



IASBABA'S MONTHLY MAGAZINE

November 2018

East Asia Summit
Ease of Doing Business
Virtual Climate Summit
Nuclear Triad
Cyclone Gaja
Protecting Indigenous People

PREFACE

With the present shift in examination pattern of UPSC Civil Services Examination, 'General Studies – II and General Studies III' can safely be replaced with 'Current Affairs'. Moreover, following the recent trend of UPSC, almost all the questions are issue-based rather than news-based. Therefore, the right approach to preparation is to prepare issues, rather than just reading news.

Taking this into account, our website www.iasbaba.com will cover current affairs focusing more on 'issues' on a daily basis. This will help you pick up relevant news items of the day from various national dailies such as The Hindu, Indian Express, Business Standard, LiveMint, Business Line and other important Online sources. Over time, some of these news items will become important issues.

UPSC has the knack of picking such issues and asking general opinion based questions. Answering such questions will require general awareness and an overall understanding of the issue. Therefore, we intend to create the right understanding among aspirants – 'How to cover these issues?'

This is the **42nd edition** of IASbaba's Monthly Magazine. This edition covers all important issues that were in news in the month of **NOVEMBER 2018** which can be accessed from <https://iasbaba.com/current-affairs-for-ias-upsc-exams/>

VALUE ADDITIONS FROM IASBABA

- **Must Read and Connecting the dots.**
- **Also, we have introduced Prelim and mains focused snippets and Test Your Knowledge (Prelims MCQs based on daily current affairs) which shall guide you for better revision.**
- **'Must Read' section**, will give you important links to be read from exam perspective. This will make sure that, you don't miss out on any important news/editorials from various newspapers on daily basis.
- Under each news article, **'Connecting the dots'** facilitates your thinking to connect and ponder over various aspects of an issue. Basically, it helps you in understanding an issue from multi-dimensional view-point. You will understand its importance while giving Mains or Interview.

Must Read Articles: We have not included them in the magazine. Those following DNA on daily basis may follow it- <https://iasbaba.com/current-affairs-for-ias-upsc-exams/>

"Tell my mistakes to me not to others, because these are to be corrected by me, not by them."

CONTENTS

HISTORY/CULTURE/GEOGRAPHY	8
Konark Sun Temple	8
Incredible India campaign: Tawang Monastery	8
Loss of artefacts, historical idols and antiquities	9
The forgotten million: WWI and its impacts on India	10
World War I: a turning point for the Indian economy	11
POLITY/GOVERNANCE	15
‘Private’ efforts at legislation: private member's bill	15
Rechristening of names	17
A reality check on cooperative federalism	18
Can judges legislate?	20
When judges legislate	22
A crippling shortage: on vacancies in courts	23
Witness protection scheme to be a reality soon	25
Amid institutional decline	26
Jammu and Kashmir Governor dissolved the State Assembly	28
Unlawful dissolution: On J&K Assembly	29
The Maine example: The preferential voting system	31
Statute in Braille to mark Constitution Day	32
Employee has right to resign, says Supreme Court	32
Are criminal laws ill-equipped to deal with cases of riots?	33
SOCIAL ISSUE/WELFARE PROGRAMMES	34
Support for lives on the move	34
UNESCO global education monitoring report 2019	37
Tribal development and empowerment	38
U.S. citizen killed by Andaman tribals	38
Do not disturb this Andaman Island	39
‘44 violations took place in Andamans’	42
Lessons from a tragedy: On Adaman & Nicobar	43
Protect indigenous people	45
GST of 18% on tendu leaves: how it will impact tribals	47
Quota math: on Maharashtra's Maratha reservation proposal	48
WOMEN ISSUE	50

26-week maternity leave law.....	50
SC: live-in partner can seek maintenance.....	51
Fissures amidst growth: Female foeticide	52
Self-defence: Kerala village set to become first local body to train all its women.....	54
Single women seek monthly pension	55
#MeToo: GoM may review law.....	55

HEALTH ISSUE56

Zika Virus: Cause to remain alert	56
Setting a proper diet plan: Malnutrition in India.....	57
India to study drugs derived from marijuana	60
Measles and Rubella vaccination campaign	60
Ahead on malaria: on reduction in cases in India.....	61
Lancet report warns about heatwave exposure surge	63

GOVERNMENT SCHEMES65

Loans for MSMEs in 59 minutes.....	65
Pradhan Mantri Fasal Bima Yojana (PMFBY): Crop Insurance Scheme	66
Pradhan Mantri Sahaj Bijli Har Ghar Yojana or “Saubhagya” scheme.....	68
Public bicycle sharing system launched in Odisha.....	69
Report cards to Teachers based on the performance of the students.....	70
Without maternity benefits: NFSA and PMMVY.....	70

INTERNATIONAL RELATIONS72

Intermediate-Range Nuclear Forces (INF) Treaty	72
13th East Asia Summit in Singapore	75
Moscow Format: Afghanistan Peace Talks	75
India to join Afghanistan peace talks.....	77
When giants clash: on the US-China discord	78
30th Asia Pacific Economic Cooperation (APEC) Summit	79
Along the new Silk Roads: Multilateralism & Trade War.....	80
Russia and Ukraine tensions	81

INDIA AND THE WORLD83

Define ‘strategic partners’: India-U.S. Relations.....	83
India-US: How not to choose among allies	84
US sanctions on Iran: India, China get relief	86
India, China and Pakistan: India protests China-Pakistan bus via PoK.....	87
China Pakistan: Growing Ties.....	87
China-Pakistan Ties and India-China Wuhan consensus.....	87
India, Singapore begin sea drills	88

Third Quad Round in Singapore	88
Four corners: Quad grouping.....	90
New ripples in Andaman Sea	91
India, Pak. commit to Kartarpur corridor.....	94
Kartarpur corridor can build bridges: Venkaiah.....	95
Pakistan's Prime Minister calls for fresh start	96
Looking beyond the optics: India – Vietnam relations	97

ECONOMY..... 100

Ease of Doing Business Index: India jumps to 77th rank	100
Ease of Doing Business Index: Serious business	101
Filling the gap: significance of MSMEs.....	102
Political economics: credit stimulus for MSMEs.....	104
Poverty in all its faces	105
Full disclosure: Credit rating agencies	108
RBI eases ECB hedging norms for companies.....	110
Reserve Bank to inject ₹40,000 crore through open market operations (OMOs).....	110
Breathing space: on the strengthening rupee	111

AGRICULTURE 113

How to weaken the mandi monopoly?.....	113
A reinstated right to property will protect the poor.....	114
India to export sugar to China	117
India steps up agro-diplomacy with China.....	117
Solar Bubble Dryer	117
Drought warning	120
Agriculture Ministry takes back report on impact of demonetization on farmers.....	121
Farmers assemble in Delhi to demand policy change	122

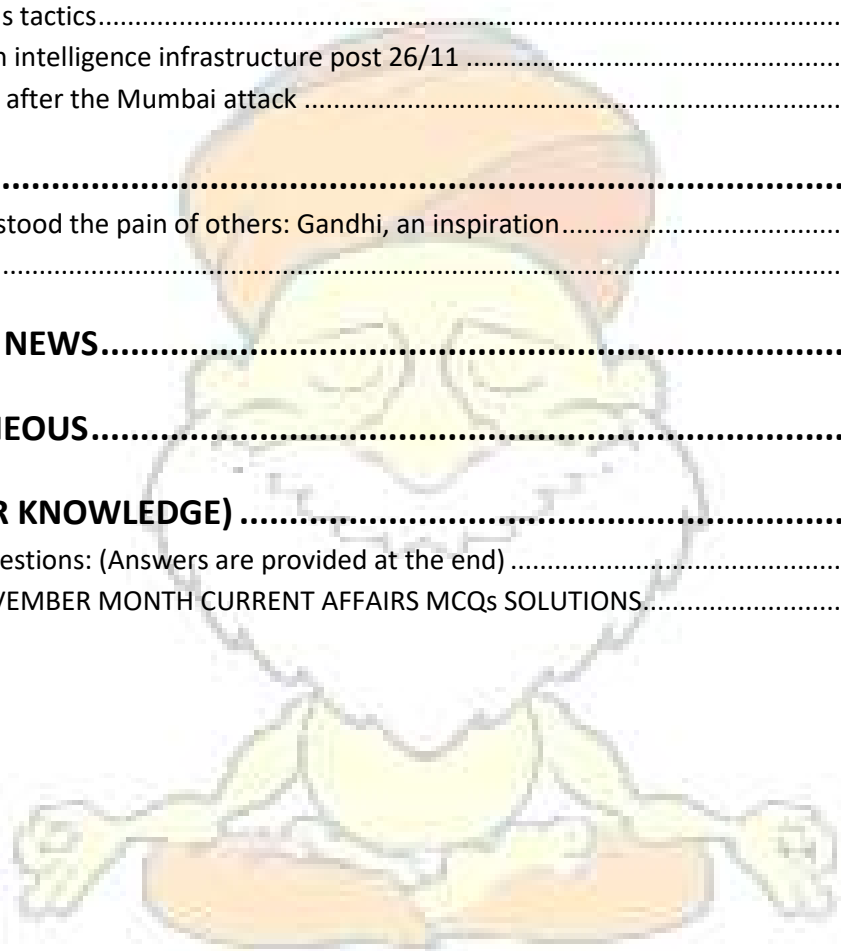
ENVIRONMENT 123

Choked by smog.....	123
Smoke overdose: Delhi air worsens a day after Diwali.....	124
A passage to clean air	125
Phasing out hydrofluorocarbons (HFC).....	127
Role of non-state actors and women's movement against the felling of trees in Jhinkargadi forest 128	
Virtual climate summit.....	129
Atmosphere and Climate Research-Modelling Observing Systems & Services (ACROSS) and National Facility for Airborne Research (NFAR).....	129

ANIMALS/NATIONAL PARKS IN NEWS..... 131

461 elephants electrocuted in country in 8 years since 2009	131
Not Burning Bright: Human-Animal Conflicts	132
Make elephant corridors eco-sensitive zones: NGT	134
Greater flamingoes at Hope Island after 25 years	135
Animal in news: 490 Indian star tortoises seized.....	136
Animal in news: Sangai deer	136
Animal in news: Ortolan Bunting	137
Protect the little helpers	137
Wildlife and Bird Sanctuary in news: Point Calimere	139
National Park/Tiger reserves in news:	140
Wildlife and Bird Sanctuary in news: Point Calimere	141
Tiger Reserves/National Parks in news: Dudhwa Tiger Reserve and Bhitarkanika National Park....	142
Andaman & Nicobar Islands: home to a tenth of India's fauna species	143
Animal in news: Amur falcon	144
INFRASTRUCTURE/ENERGY	146
Against the current: Access to Internet in India	146
Further stressed by thermal power: Water stress in India	147
9th round of City Gas Distribution(CGD).....	149
SCIENCE AND TECHNOLOGY	151
The legacy of NASA's Kepler	151
NASA's historic Dawn mission comes to an end.....	152
NASA's Insight rover heads for 6.5 minutes of terror.....	152
ISRO's GSAT-29.....	153
GSAT-29 and GSLV-MkIII-D2 rocket	154
Ripples of discord: on gravitational waves	157
Universities and patents	159
SpiNNaker: world's largest brain-mimicking supercomputer.....	161
Neutrino facility has miles to go	162
Kilogram gets a new definition	165
Chandrayaan-2 lunar lander	166
HysIS - Hyper Spectral Imaging Satellite	167
NASA's InSight lands on Mars	168
DEFENCE	169
India declares nuclear triad operational	169
Aligning the triad: On India's nuclear deterrence.....	169
Indian Army inducts its artillery gun systems	171
Defence Procurement Procedure (DPP)	172
India, Singapore begin sea drills	173

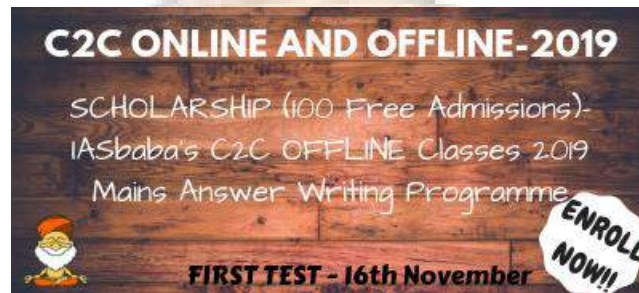
India, Russia to build stealth frigates	174
DISASTER MANAGEMENT	175
National Cyclone Risk Mitigation Project (NCRMP)	175
Cyclone Gaja: Being prepared against extreme events	175
Regional Integrated Multi-Hazard Early Warning System (RIMES).....	177
INTERNAL SECURITY/SECURITY	179
Dangerous tactics.....	179
Big leap in intelligence infrastructure post 26/11	181
Ten years after the Mumbai attack	182
ETHICS	185
He understood the pain of others: Gandhi, an inspiration.....	185
Quotes:.....	187
PERSON IN NEWS.....	188
MISCELLANEOUS.....	189
(TEST YOUR KNOWLEDGE)	194
Model questions: (Answers are provided at the end)	194
2018 NOVEMBER MONTH CURRENT AFFAIRS MCQs SOLUTIONS.....	215



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HISTORY/CULTURE/GEOGRAPHY

Konark Sun Temple

Part of: GS Prelims and Mains I – Culture; Indian Art and Heritage

In news:

- The Sun Temple, an ASI-protected world heritage site, is known for its outstanding architecture.
- The temple represents a chariot of the Sun God and is one of the World Heritage sites declared by UNESCO.
- The 13th Century monument was built by King Langula Narasingha Deva by mobilising 1,200 sculptors.
- Recently, there are some allegations that the original stone carvings in the temple, as per media reports, had been removed and in their place, plain stones had been fixed.

Do you know?

- Konark Sun temple represents the climax of Odishan temple architecture. It symbolises Odia pride and reflects the ethical and emotional expression of the Odia people.

Incredible India campaign: Tawang Monastery

Part of: GS Prelims and Mains I – Indian heritage and culture

In news:

- The Incredible India campaign has goofed up on **Tawang Monastery in Arunachal Pradesh**, suggesting the ancient structure was built just three decades ago.

About Monastery

- **Known in Tibetan as Gaden Namgyal Lhatse, the Tawang Monastery** was built according to the wishes of the 5th Dalai Lama, Ngawang Lobsang Gyatso.
- It was founded in 1680-81 by a monk named Merag Lodre Gyatso of the Gelug sect after the 4th Dalai Lama gave him a painting of goddess Palden Lhamo to be kept in the monastery.
- An eight-metre high gilded statue of Lord Buddha dominates the sanctum of the monastery.

- Local legend has it that China had attacked Tawang in 1962 primarily to extract the secret to eternal youth believed to be buried under the monastery built at about 10,000 ft above sea level.

Loss of artefacts, historical idols and antiquities

General studies 2

- *Governance*
- *Government policies and interventions*

Introduction

- In the recent times there has been growing incidents **loss of artefacts, historical idols and antiquities in the state of Tamil Nadu.**
- Tamil Nadu is rich feeding ground for idol thieves and smugglers because of the **sheer number of temples within its borders.**

Madras HC on this issue

- **The Madras High Court constituted a special bench** to hear cases relating to idol theft.
- The court raised the concerns related to the **lack of coordination between departments responsible for custodianship of cultural heritage and law enforcement agencies.**
- HC also noted that the department has **not computerised the stock**, provided adequate ICON Centres with surveillance to keep safe custody of the valuable idols in the Centre and in the temples.
- Madras HC also raised **concerns related to the management of the historical artefacts in India**, importantly about **lack of coordination and lack of surveillance measures.**
- Because of these concerns the Madras HC **ordered the state government to go for computerisation of the stock of the idols.**

Steps taken by the government

- The parliament of India passed an Act, **the Antiquities and Art Treasures Act, 1972**, focussing mainly the **objectives of prevention of smuggling, prevent illegal sale, regulate export trade in antiquities and compulsory acquisition of antiquities and art treasures.**
- **National mission on monuments and antiquities (NMMA)** has been launched. One of the main components of this NMMA is **to create a national register of these antiquities.**
- **Nodal agency for implementation of NMMA is Archaeological survey of India.**

Concerns still remain

- **The problem of non-coordination and lack of information among government departments** as highlighted by the Madras High Court still remain a concern across India.
- While the Ministry of Culture's annual report for 2017-18 states that a mammoth 15.2 lakh registered antiquities have been documented through the NMMA, the Register only provides information for about 4.7 lakh of these.

Way forward

- **Thus, different states need to co-ordinate their effort in terms of identification and then preservation** of such artefacts
- **National register for antiquities must be updated** for these valuable artefacts.
- Also, there is a **need for timely action to be taken by the concerned government departments** for identification and preservation of our cultural heritage.

Connecting the dots:

- State and public initiatives to compile registers of antiquities must be closely coordinated to control the smuggling and theft. Elucidate

The forgotten million: WWI and its impacts on India

General studies 1 & 2

- *History of the world, national movement*
- *International events affecting India and its interests*

Introduction

- One hundred years after the end of World War I, the immense sacrifice and contributions of well over a million soldiers of undivided India are being incrementally recognised and memorialised the world over.
- In France, the centenary celebrations of Armistice Day on November 11 will include the unveiling of the second overseas national war memorial for Indian soldiers.
- The first such memorial abroad, formalised in 2002, is the Menin Gate in Ypres, Belgium, which is a recognition that more than 130,000 Indian soldiers fought in WWI in Belgium.

Significance

- These ceremonial pomp of officialdom is perhaps the most touching symbol of how much ordinary Indian men, mostly-illiterate, enlisting in the colonial government's Army gave of their lives.

- The British Library in London has received 1,000 pages of war-veteran interview transcripts recorded, which include details of the inhumane treatment, including floggings, denial of home leave, and brazenly racial-discriminatory treatment that 1.5 million men from northern India faced regularly within the allied forces army.

Impact of World War I on India

- The Indian leaders supported British war efforts during World War I. This was because, although the swadeshi movement was underway, the freedom movement was in a beginning stage.
- This was reciprocated by British Government through its August Declaration which stated that it is in favour of responsible government in India and called for increased association of Indians in every branch of administration.
- On the other hand, Revolutionaries utilized WWI to oppose British India. In response, the British India passed Defence of India Act, 1915 to curb these revolutionary activities.
- In order to finance its war expenditure, the British imposed higher taxes leading to economic exploitation.
- With the enormous death toll by the end of WWI, the painful lessons were absorbed and the pressure for enlistment of Indians in the World War II effort produced an entirely different outcome — the Quit India movement and the escalation of the freedom movement.
- WWI also influenced the collective psyche of the government of independent India, starting with the tenets of non-alignment that came to embody a core mantra of the country's foreign policy ethos.

Conclusion

- India's freedom struggle and the events happened during it, continues to shape the policies and strategies of India on global platform.
- While India remains wary of 'treaty alliances' and steers clear of combat involvement in third-party conflicts, it is the third-largest contributor of military and police personnel to UN peacekeeping missions.

Connecting the dots:

- Analyze briefly the impacts of WWI on India's struggle for independence.

World War I: a turning point for the Indian economy

General studies 1 & 3

- *History of the world and India: World war I*
- *Indian economy: Industrialization*

Introduction

- The centenary celebration of the end of World War I has mostly focused on its political impact on India and the world.
- Less attention has been lavished on the economic impact of the conflagration. World War I ended the first era of globalization.

Political impacts of World War I

- Some of the political impacts were; the implosion of multinational empires that led to the creation of new ethnic nations in Europe, as well as the communist capture of power in Russia.
- In India, the return of Punjabi soldiers after the end of the war also galvanised political activity against colonial rule in that province, which became the spark for wider protests.

Economic impacts of World War I

- World War I also proved to be a turning point for the Indian economy.
- The economic historian Tirthankar Roy has explained in his work how the British engagement in World War I had a complicated impact on India.
- There was a sharp increase in demand for Indian goods in Britain as production capabilities in Britain itself were diverted to the war effort.
- However, the disruption in shipping lanes because of the war also meant that Indian industry faced dislocations because of the shortage of inputs that were earlier imported from Britain and Germany.
- There was excess demand as well as supply bottlenecks.
- Another result was inflation. Industrial prices nearly doubled in the six years after 1914.
- Accelerating prices benefitted Indian industry, as was also the case during World War II a few decades later.
- Farm prices rose as well, but at a slower pace than industrial prices. The internal terms of trade moved against agriculture.
- This trend continued for most of the next few decades, and especially during the collapse in global commodity prices during the Great Depression.
- The rapid rise in industrial prices as well as improving internal terms of trade for Indian industry benefitted industrial enterprises.

Shift in British Policy towards India

- The war years also saw a shift in colonial policy away from laissez faire to a more interventionist approach—a shift that had a profound effect on the subsequent policy framework.
- There were two primary forces driving this shift.
- First, the British realised that their most important colony needed strategic industrial depth if it had to be successfully held during disruptions such as a world war.
- Second, the long nationalist campaign for the state to support Indian industrialization began to bear fruit. The colonial state finally accepted the need for a specific policy framework to support industrial investment in India.

Indian Industrial Report 1918

- In March 1916, Ibrahim Rahimtoola proposed in the Imperial Legislative Council that a committee should be appointed to examine what policies were needed to promote industrial development in India.
- The Viceroy accepted the proposal. There were four Indian members in the group that wrote the Indian Industrial Report that was made public in 1918, or 100 years ago.
- These Indian members were Fazulbhoy Currimbhoy, R.N. Mookerjee, D.J. Tata and Madan Mohan Malaviya.

Key Points of the report

- The Indian Industrial Report recognised the need of state support for industrial growth.
- It did not include the original demand by Rahimtoola that the power to impose import, export and excise duties to promote domestic industrial investment should be shifted from London to New Delhi.
- Fiscal autonomy was rejected.
- The conclusion of the report was: “A powerful and well-directed stimulus is needed to start the economic development of India along the path of progress. Such a stimulus can only be supplied by an organised system of technical, financial and administrative assistance.”

The dissent note

- More powerful than the official report itself was the scholarly dissent note written by Malaviya. He marshalled data from Indian economic history as well as the recent experience of late industrializers such as Germany and Japan to argue for a more meaningful government support for Indian industrial growth.
- This was at a time when mainstream Indian nationalism was enthusiastic about rapid industrialisation, and a few years before the Gandhian idea of village self-sufficiency took hold of the public imagination.
- The dissent note written by Malaviya is a treat to read even 100 years later.

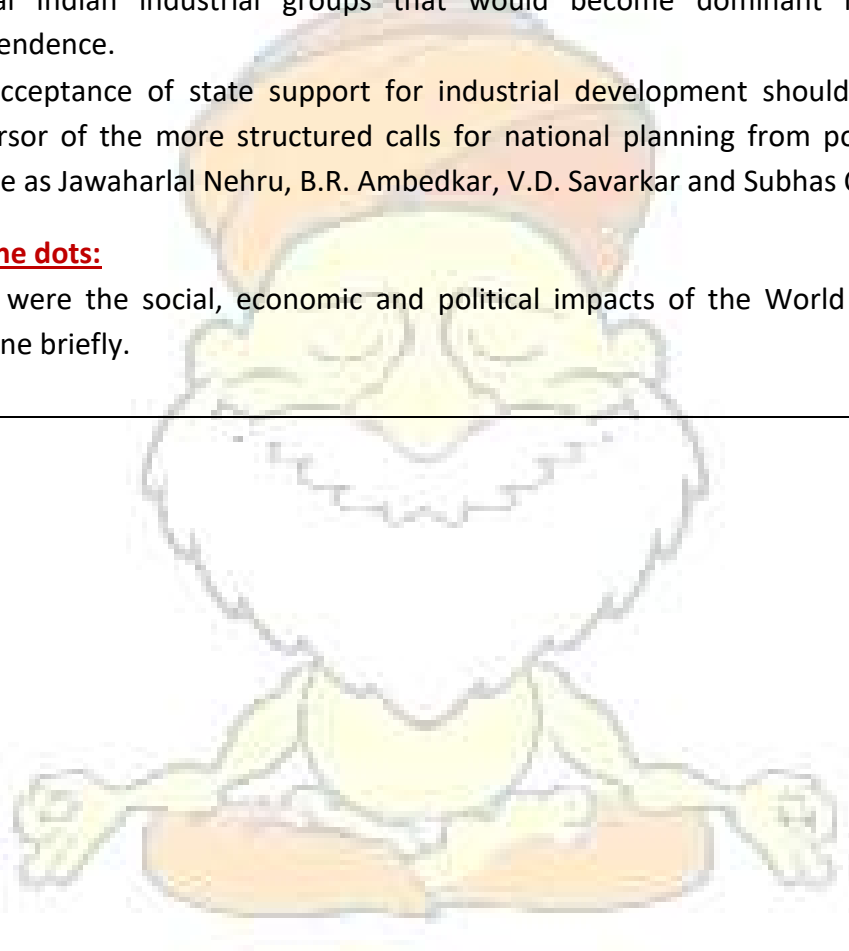
- His protest was not wasted. The next few years after 1918 would see the setting up of a Fiscal Commission to provide some element of fiscal autonomy for India as well as a Tariffs Commission that would offer temporary protection for a handful of industries that had been carefully identified based on the comparative advantage.

Conclusion

- What happened in the six years after 1914 had an impact over the longer term.
- The extraordinary profits earned during World War I provided the initial capital for several Indian industrial groups that would become dominant in the years to independence.
- The acceptance of state support for industrial development should be seen as the precursor of the more structured calls for national planning from political leaders as diverse as Jawaharlal Nehru, B.R. Ambedkar, V.D. Savarkar and Subhas Chandra Bose.

Connecting the dots:

- What were the social, economic and political impacts of the World War I on India? Examine briefly.



POLITY/GOVERNANCE

'Private' efforts at legislation: private member's bill

General studies 2

- *Constitution: Parliament; functions and powers*

Introduction

- Nominated Member of Rajya Sabha Rakesh Sinha said he would bring a private member's Bill "on the Ram Temple".
- How are private member's Bills introduced and discussed? What chance does such a Bill have of becoming law?

Private members, their Bills

- Any MP who is not a Minister is referred to as a private member.
- Parliament's key role is to debate and make laws. Both Ministers and private members contribute to the lawmaking process.
- Bills introduced by Ministers are referred to as government bills. They are backed by the government, and reflect its legislative agenda.
- Private member's bills are piloted by non-Minister MPs.
- Their purpose is to draw the government's attention to what individual MPs see as issues and gaps in the existing legal framework, which require legislative intervention.

Introduction in the House

- The admissibility of a private member's Bill is decided by the Rajya Sabha Chairman. (In the case of Lok Sabha, it is the Speaker; the procedure is roughly the same for both Houses.)
- The Member must give at least a month's notice before the Bill can be listed for introduction; the House secretariat examines it for compliance with constitutional provisions and rules on legislation before listing.
- Up to 1997, private members could introduce up to three Bills in a week.
- This led to a piling up of Bills that were introduced but never discussed; Chairman K R Narayanan, therefore, capped the number of private member's Bills to three per session.
- While government Bills can be introduced and discussed on any day, private member's Bills can be introduced and discussed only on Fridays.

- Private member's Bills have been introduced and discussed in Rajya Sabha on 20 days in the last three years.

Procedure for introduction

- On the scheduled Friday, the private member moves a motion for introduction of the Bill, which is usually not opposed.
- Two recent exceptions to this convention were in 2004, when nominated MP Vidya Nivas Misra's Bill seeking to amend the Preamble of the Constitution was opposed; and in 2015, when Shashi Tharoor's Bill to decriminalise homosexuality was not introduced in Lok Sabha after the BJP's Nishikant Dubey forced a division, which led to the motion being defeated.
- (The Supreme Court struck down IPC Section 377 this September.)
- Rajya Sabha draws a ballot to decide the sequence of discussion of Bills. If a Bill is successful in the ballot, it has to wait for the discussion to conclude on a Bill currently being debated by the House.
- For example, a Bill related to sittings of Parliament introduced by Naresh Gujral in March 2017 was taken up for discussion only in August 2018.
- The discussion will resume when private member business is taken up in the upcoming Winter Session, and other private member's bills will have to wait for the debate to conclude.
- Over the last three years, Rajya Sabha saw the introduction of 165 private member's Bills; discussion was concluded on only 18.
- A private member's Bill that is introduced but not discussed in Rajya Sabha, lapses when Member retires.

After discussion ends

- Upon conclusion of the discussion, the Member piloting the Bill can either withdraw it on the request of the Minister concerned, or he may choose to press ahead with its passage.
- In the latter case, the Bill is put to vote and, if the private member gets the support of the House, it is passed.
- In 1977, Rajya Sabha passed a private member's Bill to amend the Aligarh Muslim University Act. The Bill then went to the sixth Lok Sabha, where it lapsed with the dissolution of the House in 1979.
- In 2015, Rajya Sabha passed The Rights of Transgender Persons Bill, 2014, a private member's Bill piloted by Tiruchi Siva of the DMK. The Bill is now pending before Lok Sabha.

Conclusion

- Many private members' bills were introduced in parliament, but only a fraction of them are taken up for discussion and very few finally passed.
- The last time a private member's Bill was passed by both Houses was in 1970. This was the Supreme Court (Enlargement of Criminal Appellate Jurisdiction) Bill, 1968.
- Fourteen private member's Bills — five of which were introduced in Rajya Sabha — have become law so far.

Connecting the dots:

- What is private member's bill? Briefly discuss the procedure of introduction of such bill and importance of it in Indian democracy.

Rechristening of names

Below picture provides examples of some of the names of cities and villages being changed recently.


New monikers

In the past one year, the Centre has given consent to the renaming of at least 25 towns and villages across India. Several others are pending. A look at a few of the new names

APPROVED

Old name	New name	State
Rajahmundry	Rajamahendravaram	A.P.
Outer Wheeler Island	A.P.J. Abdul Kalam Island	Odisha
Arikkod	Areekode	Kerala
Pindari	Pandu-Pindara	Haryana
Samphur	Sanphure	Nagaland
Landgewadi	Narsinhagaon	Maharashtra
Garhi Sampla	Ch. Sir Chhotu Ram Nagar	Haryana
Khatu Kalan village	Bari Khatu	Rajasthan
Mihgawan Chhakka	Mihgawan Sarkar	M.P.
Mihgawan Tilia	Mihgawan Ghat	M.P.
Shukratal Khadar	Sukhtirth Khadar	U.P.
Shukratal Bangar	Sukhtirth Bangar	U.P.

PENDING
West Bengal (**Bangla**), Allahabad (**Prayagraj**) and Faizabad (**Ayodhya**) in Uttar Pradesh



Changing identity:
The newly affixed board at the office of the Allahabad District Magistrate shows the name changed to Prayagraj.
• PTI

IT'S NOT THAT EASY
Renaming is a long-drawn process involving multiple Central Ministries and Departments

- Home Ministry gives consent after no-objections from Ministry of Railways, Department of Posts and the Survey of India
- These organisations have to confirm that there is no such town or village in their records with a name similar to the proposed one
- The renaming of a State requires an Amendment to the Constitution with a simple majority in Parliament
- For changing the name of a village or town, an executive order is needed

SOURCE: PTI

Pic:

https://d39gegkjaqduz9.cloudfront.net/TH/2018/11/12/DEL/Delhi/TH/5_07/c5437402_2519908_101_mr.jpg

In news:

- Centre has given consent to the renaming of at least 25 towns and villages across India in the past one year
- Allahabad and Faizabad are the latest additions to the growing list of places that have been renamed.

Name change requirements

- The Home Ministry gives its consent to the change of name of any place after taking no-objections from the Ministry of Railways, Department of Posts and Survey of India.
- These organisations have to confirm that there is no such town or village in their records with a name similar to the proposed one.
- The renaming of a State requires amendment of the Constitution with a simple majority in Parliament. For changing the name of a village or town, an executive order is needed.

What is the procedure of changing a name of state?

- Process for changing the name of a state can be initiated by state itself. However, by virtue of article 3, the parliament has power to change the name of a state even if such proposal does not come from the concerned state.

[A reality check on cooperative federalism](#)

General studies 2

- *Constitution; Basic structure*
- *Center-state relations, good governance*

Introduction

- Since at least 1974, when the Supreme Court commented on the Constitution envisaging a cooperative federal structure, federalism has come a long way in India.
- Despite federalism being the basic feature of Indian Constitution, central government continues to wield superior legislative powers including residuary powers over states.
- Among many other, the taxing provisions are also contentious terrain as the Centre is more empowered under the newly enacted Goods and Services Tax law.

An example: President's Rule

- In relation to the imposition of President's rule under Article 356 of the Constitution, federalism is far more mature.
- Between 1947 and 1977, there were 44 instances when the power to impose President's rule was exercised.

- Between 1977 and 1996, the power was exercised almost 59 times. 15 instances between 1980 and 1984 after the Supreme Court held federalism a basic feature of the Constitution is quite telling.
- From 1991 till 2016, there have been 32 instances of the exercise of this power — compared to 92 instances in the preceding period.

Supreme Court rulings

- In *S.R. Bommai v. Union of India* (1994), the limitation laid down by the Supreme Court might have placed gentle breaks on exercise of this power (Article 356), but the Centre continues to wield superior legislative powers, including residuary powers and legislative precedence.
- Recently, in *Govt. of NCT of Delhi v. Union of India*, the Supreme Court gently tilted the balance of executive power in favour of the Government of the National Capital Territory vis-à-vis the Lieutenant Governor (and by extension, the Centre).
- However, the court's observations on cooperative federalism were stating the obvious considering members of both cabinets take an oath to uphold the Constitution.

Taxation powers

- Taxation powers are another contentious issue and the Central government has won most of the disputes purely due to express provisions in the Constitution.
- In the Goods and Services Tax (GST) scenario, States have foregone some taxation powers (octroi, entry tax, luxury and entertainment taxes, etc.) but have powers to levy taxes through panchayats and municipalities.
- Such powers can result in an anomalous situation of a transaction being taxed under GST laws and a local law, and this is yet to be tested in court.
- After the GST amendments to the Constitution, States have power to levy tax on sale of petrol, diesel, etc. and these would be revenues of the respective States. However, the GST Council is yet to recommend inclusion of these items under GST.

The Anomaly created by GST Amendment

- As per Article 269A(1) of the Constitution, the powers to make recommendations in relation to sharing of taxes from inter-State trade has been given to GST Council and not the Finance Commission.
- However, Article 270(1A) and Article 270(2) provide that taxes levied under the GST laws will be shared in the manner 'prescribed' by Finance Commission.
- Thus, there is an anomaly with respect to roles and powers of GST Council and Finance Commission regarding sharing of tax proceeds.

Finance Commission and role of states

- Involvement of Finance Commission also means making of laws through the Parliament under Article 275 (statutory grant – grants in aid) where states have lesser role to play.
- Recommendations of the Finance Commission are placed before Parliament and States have no role in the debate.
- There is also no provision for an aggrieved State to challenge the report of Finance Commission on certain grounds or seek mandatory enforcement of its recommendations.

On GST Council

- As per Article 279A (11) - The Goods and Services Tax Council may decide about the modalities to resolve disputes arising out of its recommendations.
- If the Centre refuses to make allocations as per the GST Council, or if a State is aggrieved by the recommendations itself, then as of now moving to the Supreme Court for an aggrieved State is the only option.
- This is because till now, no modality to resolve disputes under Article 279A (11) has yet been finalised.

Conclusion

- States don't merely seek parity with each other, historically States have also sought parity with the Centre (Sarkaria and Punchhi Commissions).
- In an era of coalition politics, GST will be a true test of cooperative federalism.

Connecting the dots:

- The concept of cooperative federalism has been increasingly emphasised in recent years. Highlight the drawbacks in the existing structure and extent to which cooperative federalism would answer the shortcomings. (UPSC mains 2015)
- Though the federal principle is dominant in our Constitution and that principle is one of its basic features, but it is equally true that federalism under the Indian Constitution leans in favour of a strong Centre, a feature that militates against the concept of strong federalism. Discuss. (UPSC mains 2014)

Can judges legislate?

Part of: GS Prelims and Mains II – Indian Polity; Separation of powers

In news:

Principle of separation of powers

- In **Ram Jawaya v. The State of Punjab (1955)**, the court observed: the three organs or part of the state should not encroach into the domain of another. If this happens, the delicate balance in the Constitution will be upset and there will be chaos.
- In **Union of India v. Deoki Nandan Aggarwal (1991)**, the court observed that the power to legislate has not been conferred on the courts. Making laws is the function of the legislature.
- In **Suresh Seth v. Commissioner, Indore Municipal Corporation (2005)**, the court observed: "Under our Constitutional scheme, Parliament and Legislative Assemblies exercise sovereign power to enact laws."

However, in many recent judgments, the Supreme Court has become hyper-activist in making laws.

1. In **Arun Gopal v. Union of India (2017)**, the Supreme Court fixed timings for bursting Diwali fireworks and prohibited the use of non-green fireworks, although there are no laws to that effect.
2. In **M.C. Mehta v. Union of India (2018)**, the court annulled the statutory Rule 115(21) of the Central Motor Vehicle Rules, 1989, when it directed that no BS-4 vehicle should be sold after March 30, 2020, and that only BS-6 vehicles can be sold after that date.
3. In **Subhash Kashinath Mahajan v. State of Maharashtra (2018)**, the court amended the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989, by annulling Section 18 which said that no anticipatory bail will be granted to persons accused under the Act; by requiring a preliminary enquiry; and by prohibiting arrest under the Act except with permission in writing by the appropriate authority.
4. In **Rajesh Sharma v. The State of Uttar Pradesh (2017)**, the court felt that Section 498A of the Indian Penal Code was being misused. So it amended that Section by requiring complaints under that provision to be sent to a Family Welfare Committee constituted by the District Legal Services Authority, although there is no such requirement in Section 498A.
5. The National Green Tribunal (NGT) ordered that no 15-year-old petrol-driven or 10-year-old diesel-driven vehicle will ply in Delhi, and the Supreme Court has directed impounding such vehicles, though neither the NGT nor the Supreme Court are legislative bodies.

Against the principle of separation of powers

If judges are free to make laws of their choices, not only would that go against the principle of separation of powers, it could also lead to uncertainty in the law and chaos as every judge will start drafting his own laws according to his whims and fancies.

When judges legislate

Introduction

In many recent judgments, the Supreme Court has become hyper-activist in making laws. But can judges legislate, remains a question to be discussed.

Can judges legislate?

- This question has been answered in the past by the court.
- In *Ram Jawaya v. The State of Punjab* (1955), the court observed that there should be a broad separation of powers in the Constitution of the three organs of the state, and that one organ should not encroach into the domain of another.
- If this happens, the delicate balance in the Constitution will be upset and there will be chaos.
- Similarly in *Union of India v. Deoki Nandan Aggarwal* (1991) court observed that the power to legislate has not been conferred on the courts.
- In *Suresh Seth v. Commissioner, Indore Municipal Corporation* (2005), the court observed: "Under our Constitutional scheme, Parliament and Legislative Assemblies exercise sovereign power to enact laws."

Recent example of judicial legislation through judgments -

- Fixing timings for bursting Diwali fireworks and prohibiting the use of non-green fireworks
- Direction that no BS-4 vehicle should be sold after March 30, 2020, and that only BS-6 vehicles can be sold after that date
- Amendment to the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989
- Amending section 498A of the Indian Penal Code
- National Green Tribunal's order that no 15-year-old petrol-driven or 10-year-old diesel-driven vehicle will ply in Delhi.

Do you know?

- **Judicial review:** Power of judiciary to examine the constitutional validity of legislative enactments and executive orders of the government.
- **Judicial activism:** Proactive role played by the judiciary in protection of rights of citizen and promotion of justice in society. It amounts to the assertive role by judiciary where it forces the other two organs to discharge their constitutional duties.
- **Judicial restraint:** Role of judges should be limited to only interpretation of law and should leave the law making business to the legislature and the executive. As it is

against the constitutional principle of separation of powers and since judiciary is a non-elective body, it does not enjoy popular will to make laws.

- **Article 50 of the Indian Constitution** – Separation of judiciary from the executive – The state shall take steps to separate the judiciary from the executive in the public services of the State.

Conclusion

- Making laws is the function of the legislature.
- If judges are free to make laws of their choices, not only would that go against the principle of separation of powers, it could also lead to uncertainty in the law and chaos as every judge will start drafting his own laws according to his whims and fancies.

Connecting the dots:

- What is judicial legislation? Explain briefly the separation of powers between various organs of the state.

A crippling shortage: on vacancies in courts

General studies 2

- **Judiciary: Functions and appointments**

Introduction

- Other than slow judicial processes, the important reason behind rising number of pending cases in lower judiciary is the chronic shortage of judges and severe understaffing of the courts they preside over.
- More than a decade after the Supreme Court laid down guidelines in 2007 for making appointments in the lower judiciary within a set time frame, a similar issue is back before the highest court.

Current situation

- There are more than 5,000 vacancies in the subordinate courts.
- A Bench headed by Chief Justice of India Ranjan Gogoi has pulled up State governments and the administration of various High Courts for the delay in filling these vacancies.
- Answers provided in the Rajya Sabha reveal that as on March 31, 2018, nearly a quarter of the total number of posts in the subordinate courts remained vacant.
- The court has put the actual figure at 5,133 out 22,036 sanctioned posts.

- The State-wise figures are quite alarming, with Uttar Pradesh having a vacancy of 42.18% and Bihar 37.23%.
- Among the smaller States, Meghalaya has a vacancy level of 59.79%.

Reasons behind vacancies

- Utter tardiness in the process of calling for applications, holding recruitment examinations and declaring the results.
- A study revealed that the recruitment cycle in most States far exceeded the time limit prescribed by the Supreme Court.
- This time limit is 153 days for a two-tier recruitment process and 273 days for a three-tier process.
- Most States took longer to appoint junior civil judges as well as district judges by direct recruitment.
- Delayed funds to pay and accommodate the newly appointed judges and magistrates.

Process of appointments

- According to the Constitution, district judges are appointed by the Governor in consultation with the High Court.
- Other subordinate judicial officers are appointed as per rules framed by the Governor in consultation with the High Court and the State Public Service Commission.
- In effect, the High Courts have a significant role to play.
- A smooth and time-bound process of making appointments would, therefore, require close coordination between the High Courts and the State Public Service Commissions.

Why, vacancies in lower courts, is serious cause of concern?

- Subordinate courts perform the most critical judicial functions that affect the life of the common man: conducting trials, settling civil disputes, and implementing the bare bones of the law.
- Any failure to allocate the required human and financial resources may lead to the crippling of judicial work in the subordinate courts.
- It will also amount to letting down poor litigants and under-trials, who stand to suffer the most due to judicial delay.

Way forward

- The situation demands a massive infusion of both manpower and resources.
- Public Service Commissions should recruit the staff to assist these judges, while State governments build courts or identify space for them.

Connecting the dots:

- Large number of vacancies in lower courts is one of the important reasons behind the burgeoning burden of pending cases. Comment.

Witness protection scheme to be a reality soon

Part of: GS Prelims and Mains II – Polity and Governance; Government policies and schemes

In news:

- The Supreme Court recently said that it would direct all the states to implement the draft witness protection scheme framed by the Centre in consultation with the National Legal Services Authority (NALSA).
- The issue of witness protection scheme had cropped up earlier when the top court was hearing a public interest litigation (PIL) seeking protection for witnesses in rape cases involving self-styled preacher Asaram Bapu.
- The scheme aims to promote law enforcement by facilitating the protection of persons who are involved directly or indirectly in providing assistance to criminal law enforcement agencies and overall administration of Justice.

Need for such scheme

- Jeremy Bentham has said that *“Witnesses are the eyes and ears of justice.”*
- In a society governed by a Rule of Law, it is imperative to ensure that investigation, prosecution and trial of criminal offences is not prejudiced because of threats or intimidation to witnesses.
- In cases involving influential people, witnesses turn hostile because of threat to life and property. Witnesses find that there is no legal obligation by the state for extending any security.

As such witnesses should be entitled to the following rights:

1. Right to give evidence anonymously
2. Right to protection from intimidation and harm
3. Right to be treated with dignity and compassion and respect of privacy
4. Right to information of the status of the investigation and prosecution of the crime
5. Right to secure waiting place while at Court proceedings
6. Right to transportation and lodging arrangements

Do you know?

- A witness is a person who possesses with him some secret information to criminal proceedings about which he or she has given or is about to give testimony.

- In **Neelam Katara vs. Union of India** case, SC observed that the edifice of administration of justice is based upon witnesses coming forward and deposing without fear or favour, without intimidation or allurements in the court of law. If witnesses are intimidated or allured, the foundation of the administration of justice gets weakened and even obliterated.
- Similarly, in **Himanshu Singh Sabharwal vs State of Madhya Pradesh and Ors 2008** case, the court observed that witnesses are the eyes and ears of the justice system and when a witness is threatened or killed or harassed, it is not only the witness who is threatened but also the fundamental right of a citizen to a free and fair trial is vindicated.

Amid institutional decline

TOPIC

General studies 2 & 4

- *Constitution, Issues related to Governance, judiciary*
- *Indian economy: Industrialization*
- *Public/Civil service values and Ethics in Public administration: Status and problems; ethical concerns and dilemmas in government and private institutions;*
- *Strengthening of ethical and moral values in governance;*
- *Case Studies on above issues*

Introduction

There has been observed a decline in the working of various government institutions over time. This decline is partly fuelled by the wrong policies undertaken by the government and partly because of the impact of such decision making.

Examples of institutions in decline

- The involvement of the government in the decision making process of the investigative agencies such as CBI has undermined their independence and autonomy.
- Further, there are growing differences between RBI and the government on number of fundamental issues.
- In this regard, the RBI's deputy Governor has warned that there could be serious consequences if there is erosion in the autonomy of the RBI.
- The Election Commission was under a cloud over the announcement of election dates, action taken against some Delhi legislators and the functioning of electronic voting machines.

- The ongoing #MeToo movement has exposed the sordid goings-on in large swathes of the media and the entertainment industry.
- Then there is the attempt to introduce Civil Service Rules in Central universities, an attempt to erode the autonomy of academics.
- The crisis in the banking system and the huge non-performing assets that overrun their balance sheets impact the viability of the financial system.
- The functioning of the judiciary itself has been a cause for concern.
- The list of institutions in decline is long. The decline of institutions in India is not recent.

The present and past: two case studies

1. Demonitisation

- In 2016, demonetisation brought out the centralisation of power and a lack of consultation with important sections of the government. The RBI and the banks were marginalised.
- The chaos prevailed for months and about 99% of the money came back into the system, thus defeating the very purpose of carrying out this draconian measure.
- Those with black money escaped and those who had never seen black money were put to great hardship.

2. Mess in CBI

- Political interference in the agency and corruption among its ranks have been talked about but are hard to prove.
- The Supreme Court, in 2013, even called the agency a 'caged parrot' but this was not concrete enough.
- The political Opposition when feeling the heat of various investigations has always accused the agency of being its 'master's voice'.
- The intervention by the Supreme Court in the CBI issue places a question mark on the independence of the Central Vigilance Commission (CVC) and the functioning of the government as a whole in making key appointments in the CBI.
- Further, the credibility of institutions has come under doubts due to lack of transparency in the appointment process and lack of proper investigation of politically sensitive cases.

The dilemma

- The 'committed bureaucracy' is an idea floated during the Emergency. The issue is: Committed to whom? To the national interest or to the rulers?
- Another dilemma is, can a dishonest system be managed honestly?

Impacts of institutional decline

- The rule of law is being subverted and illegality being committed on a large scale.

- Growth of the black economy is a measure of illegality. It has gone up from 4-5% of GDP in 1955-56 to the present level of 62%.
- It has become 'systematic and systemic' and eroded institutional functioning all across the board. This has damaged institutions.
- The fight against widespread graft in the country has been set back.

Do you know?

A.V. Dicey's Rule of Law

1. Supremacy of the law (Absence of arbitrary power)
2. Equality before the law
3. Individual Liberties

The Supreme Court in *Bachan Singh Vs. State of Punjab* emphasizes that Rule of law excludes arbitrariness and unreasonableness.

Conclusion

- Institutions provide the framework for individuals and systems to function. Their breakdown leads to a breakdown of societal functioning — democracy is weakened, the sense of justice is eroded and the Opposition is sought to be suppressed.
- If institutions are strong, they are respected and it becomes difficult to manipulate them. It enables the honest to survive.
- In strong institutions, individual corruption is an aberration but when they weaken, it becomes generalised.
- It leads to individualisation, illegality becomes acceptable and the collective interest suffers.
- Thus, there is need for adherence to the rule of law and need to restore the institutional integrity and its independent functioning.
- There is need for committed bureaucracy which should work in favour of national interest.

Connecting the dots:

- It is difficult to manage a dishonest system honestly. Critically comment.

Jammu and Kashmir Governor dissolved the State Assembly

Part of: GS Prelims and Mains II – Indian Polity; Centre State Relations

In news:

- Jammu and Kashmir Governor passed an order in exercise of the powers conferred upon him by Section 53 of the Constitution of Jammu and Kashmir to dissolve the Legislative Assembly.

Powers invoked by the Governor on the basis of the Constitution of Jammu and Kashmir

- Section 92 has provisions in case of failure of constitutional machinery in the State
- Section 53(2)(b) provides for the dissolution of the Assembly

Powers of Governor of other States (i.e., except Jammu and Kashmir)

- Governor can dissolve the legislative assembly if the chief minister advises him to do following a vote of no confidence. Now, it is up to the Governor what he/she would like to do.
- Governor, on his/her discretion can recommend the president about the failure of the constitutional machinery in the state.
- If there is NO political party with a clear cut majority in the assembly, Governor on his/her discretion can appoint anybody as chief minister.

Unlawful dissolution: On J&K Assembly

General studies 2

- *Constitution: Governor, Special status to J&K*

Introduction

- Jammu and Kashmir was under Governor's Rule since June 2018 as per the constitution of Jammu and Kashmir.
- The Governor of Jammu and Kashmir has dissolved the Jammu and Kashmir Legislative Assembly citing "extensive horse-trading" and the "impossibility" of forming a stable government by coming together of political parties with "opposing political ideologies" for dissolving the assembly.
- His move paves the way for fresh elections in the state of Jammu and Kashmir. But decision to dissolve J&K assembly is being criticised.

Criticism of dissolution

- As indicated in Rameshwar Prasad(2006), a Governor cannot shut out post-poll alliances altogether as one of the ways in which a popular government may be formed.
- The court had also said unsubstantiated claims of horse-trading or corruption in efforts at government formation cannot be cited as reasons to dissolve the Assembly.

- Further, it said it was the Governor's duty to explore the possibility of forming a popular government, and that he could not dissolve the House solely to prevent a combination from staking its claim.

Do you know?

About Governor of Jammu and Kashmir

- Governor of Jammu and Kashmir derives his powers and authority from the Constitution of Jammu and Kashmir.
- The Governor of Jammu and Kashmir shall be appointed by the President by warrant under his hand and seal.
- The Governor shall hold office during the pleasure of the President. The Governor may, by writing under his hand addressed to the President, resign his office.
- Governor shall hold office for a term of five years from the date on which he enters upon his office.
- No person shall be eligible for appointment as Governor unless he is a citizen of India and has completed the age of thirty years.
- The Governor shall, before entering upon his office, make and subscribe in the presence of the Chief Justice of the High Court or, in his absence, the senior most Judge of that Court available, an oath or affirmation.
- Council of Ministers aid and advise the Governor of J&K as per Section 35 of J&K Constitution.
- Section 35(2) - All functions of the Governor except those under sections 36, 38 and 92 shall be exercised by him only on the advice of the Council of Ministers.

Where Governor of J&K may have discretion

- Section 36 - Appointment of Ministers; The Chief Minister shall be appointed by the Governor and the other ministers shall be appointed by the Governor on the advice of the Chief Minister.
- Section 38 - Deputy Ministers; The Governor may on the advice of the Chief Minister appoint from amongst the members of either House of Legislature such number of Deputy Ministers as may be necessary.
- Section 92 - Provisions in case of failure of constitutional machinery in the State

Conclusion

- J&K's relationship with the Centre is rooted in constitutional safeguards as well as in the participation of its major parties in electoral politics and parliamentary democracy.
- For political stability in the sensitive State it should be ensured that democratic processes are strengthened.

- The potential for political instability in the future should not be cited as a reason to scuttle emerging alliances.

Connecting the dots:

Explain briefly, appointment, powers and functions of J&K governor.

The Maine example: The preferential voting system

General studies 2

- ***Elections: various types of voting system***

Introduction

The recently concluded mid-term elections in the U.S. received a lot of attention as the opposition Democrats managed to decisively bring about a “blue wave” to capture the House of Representatives.

The preferential voting system

- The electoral system used exclusively in Maine in House polls features not just a choice of the candidates, but also a preferential ranking of them.
- A voter can choose just one candidate, but also rank candidates in an order of preference.
- If a candidate wins 50% of the mandate plus one vote, she is declared the winner. But if the candidate falls short of this threshold, the candidates are ranked again based on their second choices. And if this still falls below the threshold, the contest moves on to the third round, and so on.
- Nobel laureate Amartya Sen had lauded the preferential voting system before it was implemented in Maine, as the ordered voting allows for a true majority choice to emerge, both in the form of the candidate chosen as well as the reflection of the views of the majority, unlike the simple first-past-the-post (FPTP) system.

First-past-the-post (FPTP) system

- In the FPTP system, the leading candidate can win an election despite winning a minority of the votes.
- This happened in the U.S. in 2016, when Donald Trump won the presidency despite winning less than 50% of the vote, thanks largely due to the nature of the electoral college, but also due to third candidates acting as spoilers in several seats in swing States.

- India too follows an FPTP system. In several States with a high number of effective parties in particular (U.P. and Bihar, for instance), parties which secure less than 50% of the vote tend to win substantive majorities.
- In the past, this was mitigated at the Central level by the need for coalitions — even if the leading party in the election fell short in vote share terms, it had to get the support of regional parties to go past the halfway mark in seat terms. This rendered the system a truly representative one.
- In 2014, however, the NDA won the majority of seats despite a vote share of only 38.5% and little accretion of outside support after the election.

Conclusion

Even if the preferential voting system is more complicated than the FPTP system, it is worth considering as a just alternative in the longer term.

Connecting the dots:

The preferential voting system ensures a truly representative winner. Critically examine the suitability of this voting system in India.

Statute in Braille to mark Constitution Day

In news:

- The Constitution will be made available in Braille for the first time ahead of the Constitution Day on November 26.
- In a joint project undertaken by The Buddhist Association for the Blind along with Saavi Foundation and Swagat Thorat, who started India's first Braille newsletter Sparshdnyan, the Constitution will be made available in five parts in Braille for the benefit of visually challenged individuals.

Employee has right to resign, says Supreme Court

Part of: GS Prelims and Mains II – Role of Judiciary; Fundamental Rights; Polity

In news:

- **To resign is a right** of an employee and he cannot be forced to continue, the Supreme Court has said in a recent order.
- An employee **cannot be compelled to serve** in case he is not willing “until and unless there is some stipulation in the rules or in the terms of appointment or disciplinary

proceedings is pending or contemplated which is sought to be avoided by resigning from the services.”

Are criminal laws ill-equipped to deal with cases of riots?

Part of: GS Mains II – Indian polity; Government laws and policies; Policy reforms

In news:

- According to Delhi High Court, general criminal law is ill-equipped to deal with communal riots cases.
- The statement was made after the HC upheld the conviction of 70 persons on the charges of rioting, burning houses and violating curfew during the 1984 anti-Sikh riots.

The HC observed that - after each event of communal riots, allegations of political influence have worked as the root cause or for protection of those responsible. It has suggested for several reforms –

- Entrusting investigative and prosecution process in such cases to authorities other than normal agencies of the State.
- The High Court wondered if the initial task of gathering evidence or the duty to “preserve” evidence can be entrusted to the Human Rights Commissions in cases of communal riots situations.
- Once a Commission of Inquiry is instituted, under the Commission of Inquiry Act, 1952, further investigative process by gathering all evidence for such cases can be taken over by such Commissions of Inquiry.

Crux –

- The court suggested amendments to the **Commissions of Inquiry Act, 1952** and the **Protection of Human Rights Act, 1993** to entrust the responsibility of investigation in communal riots **through SITs** specially constituted under their respective control.
- With **the technological advancements** that have been made and the rise of media — **print and electronic** — **as an effective fourth pillar of democracy**, the HC said there was a strong case for utilising as evidence the press reports, supported by photographic material or video footages in trials of criminal cases arising out of communal riots.

SOCIAL ISSUE/WELFARE PROGRAMMES

Support for lives on the move

General studies 2&3

- *Social justice*
- *Economic development and inclusive growth*

Introduction

- Though migration is expected to enhance consumption and lift families out of absolute poverty at the origin, it is not free from distress.
- This distress is due to unemployment or underemployment in agriculture, natural calamities, and input/output market imperfections.

Factors of internal migration

- Migration is driven by push-pull factors.
- Distress has been a push factor from rural areas.
- The desire for better employment in urban areas has been a pull factors in internal migration in India.
- Data show that employment-seeking is the principal reason for migration in regions without conflict.

The problems of migration

- At the destination, a migrant's lack of skills is a major hindrance in entering the labour market.
- The modern formal urban sector has often not been able to absorb the large number of rural workers entering the urban labour market.
- This has led to the growth of the 'urban informal' economy, which is marked by high poverty and vulnerabilities.
- The 'urban informal' economy is wrongly understood in countries such as India as a transient phenomenon.
- It has, in fact, expanded over the years and accounts for the bulk of urban employment.
- Most jobs in the urban informal sector pay poorly and involve self-employed workers who turn to petty production because of their inability to find wage labour.
- Then there are various forms of discrimination which do not allow migrants to graduate to better-paying jobs.

- Migrant workers earn only two-thirds of what is earned by non-migrant workers, according to 2014 data.
- Further, they have to incur a large cost of migration which includes the 'search cost' and the hazard of being cheated.
- Often these costs escalate as they are outside the state-provided health care and education system; this forces them to borrow from employers in order to meet these expenses.
- Frequent borrowing forces them to sell assets towards repayment of their loans.
- Employment opportunities, the levels of income earned, and the working conditions in destination areas are determined by the migrant's household's social location in his or her village.
- The division of the labour market by occupation, geography or industry (labour market segmentation), even within the urban informal labour market, confines migrants to the lower end.
- Often, such segmentation reinforces differences in social identity, and new forms of discrimination emerge in these sites.

The benefits of migration

- Despite these issues, internal migration has resulted in the increased well being of households, especially for people with higher skills, social connections and assets.
- Migrants belonging to lower castes and tribes have also brought in enough income to improve the economic condition of their households in rural areas and lift them out of poverty.
- Data show that a circular migrant's earnings account for a higher proportion of household income among the lower castes and tribes.
- This has helped to improve the creditworthiness of the family members left behind — they can now obtain loans more easily.
- Thus, there exists a need to scale-up interventions aimed at enhancing these benefits from circular or temporary migration.
- Interventions targeting short-term migrants also need to recognise the fact that short-term migration to urban areas and its role in improving rural livelihoods is an ongoing part of a long-term economic strategy of the households.
- Local interventions by NGOs and private entrepreneurs also need to consider cultural dimensions reinforced by caste hierarchies and social consequences while targeting migrants.

Why a national policy?

- According to a study, less than 20% of urban migrants had prearranged jobs and nearly two-thirds managed to find jobs within a week of their entry into the city.
- The probability of moving to an urban area with a prearranged job increases with an increase in education levels.
- Access to information on employment availability before migrating along with social networks tend to reduce the period of unemployment significantly.
- Social networks in the source region not only provide migrants with information on employment opportunities, but are also critical as social capital in that they provide a degree of trust.
- While migrants interact with each other based on ethnic ties, such ties dissipate when they interact with urban elites to secure employment.
- In India, the bulk of policy interventions, which the migrants could also benefit from, are directed towards enhancing human development; some are aimed at providing financial services.
- As government interventions are directed towards poverty reduction, there is a dearth of direct interventions targeted and focussed on regions.
- Policies on this could be twofold. The first kind could aim at reducing distress-induced migration and the second in addressing conditions of work, terms of employment and access to basic necessities.
- Policy interventions have to consider the push factors, which vary across regions, and understand the heterogeneity of migrants.

Way forward

- There is a need to distinguish between policy interventions aimed at 'migrants for survival' and 'migrants for employment'.
- Continued dynamic interventions over long periods of time would yield better results compared to single-point static interventions, especially in the context of seasonal migrants.
- Local bodies and NGOs which bring about structural changes in local regions need to be provided more space.
- Interventions aimed at enhanced skill development would enable easier entry into the labour market.
- We also need independent interventions aimed specifically at addressing the needs of individual and household migrants because household migration necessitates access to infrastructure such as housing, sanitation and health care more than individual migration does.
- Various interventions must complement each other.

- For instance, government interventions related to employment can be supported by market-led interventions such as microfinance initiatives, which help in tackling seasonality of incomes.
- Another important example is, improved financial infrastructure to enable the smooth flow of remittances and their effective use require more attention from India's growing financial sector.

Connecting the dots:

- A national policy for internal migration is needed to improve earnings and enable an exit from poverty. Comment.

UNESCO global education monitoring report 2019

Part of: GS Prelims and Mains II and III – Social issue; Education or Literacy; Human Economy

In news:

UNESCO report says that –

- **Literacy levels** in rural households of India **dip with seasonal migration**.
- 80% of seasonal migrant children in seven cities lacked access to education and 40% were likely to end up in work.
- Construction sector absorbs the majority of short-term migrants.
- Inter-State migration rates have doubled between 2001 and 2011.
- It also warns of the negative impact on education for children who are left behind as their parents migrate: "Test scores were lower among left-behind children aged 5 to 8."

What steps India has taken to address the issue?

- Right to Education Act in 2009 made it mandatory for local authorities to admit migrant children.
- National-level guidelines are issued to allow for flexible admission of children; to provide transport and volunteers to support with mobile education; create seasonal hostels and aiming to improve coordination between sending and receiving districts and states.

Pic:

https://d39gegkjaqduz9.cloudfront.net/TH/2018/11/20/DEL/Delhi/TH/5_07/f8427371_2537999_101_mr.jpg

Tribal development and empowerment

Part of: GS Prelims and Mains II – Social and welfare issue; Inclusive development

In news:

According to the Scheduled Castes and Scheduled Tribes Research and Training Institute –

- Odisha has made significant strides in tribal empowerment and development during the past couple of decades.
- Comparing the status of 13 tribal-dominated districts (from 2001-02 to 2011-12), the study indicated that seven districts have climbed up, two districts have remained constant and four districts have climbed down in their respective rankings.
- The tribal literacy rate of Odisha was 37.37% with tribal female literacy at 23.37%, but it increased to 52.24% with female literacy at 41.20 % in the 2011 Census.

Do you know?

- Odisha has the second highest percentage of tribal population in the country.
- The State has 62 Scheduled Tribes, of which 13 have been identified as particularly vulnerable groups.
- The scheduled area of Odisha comprises 13 districts and 119 tribal sub-plan blocks.
- About 60% of the total tribal population of Odisha lives within the scheduled area and the remaining 40% live outside.

U.S. citizen killed by Andaman tribals

In news:

U.S. citizen was killed by Andaman tribals when he tried to enter the North Sentinel Island (one of the Andaman Islands).

Do you know?

- Access to North Sentinel Island and its buffer zone is strictly restricted under the **Protection of Aboriginal Tribe (Regulation), 1956** and **Regulations under Indian Forest Act, 1927**.
- Photographing or filming the tribe members is also an offence. The rules were amended later to enhance penalties. But restricted area permits were relaxed for some islands recently.

Who are these Sentinelese?

- The Sentinelese, a negrito tribe who live on the North Sentinel Island of the Andamans, have not faced incursions and remain hostile to outsiders.
- The inhabitants are connected to the Jarawa on the basis of physical, as well as linguistic similarities, researchers say.
- Based on carbon dating of kitchen middens by the Anthropological Survey of India, Sentinelese presence was confirmed in the islands to 2,000 years ago. Genome studies indicate that the Andaman tribes could have been on the islands even 30,000 years ago.
- The Sentinelese have been fiercely hostile to outside contact. But in 1991 they accepted some coconuts from a team of Indian anthropologists and administrators.
- Some researchers argue that the Sentinelese have been mostly left alone even from colonial times, unlike other tribes such as the Onges, Jarawas and Great Andamanese, because the land they occupy has little commercial attraction.

How many are there?

- From 1901 to 1921 they were estimated to be 117 people. In 1931, the number dropped to 50, a figure used for the 1961 Census too. In 1991 their head count was put at 23.
- Census 2001 counted 39 inhabitants.

Do not disturb this Andaman Island

General studies 1, 2 & 3

- *Geography and society (Tribes, vulnerable sections of the society)*
- *Health and related issues*
- *Tourism*

Introduction

- 'Civilisation' has destroyed the aboriginals of Andaman & Nicobar. The death of an interloper on North Sentinel Island underlines the threat to the 55,000-yr-old sovereignty of the Islands' last tribe standing.
- After 12 years, the Sentinelese have again rejected external contact in the most emphatic way possible.



<https://images.indianexpress.com/2018/11/north-sentinel-island-759.jpg>

Free in spirit and faith

- Chau apparently went to preach Christianity to the Sentinelese. Missionaries have been historically unwelcome in the Andamans, and the tribes of the Islands have resisted every occupation force with bows and arrows.
- The Great Andamanese fought the Battle of Aberdeen against the British in 1859, and were enslaved and eventually killed in large numbers.
- The seafaring Onge were forced to make room for the settlers.
- The forest-dwelling Jarawa fiercely resisted outsiders until the late 1990s.
- The reclusive Sentinelese still hold their tiny fort. All remain animistic in faith.
- Missionaries had greater success on the Nicobar Islands to the south, which lie on the ancient marine trade route between Europe and the Far East.
- Evangelists started to approach the Nicobar tribes from the 15th century onward, and a Christian movement eventually succeeded on the Islands during the final decades of British occupation.

An island of isolation

- The Nicobar tribes are Mongoloid; the Andaman tribes, including the Sentinelese, are Negrito — evidence for the Homo sapiens migration from East Africa some 70,000 years ago.

- The Sentinelese are a pre-Neolithic people who have inhabited North Sentinel Island for an estimated 55,000 years without contact with the outside world.
- They are short statured possibly due to the “island effect” that causes genetic limitation over time.
- The Sentinelese and other aboriginal tribes of the archipelago are protected under The Andaman and Nicobar (Protection of Aboriginal Tribes) Regulation, 1956.
- Due to their isolation, it is unlikely the Sentinelese have immunity against even common diseases.

Immunity and declining population

- A large chunk of the population of the 10 Great Andamanese tribes was wiped out after the indigenous peoples caught syphilis, measles, and influenza on an epidemic scale following contact with the early settlers.
- Between 1998 and 2004, when the Jarawa started to respond to the state, all government hospitals bordering their reserve opened special wards to treat them for infections.
- The Sentinelese remained hostile from the time efforts began to reach out to them in 1967.
- The government gave up in the mid-1990s, and in order to safeguard their health and sovereignty, decided that no one could enter a 5-km buffer zone around their island, which was already out of bounds.

Commerce vs caution

- Under the Foreigners (Restricted Areas) Order, 1963, the Andaman & Nicobar Islands are a “Restricted Area” in which foreigners with a restricted area permit (RAP) can stay on 13 islands, and make day visits to another 11.
- But in recent years, the Andaman Chamber of Commerce and Industry and the Andaman Association of Tour Operators have pressed to have the RAP restrictions relaxed.
- In August 2018, the Home Ministry dropped the RAP requirement for visiting 29 inhabited islands until 2022, even though separate approvals continue to be required for visiting Reserve Forests, Wildlife Sanctuaries and Tribal Reserves.
- Following criticism that the move compromised the safety of the tribes and ecology of the islands, the UT Administration clarified that Indian nationals would continue to require a pass issued by the Deputy Commissioner for entering a tribal reserve, and foreigners would need prior approval from the Principal Secretary (Tribal Welfare).

Cost of exposure

- Fewer than 50 Great Andamanese are alive today.

- In 2010, Boa, the last of the Bo, a Great Andamanese tribe, died — taking with her the knowledge and language of her people.
- A few months earlier, another ancient language, Khora, had passed with Boa's neighbour Boro.
- In December 2008, at least 15 Onge men died after drinking from a plastic container that had washed up on Dugong Creek.
- The Onge, who now number fewer than 100, have abandoned hunting-gathering and depend entirely on government help.
- From 2004 onward, the 400-odd surviving Jarawa began to retreat into the forest, closing the window of their willing interaction with the world.
- But the highway continues to bring the world and sexual exploitation, substance abuse and disease — into their shrinking sanctuary.
- The Sentinelese have been the exception, protected by coral reefs that make landing on their island dangerous, and by the tribe's unwavering hostility towards outsiders.

Conclusion

- In December 2014, the A&N administration announced a change of policy from “hands off” to “hands off but eyes on” to protect the Sentinelese.
- Chau's tragedy underlines the need to re-examine security and tighten vigil around North Sentinel Island.
- While the “island effect” may eventually wipe out the tiny tribal populations in the archipelago, allowing their sanctuaries to be invaded by outsiders will only hasten that process.
- As President Pranab Mukherjee said in 2014, it is the job of the Indian state “to protect them in their own environment and in their own circumstances”.

Connecting the dots:

What is "island effect"? Critically examine the causes of declining tribal population on Andaman and Nicobar islands.

'44 violations took place in Andamans'

Do you know?

- As many as 44 violations by foreigners have taken place in recent past in restricted areas of Andaman and Nicobar islands.

- Restricted Area Permit (RAP) – this policy allows people to visit certain locations with permission.
- The RAP for foreigners and Indians was recently liberalised by the Centre.
- Now, RAP may be reimposed in the Andamans following the recent killing of an American by inhabitants on North Sentinel Island, a highly reclusive and protected tribe.
- Though the RAP was withdrawn in 29 islands, tourists are required to take permission from the Forest Department and the administration of the Andamans as it is protected under two other Acts — protection of aboriginal people and forest Acts.

Lessons from a tragedy: On Adaman & Nicobar

Introduction

- The tragic death of an American adventurer in the protected “tribal reserve” of North Sentinel Island in the Andaman and Nicobar Islands archipelago has triggered global interest in the region.
- There are debates about peculiar and almost brutal hostility displayed by the Sentinel islanders towards the outsider. Some see it as signs of a pathological “primitivity” and the result of “complete isolation” from “civilisation” while others interpret it as an effect of the historical memory of colonial brutality.

On the question of hostility and isolation

- Change in shape of their canoes, use of iron to make blades and arrowheads, glass bead necklaces etc all point to the fact that over the years Sentinelese have not remained completely isolated.
- There are images which show them receiving coconuts, bananas and other gifts from government contact parties.
- Thus Sentinelese decide on spot what contact is safe and useful- pointing to the fact that their hostility is rather ‘strategic’ to ensure survival, rather than borne out of primitivity.

Why hasn’t Indian government pacified Sentinelese into contact ?

- Unlike the colonial predecessors, Indian government has rightly abstained from coercing indigenous communities into assimilation.
- Tribal welfare policy in the islands today not only ensures their protection but also accept their right to self-determination.

Problem with protection

- Policies of “protection” demand strong surveillance infrastructures, empowered staff, coordination among police, forest and welfare agencies and, more importantly, investment in projects of sensitisation.
- It is tensions between the common settler-indigene relations on the islands leads to collusive breaches of the law and the undermining of the protective cover for the Sentinelese and other Particularly Vulnerable Tribal Groups (PVTGs) like the Jarawas.

Why vulnerable to intrusions?

- The Indian government though gave it a free society status but used it as a space to settle its “excess” population – like the refugee rehabilitation schemes in the post-Partition years.
- Though cared for and protected, they had to move out of their original forest habitats into newly designated “tribal reserves”.
- As a result of continuous settlement and often ill-conceived developmental projects on the islands over the past six decades, these reserves have become increasingly vulnerable to the intrusions of poachers, encroachers and tourists.

Do you know?

Tribal Panchsheel Policy by Jawaharlal Nehru

- 1) Non-imposition: People should develop along the lines of their own genius, and the imposition of alien values should be avoided.
- 2) Tribal rights in land and forest should be respected.
- 3) Teams of tribals should be trained in the work of administration and development. Introducing too many outsiders into tribal territory should be avoided.
- 4) Tribal areas should not be over administered or overwhelmed with a multiplicity of schemes.
- 5) Results should be judged not by statistics or the amount of money spent, but by the human character that is evolved.

Conclusion

- It is important to draw a few lessons from the recent unfortunate death and question the ways in which mainland India views the islands.
- The announcement of new projects for “holistic” development of Andaman and Nicobar Islands should consider a context-sensitive “island view” of development and recognise settlers and PVTGs as equal stakeholders in a common sustainable future.

Connecting the dots:

- The indigenous communities and settlers in the Andaman & Nicobar Islands must be equal stakeholders in a common future. Comment.

Protect indigenous people

Introduction

- The debates following the recent alleged killing of an American national by the Sentinelese have put the spotlight on the vulnerability of an indigenous community that has lived for thousands of years with little contact with outsiders.
- The Andaman Trunk Road, among other projects, has cut into the heart of the Jarawa reserve, which has not only disturbed their ecological environment but has also changed their lifestyle and dietary habits and endangered them.
- Implementation of the various provisions to protect the tribals of the Andaman and Nicobar Islands has been poor.

The tribes of Andaman and Nicobar

- Negrito tribal communities in Andaman - the Great Andamanese, Onge, Jarawa and Sentinelese
- Mongoloid tribal communities in Nicobar - the Shompen and Nicobarese

India's policy towards Tribals

1) Jawaharlal Nehru's Tribal Panchsheel

- Non-imposition : People should develop along the lines of their own genius, and the imposition of alien values should be avoided.
- Tribal rights in land and forest should be respected. (Example: FRA 2006)
- Teams of tribals should be trained in the work of administration and development. Introducing too many outsiders into tribal territory should be avoided. (Example: PESA)
- Tribal areas should not be over administered or overwhelmed with a multiplicity of schemes.
- Results should be judged not by statistics or the amount of money spent, but by the human character that is evolved.

2) Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation (ANPATR), 1956

- This Regulation protected the tribals from outside interference, specified the limits of reserved areas and said no land in a reserved area shall be allotted for agricultural purposes or sold or mortgaged to outsiders.
- Those violating the land rights of the tribals were to be imprisoned for one year, fined ₹1,000, or both.

3) Policy of non-intervention

- A committee was set up by the SC after a petition was filed in 1999 proposing to bring the Jarawas in mainstream.
- The committee recommended protecting the Jarawas from harmful contact with outsiders, preserving their cultural and social identity, conserving their land and advocated sensitising settlers about the Jarawas.

4) 2005 ANPATR was amended; The term of imprisonment as well as the fine increased.

5) 2012 ANPATR amendment

- ANPATR was amended yet again in 2012, creating a buffer zone contiguous to the Jarawa tribal reserve where commercial establishments were prohibited, and regulating tourist operators.

6) Easing of the Restricted Area Permit

- Despite India's domestic policy and the ANPATR, the government in August relaxed the Restricted Area permit for 29 islands in the Andaman and Nicobar, including North Sentinel Island.
- If the government intendeds to eventually ease these restriction, it could have an adverse impact on indigenous population in the long run.
- Such commercialisation of tribal spaces could lead to encroachment of land, as we see in other parts of the country.

International conventions

- The Indigenous and Tribal Populations Convention, 1957 of the International Labour Organisation (ILO) insisted on an integrationist approach towards tribal communities, whereas, the 1989 convention of the ILO insisted on a policy of non-intervention.
- India ratified the 1957 convention but has not ratified the 1989 convention.

Problems faced by these tribes

- The lifestyle and dietary habits of the Jarawa has been drastically changed after the Andaman Trunk Road was constructed, cutting right through the Jarawa reserve. For Jarawas, this had led to the spread of diseases, sexual exploitation, and begging.
- In spite of the 2005 amendment, videos of commercial exploitation of the Jarawas in the name of "human safaris" were widely reported in the media.
- Despite all the amendments and provisions, there continue to be numerous reports of civilian intrusion into the Jarawa tribal reserve.

Conclusion

- Government needs to reorient its policies and priorities to protect the indigenous tribes.
- India needs to sign the 1989 convention of the ILO, and implement its various policies to protect the rights of the indigenous population.
- It should also make efforts to sensitise settlers and outsiders about them.

Connecting the dots:

- Highlight the regulations and policy of the government towards protection of tribes of Andaman & Nicobar islands. Also throw light on ineffective implementation of these provisions in the light of recent death of an American National.

GST of 18% on tendu leaves: how it will impact tribals

Part of: GS Prelims and Mains II and III – Welfare/social issues; government schemes and policies affecting tribals or vulnerable section

Quick facts about Tendu Leaves

- The tendu tree (*Diospyros melanoxylon*) is found widely across central India.
- Leaves plucked from its shrubs are used to wrap bidi, the poor man's cigarette.
- Gathering tendu is labour-intensive and employs millions of tribals.
- Tendu leaf is the financial lifeline of the tribal people. Many tribals in central India depend of tendu leaf collection for subsistence.
- They collect the leaves as part of their right defined under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
- Madhya Pradesh is the biggest Tendu Leaves producing State of India.
- Tendu tree is endemic to Indian sub-continent. It is found in dry deciduous forests throughout India.

Concern:

- GST imposed on tendu leaves, a Minor Forest Produce (MFP), is 18%. The 18 per cent GST is made up of 9 per cent central GST (CGST) and 9 per cent state GST (SGST). Central tax on the leaf was earlier zero.
- Now, as the tax is high, the traders who get the tender from state corporations to collect tendu leaves pay even less to the tribals collecting the leaves.
- The hike in taxation will surely take a toll on the tribals who depend on the leaves for subsistence.

Do you know?

- Minor Forest Produce (MFP) as defined by the Forest Rights Act (FRA) is “**all non-timber forest produce of plant origin** and includes bamboo, brushwood, stumps, canes, Tusser, cocoon, honey, waxes, Lac, tendu/kendu leaves, medicinal plants and herbs, roots, tuber and the like.” Tribals have the right to procure and sell these products.

Quota math: on Maharashtra's Maratha reservation proposal

General studies 2 & 3

- *Social justice and empowerment of vulnerable sections of the society*
- *Inclusive growth*
- *Issues related to employment*

Introduction

The Maharashtra Cabinet has cleared the proposal to grant reservation to Marathas, though it is yet to be passed in the State Assembly.

Rationale behind reservation

- According to the cabinet the decision is in line with the recommendations of a State Backward Class Commission (SBCC) report which is yet to be made public.
- According to the cabinet, the SBCC report recommends reserving seats for Marathas under a new, separate Socially and Educationally Backward Class category as Marathas are socially and educationally backward, with minuscule representation in government services, and the State is liable to take action considering the “extraordinary and exceptional conditions”.

Is this reservation justified?

- Earlier also in 2014, a move to reserve 16% of seats in government jobs and educational institution was stayed by the Bombay High Court.
- Creating a separate category now would increase the overall quota beyond the 50% limit set by Supreme Court.
- According to critics the Cabinet’s decision is not for socio-economic reason but as a political exigency.
- The SBCC’s findings that a significant proportion of Marathas constitute a socially and educationally backward class do not match with available data.
- Like the Jats in Rajasthan and Patels in Gujarat, Marathas enjoy a socio-economic status similar to that of the forward classes (and castes) in Maharashtra.
- There is no reason to argue that Marathas face any social stigma that calls for affirmative action. Thus their demand for reservations is only to avail welfare benefits.
- Dominant communities only ask for reservation because they are unable to move up the economic ladder and don’t have adequate employment opportunities amid a sluggish agrarian economy.

Conclusion

As judicial scrutiny is bound to be brought to bear on the government's decision, it will be well-advised to look at measures to alleviate the State's prolonged agrarian distress and the lack of adequate jobs, problems that affect all sections of society.

Connecting the dots:

- What was the motive behind reservation policy designed by makers of the constitution? Critically examine the rising demands of reservation from forward classes.



WOMEN ISSUE

26-week maternity leave law

Part of: GS Prelims and Mains II – Social issue; Women issue; Health Issue

In news:

- The **Ministry of Labour and Employment** is working on an **incentive scheme** whereby the government would bear the cost of maternity leave wages for seven weeks, subject to certain conditions.
- In a bid to encourage employers **to implement the extended 26-week maternity leave law**, the Labour Ministry plans to refund them for seven weeks' worth of wages for women workers with a wage ceiling up to ₹15,000 a month. (incentive scheme)
- The financial implication to the Centre is estimated to be **₹400 crore**, and the Ministry is in the process of obtaining budgetary approvals.

Do you know?

- In March 2017, the Centre amended the **Maternity Benefit Act** to increase paid maternity leave from 12 to 26 weeks for all women employees in establishments employing 10 or more people.
- However, implementation was very poor with private sector or contract jobs.
- Some private entities didn't encourage women employees because if they are employed, they may have to provide maternity benefit to them, particularly 26 weeks of paid holiday.
- Women employees were asked to quit or are retrenched on flimsy grounds before they go on maternity leave.

Key pointers:

- Maternity Benefit Amendment Act, 2017, increases the paid maternity leave from 12 weeks to 26 weeks and mandatory crèche facility.
- Amendments seek to improve infant mortality rate (34 per 1,000 live births) and maternal mortality rate (167 per 100,000 live births).
- To ensure that working women are not forced to discontinue breastfeeding.
- To make provision for just and humane conditions for work and maternity relief (Article 42).

Making employers solely liable is not a viable option:

- 2014 ILO report had specially cautioned against making employers solely liable for the cost of maternity benefits.

- Advocated that maternity benefits should be provided either through compulsory social insurance or public funds.
- Standing Committee on Labour in 2007 had suggested that the government should create a corpus fund to partially sponsor the costs to be incurred by the employer to provide maternity benefits.

SC: live-in partner can seek maintenance

Part of: GS Prelims and Mains II – Government schemes and policies; women violence

In news:

According to a recent Supreme Court order –

- A live-in partner can seek maintenance under the Domestic Violence Act.
- The 2005 Act provides an “efficacious remedy” for maintenance even if the victim is not a legally wedded wife.

About the Domestic Violence Act, 2005

- The function of the law was to be simple—address violence against women within the home.
- It is considered a landmark Act because for the first time, an act stepped inside the home and dealt with private spaces of individuals—something the law had avoided doing until then.
- The Act defined domestic violence for the first time – The definition includes not just physical abuse, which is more identifiable and is easier to prove (for example, using medical records), but also aspects like emotional and sexual abuse. It even includes threat of violence as part of the definition.
- One of the main objectives of DVA was to secure residence for a woman; it was immaterial that she didn’t have title or ownership of such a shared household.

The Act provides for four fold support system to women who have suffered violence at home:

- Residence orders,
 - custody orders,
 - protection orders and
 - monetary relief from a respondent.
-

Fissures amidst growth: Female foeticide

General studies 2 & 3

- *Women and related issues: female foeticide*
- *Equality, right to education*
- *Inclusive growth, regional disparity*

Introduction

- India is now among the fastest-growing large economies of the world with 7 per cent real GDP growth during October-December 2017; followed by 7.7 per cent in January-March 2018 and then 8 per cent in April to June 2018.
- Unless stung by some serious shocks, India should achieve an annual growth rate of around 7.5 per cent over the next few years.
- The issue is not inadequate growth. Far more worrisome are some serious fractures that have emerged and show no signs of healing. Four such are: Female foeticide and infanticide; Failure of education; Rising inequalities; and Huge economic differences between regions of the country.

Female foeticide and infanticide:

- Demographers agree that the “natural” sex ratio at birth for the world is 935 girls per 1,000 boys. Given the poor state of birth registrations in many parts of India, we use the sex ratio of girls per 1,000 boys between ages zero to six.
- At 918 girls per 1,000 boys in 2011, India’s 0-6 sex ratio is among the poorest in the world.
- With an outrageously low sex ratio of 834 girls per 1,000 boys, Haryana is the vilest state, with every district faring poorer than the poor all-India average.
- In 2011, the 0-6 sex ratio in Punjab was 846, or 7.8 per cent below the all-India average, twenty-eight of the 33 districts of Rajasthan were worse than India, as were 47 of the 71 districts of Uttar Pradesh (UP).
- In 17 of the 26 districts of Gujarat, the 0-6 sex ratios were poorer than India’s. Surat, one of the country’s richest districts, had a ratio of 835 girls per 1,000 boys, ranking among the bottom 25.
- Ahmedabad had 857 girls per 1,000 boys, or 7 per cent lower than all-India. In Gandhinagar, the capital, the ratio was 847, or 45th from the bottom.
- In Maharashtra, for 22 of 35 census districts, the ratio was poorer than India’s.
- Simply put, much of north India, western UP, Rajasthan, Gujarat, Maharashtra and the northern part of Madhya Pradesh rampantly engage in ultrasonography to detect and then illegally abort female fetuses.

- Despite tough laws against sex-determination and female foeticide, there is no police action to speak of. For instance, during 2001-2015, Haryana registered only 139 police cases — in a state which is unparalleled in this crime.

Failure of education:

- In a rapidly digitising world, India is wholly unequipped to supply quality education.
- According to the 2011 Census, 14 per cent of men aged 25-34 years hadn't studied beyond class 10, 11.5 per cent hadn't progressed beyond Class 12 and only 14.6 per cent were graduates.
- For women, these numbers were poorer: 10 per cent stopped studying after class 10, 8 per cent after class 12 and just 11 per cent were graduates.
- According to the Annual Status of Education Report for 2017, 25 per cent of rural students of 14-18 years could not read basic text fluently in their own language. Over 50 per cent struggled with dividing three-digits by one-digit and 60 per cent couldn't calculate the length of a key if placed away from the "0" mark on the ruler.
- These are going to be the sentinels, the demographic dividend, of our globalised knowledge economy.

Rise in inequalities:

- Though there are over 240 million desperately poor people in the country, poverty has clearly reduced in both rural and urban India. Not so inequalities.
- The Gini coefficient, which ranges from 0 and 1, is an indicator of inequality with a higher Gini implying greater inequality.
- Based on household consumption expenditure, Gini coefficient is calculated.
- In 1993-94, the Gini coefficient for India as a whole was 0.301. By 2011-12, it had risen to 0.359.
- Urban India has shown greater increases in inequality. The urban Gini for 1993-94 was 0.319, which increased to 0.377 in 2011-12.
- We still don't have frighteningly large inequalities in consumption expenditure or income, such as in Brazil, Mexico, Malaysia, South Africa and Pakistan. Wealth inequalities are becoming obviously large.

Huge economic differences between regions of the country

- The 2001 and 2011 censuses lists household ownership and access to some basic assets and amenities.
- These are: Pucca house, electricity, latrine, separate bathroom, bank account, television, phone, two-wheeler and LPG connection.
- Based on these, one can construct a ranking of each district of India, from the "richest" to the "poorest".

- The north (Punjab, Himachal Pradesh, Uttarakhand, Western UP), the irrigated parts of Rajasthan, most of Gujarat, parts of Maharashtra, Goa, parts of Karnataka, most of Andhra Pradesh and Telangana, all of Kerala and much of Tamil Nadu do well.
- The districts that fare poorly cover most of Bihar, Jharkhand, Chhattisgarh, central and eastern Madhya Pradesh, Orissa, parts of West Bengal, lower Assam, parts of upper North East and the tribal belts of Gujarat and Madhya Pradesh.
- If you drew a longitude somewhere between Allahabad and Varanasi you could say this: West of the line is the zone of relative prosperity; east of it lie the districts of absolute and relative misery.

Conclusion

In a milieu of impressive growth, India has developed some serious fractures that show no signs of cure. If these fractures are cured, India's growth will translate in true sense of development.

Connecting the dots:

- Growth rate of India is on positive trajectory, but to develop in true sense some fractures needs to be cured, such as – Female foeticide and infanticide, Failure of education, Rising inequalities; and Huge economic differences between regions of the country. Critically comment.

Self-defence: Kerala village set to become first local body to train all its women

Part of: GS Mains II – Social issue; Women empowerment; Government schemes and policies

In news:

- **Kangazha village in Kottayam (Kerala)** is set to earn the distinction of having all its women aged 10-60 trained in self-defence — a first for any local body.
- Launched as **part of the Nirbhaya scheme** in April 2017, the project has so far covered over 7,800 women and is slated to include the remaining 2,000-odd soon.

Kerala state had also earned distinction because of its unique of community service model – Kudumbashree

About Kudumbashree

- Launched by Government of Kerala in 1998, it was envisioned as a part of the People's Plan Campaign and local self-governance, with women at the centre of it.
- Aim: To wipe out absolute poverty from state through concerned community action under the leadership of local self-government

[Single women seek monthly pension](#)

Part of: GS Mains II – Social or women welfare issue

In news:

- National Forum for Single Women's Rights (NFSWR) – forum representing single women has prepared a charter of demands pitching for enhanced budgetary allocation so that schemes such as monthly pension and benefits for care-givers can be framed for them.
- The forum has also demanded that the Central government look at issues concerning single women not solely as problems afflicting elderly widows but also widows of all ages as well as unmarried, divorced, separated and abandoned women.

[#MeToo: GoM may review law](#)

Part of: GS Prelims and Mains II – Government policies and schemes; Social/Women issue

In news

- Group of Ministers (GoM), which was constituted to examine sexual harassment at the workplace, may consider amending the Sexual Harassment of Women and Workplace law to ensure workplace safety.
- Women and Child Development (WCD) Ministry had also shared its recommendations which include changes to the Sexual Harassment of Women and Workplace (Prevention, Prohibition and Redressal) Act, 2013.
- The guiding principles for making the amendments would be the Vishaka guidelines.

Do you know?

- The Justice J. S. Verma panel had recommended an employment tribunal instead of an internal committee to probe complaints.

About Vishaka guidelines

- The Vishaka Guidelines was laid down by the Supreme Court in 1997.
- The guidelines lay the onus on the employer to prevent or deter acts of sexual harassment, apart from “providing resolution, settlement or prosecution of acts of sexual harassment.”
- Sexual Harassment of Women and Workplace Act was result of Vishaka Guidelines.
- The Act lays down the duties of an employer: ensuring a safe working place, displaying penal consequences of sexual harassment, creating awareness, as well as facilitating an internal probe.

HEALTH ISSUE

Zika Virus: Cause to remain alert

General studies 2 & 3

- *Public Health issues*
- *Science and technology: medical research*

Introduction

- Rise in Zika virus infections in Jaipur was recently in news.
- The Indian Council of Medical Research (ICMR) recently announced that the Zika virus strains causing the outbreak in Jaipur, Rajasthan, cannot cause microcephaly.
- But there are concerns, because this announcement is based on an study on mouse. It is better to take precautions to avoid complications.

Zika virus epidemic

- Over the last few years, the international community has banded together to quickly address a growing international public health crisis — the Zika virus epidemic.
- After its detection in Brazil during 2015, observant clinicians began to notice a striking increase in the rates of babies born with microcephaly, a rare neurological condition characterised by underdeveloped brains and undersized heads.
- Epidemiological, clinical, and experimental data has indicated that microcephaly, and a range of other birth defects (such as miscarriages and ocular disease) could be caused by the Zika virus passing from a pregnant women to her foetus.

Zika Virus in India

- The ICMR recently announced that the Zika virus strains causing the outbreak in Jaipur, Rajasthan, cannot cause microcephaly.
- This conclusion was based on a genetic sequencing of viruses isolated from the outbreak.
- In these sequences, the ICMR did not find a Zika virus mutation linked to microcephaly that was suggested in a Science magazine study, in 2017.
- The problem with this conclusion is that the research was based on infection in mouse brains — not humans — and contains no epidemiological or clinical support.
- Numerous other studies suggest that all Zika virus strains may have the capacity to infect foetuses and cause neurological disease.
- More research is needed to determine if some strains are associated with a higher risk.

- It is also difficult to determine how extensive Zika virus outbreaks will be in India.
- If the Zika virus has been silently spreading in the country, as it did throughout most of Asia for the last 50 years, then enough people may be immune to the virus to prevent large outbreaks.
- According to the most recent updates, 159 people in Jaipur had confirmed Zika virus infections.
- Considering that most infections do not cause noticeable disease, and thus most infected individuals do not seek medical attention, the true number of cases may be more than 10,000.
- At least 50 of the infected individuals are pregnant women, but again, the true number is likely to be much higher.
- According to the Centers for Disease Control and Prevention in the U.S., only 5-10% of Zika virus infections during pregnancies lead to Zika-associated birth defects, and the rates of microcephaly are much lower.
- So, while the chances for the Zika virus to cause harm to an individual baby are low, there is still a chance, regardless of the Zika virus strain in circulation.

Way forward

- Despite the recent announcement suggesting that the Jaipur Zika virus strains cannot cause foetal microcephaly, all possible measures to control transmission and monitor pregnancies should be taken.
- Pregnant women and their families, including those planning to get pregnant, should take great caution to avoid mosquitoes — wear long sleeves and trousers, stay indoors when possible, use insect repellent, and remove standing water that mosquitoes use for breeding.
- Zika virus infection is not guaranteed upon mosquito bite, but the chances for infection rise with each new bite.
- Zika-associated birth defects could be a serious public health crisis in India, and, without a vaccine, all possible measures to control transmission and monitor pregnancies should be taken.

Connecting the dots:

- Zika virus infections in India; how serious the problem is?

Setting a proper diet plan: Malnutrition in India

Introduction

- Recently, three girls died of starvation resulting from prolonged malnutrition in the national capital Delhi, which is a high per capita income State.
- Such paradox of situation is visible in many parts of the country.
- Despite being one of the fastest growing economies in the world, the nutrition condition of India is a serious concern.

Some stats

- India has been ranked at 103 out of 119 countries, with hunger levels categorised as “serious”, in the Global Hunger Index 2018.
- India’s child malnourishment level is not only the highest in the world but varies considerably across States.
- As per the National Family Health Survey-2016, the proportion of stunted (low height for age) children under five is significantly higher (38.4%) than global (22.9%) averages.
- The underweight (low weight for age) children rate (35.7%) is a lot higher than the global average (13.5%) too.
- India is home to over 53.3 million stunted, 49.6 million underweight and 29.2 million wasted (low weight for height) children under five.

Major challenges

Economic growth is not an "only" solution

- There is no doubt that the low income and Empowered-Action-Group (EAG) States face major challenges to improve malnutrition, but, two EAG States, Chhattisgarh and Odisha, have performed better on this front compared to Gujarat and Maharashtra where per capita income is almost double.
- The development path prevalent in Gujarat is more about growth, development, investment, which has not been able to translate as better nutritional status in the State.
- Odisha, which is a low income State, has a better network of Integrated Child Development Services (ICDS), public health facility/workforce per lakh population and educational attainment among women, which have translated into a better nutritional status when compared with Gujarat.
- Similarly, tribals, rural, poor and illiterate mothers’ children are badly off in so-called developed States of Haryana, Gujarat and Punjab.
- These groups are also affected in poorer States of U.P., Bihar, Jharkhand and Madhya Pradesh.
- Around two-thirds of stunted/underweight children are from 200 districts of both less developed and developed States.

Contradiction: agrarian plenty and malnutrition

- Estimates show that the malnutrition continues to be high in agricultural surplus States like Haryana (34% stunting and 29.5% underweight). Malnutrition in some of its agriculturally-developed districts (Karnal, Panipat, Sonapat, Rohtak as well as in Gurugram) is even higher than the average of Odisha.
- Recently, Madhya Pradesh has registered double-digit growth in food grain production making it one of the wheat granaries of India, but acute malnutrition is still critical in most of its districts with a high proportion of underweight (42.8%) and stunted children (41.9%).

A solution: diversity in food intake

- With the increase in diversity in food intake, measured through Food Intake Index using 19 food items in all 640 districts, malnutrition (stunted/underweight) status declines.
- Only 12% of children are likely to be stunted and underweight in areas where diversity in food intake is high, while around 50% children are stunted if they consume less than three food items.
- A majority of children across districts in Tamil Nadu consume a reasonably highly diversified food, leading to lower percentage of stunted/underweight children across districts.
- Children in a majority of districts in West Bengal, Odisha, Kerala and Karnataka consume mediocre level of food items and malnutrition is relatively lower than in Rajasthan, U.P., Jharkhand, M.P., Gujarat, Bihar and Haryana (children in many of their districts consume less diversified food).
- The diversified food intake is very low in a majority of Indian districts; just 28% of children consumed over five items of the total 19 food items.

The way forward

- An inclusive and holistic approach, including controlling/regulating food price, strengthening the public distribution system (PDS) and income support policies for making food cheaper are important steps.
- The ICDS was a high impact nutrition intervention, but its universal availability and quality are questionable due to poor functioning.
- The government must broaden the ICDS programme by ensuring diversity in food items in worst-hit districts.

Conclusion

- Faster economic growth has enormous benefits, but it is by no means sufficient and sustainable if millions of children remain undernourished, as it not only impacts early childhood health and imposes disease burden but also affects education, wages and productivity when they grow up, which will impact India's growth.

- The launch of the National Nutrition Mission as a strategy to fight maternal and child malnutrition is a welcome step towards achieving the targets of underweight and stunted children under five years from 35.7% to 20.7% and from 38.4% to 25% respectively by 2022.

Connecting the dots:

- Despite being fastest growing economy and one of the leading producers of food grains, India is home to highest number of malnourished children. Critically analyse.

India to study drugs derived from marijuana

Part of: GS Mains II and III – Health issues; Research and Development; Science and Technology

In news:

- Three major science administrators in India — the Council of Scientific and Industrial Research, the Indian Council for Medical Research and the Department of Biotechnology — are getting together **to promote research in herbal drugs**, some of which involve deriving new drugs from marijuana.
- Researchers to test whether strains of marijuana could be effective in the treatment of breast cancer, sickle-cell anaemia, among others.
- The studies into the therapeutic potential of marijuana is part of a larger governmental thrust to making new drugs derived from herbs and plants that find mention in Ayurvedic and other traditional-medicine knowledge systems.

Measles and Rubella vaccination campaign

Part of: GS Prelims and Mains II – Health and welfare issue; Science

Do you know?

- Measles and Rubella vaccine is administered to all the children group of 9 months to 15 years.
- Measles-rubella (MR) vaccine is given for preventing both measles and rubella diseases in the child.
- No specific treatment is available for measles and rubella but these diseases can easily be prevented by vaccination.

- The Government is providing Measles-Rubella vaccine free of cost through its immunization programme.

About Measles

Measles is a deadly disease. It can lead to following complications -

- Pneumonia
- Diarrhoea
- Other deadly threats

The respiratory disease measles remains a leading cause of death among young children, despite the fact that a safe and effective vaccine has been available for 40 years. Measles is an acute illness caused by a **virus** of the **paramyxovirus family**.

It is one of the most **contagious diseases** and many children who do not have sufficient immunity contract measles if exposed. During the first few weeks after contracting measles, a child's immune system becomes weakened, and a normal cold or diarrhoea can become a life-threatening illness.

About Rubella

Rubella infection during pregnancy can cause congenital deformities in newborn baby, such as -

- Blindness
- Deafness
- Mental Retardation
- Congenital heart disease

Rubella is an **acute, contagious viral infection**. While rubella virus infection usually causes a mild fever and rash illness in children and adults, infection during pregnancy, especially during the first trimester, can result in miscarriage, fetal death, stillbirth, or infants with congenital malformations, known as congenital rubella syndrome (CRS).

The rubella virus is **transmitted by airborne droplets** when infected people sneeze or a cough.

Humans are the only known host.

There is no specific treatment, but the disease can be prevented by vaccination.

[Ahead on malaria: on reduction in cases in India](#)

Introduction

India has suffered from a major burden of malaria for decades, with high levels of morbidity and death. But the declining trend of the scourge shows that sustained public health action can eradicate this epidemic.

Current status

- The World Malaria Report 2018 of the World Health Organisation notes that India's record offers great promise in the quest to cut the number of new cases and deaths globally by at least 40% by 2020, and to end the epidemic by 2030.
- A lot of that optimism has to do with the progress made by Odisha, one of the most endemic States.

Success story of Odisha

- Odisha through its greater political and administrative commitment - investments in recruiting accredited social health workers, large-scale distribution of insecticide-treated bednets and strategies to encourage health-seeking behaviour, was able to reduce its malaria burden by half in 2017.
- Malaria cases in Odisha have been coming down steadily since 2003, with a marked reduction since 2008, attributed to greater political and administrative commitment.

Issues of resistance

- One issue that requires monitoring in India is resistance to combination therapy using artemisinin.
- Recent reports indicate that some patients in West Bengal became resistant to the treatment protocol used for the falciparum parasite, which causes debilitating cerebral malaria and leads to a high number of deaths.
- This requires close monitoring, although the WHO has changed the treatment policy in some north-eastern States after treatment failure in 2012.
- Since resistance to treatment has been reported in Myanmar, there is a need for a coordinated approach to rid southern Asia of malaria.

Way forward

- The efforts by Odisha should be replicated in North eastern and elsewhere too further cut the transmission of the disease.
- Eliminating malaria requires an integrated approach, involving all states especially Chhattisgarh, Jharkhand and West Bengal, which have a higher burden of the disease.
- Odisha's experience and example of using public health education as a tool and reaching out to remote populations with advice needs to be replicated elsewhere.
- Administration should not become complacent and cut funding and efforts toward control measures.

Connecting the dots:

India has suffered from a major burden of malaria for decades, but the World Malaria Report 2018 of the World Health Organisation shows that sustained public health action can end the epidemic by 2030. Critically comment.

[Lancet report warns about heatwave exposure surge](#)

Part of: GS Mains II and III – Health issues; Impact of Climate Change

In news:

- Indians faced almost 60 mn heatwave exposure events in 2016, according to Lancet report.
- It recommended Indian policy makers to take a series of initiatives to mitigate the increased risks to health, and the loss of labour hours due to a surge in exposure to heatwave events.
- Report has placed India amongst the countries who most experience high social and economic costs from climate change.

Do you know?

- Heatwaves are associated with increased rates of heat stress and heat stroke, worsening heart failure and acute kidney injury from dehydration.
- From 2014-2017, the average length of heatwaves in India ranged from 3-4 days compared to the global average of 0.8-1.8 days.
- Indians were exposed to almost 60 million heatwave exposure events in 2016, a jump of about 40 million from 2012.
- The agriculture sector was more vulnerable compared to the industrial and service sectors because workers there were more likely to be exposed to heat.

Lancet report recommendations include –

- identifying “heat hot-spots” through appropriate tracking of meteorological data
- promoting timely development and implementation of “local Heat Action Plans” with strategic inter-agency co-ordination
- timely response which targets the most vulnerable groups
- urges a review of existing occupational health standards, labour laws and sectoral regulations for worker safety in relation to climatic conditions.

What is Heat Wave?

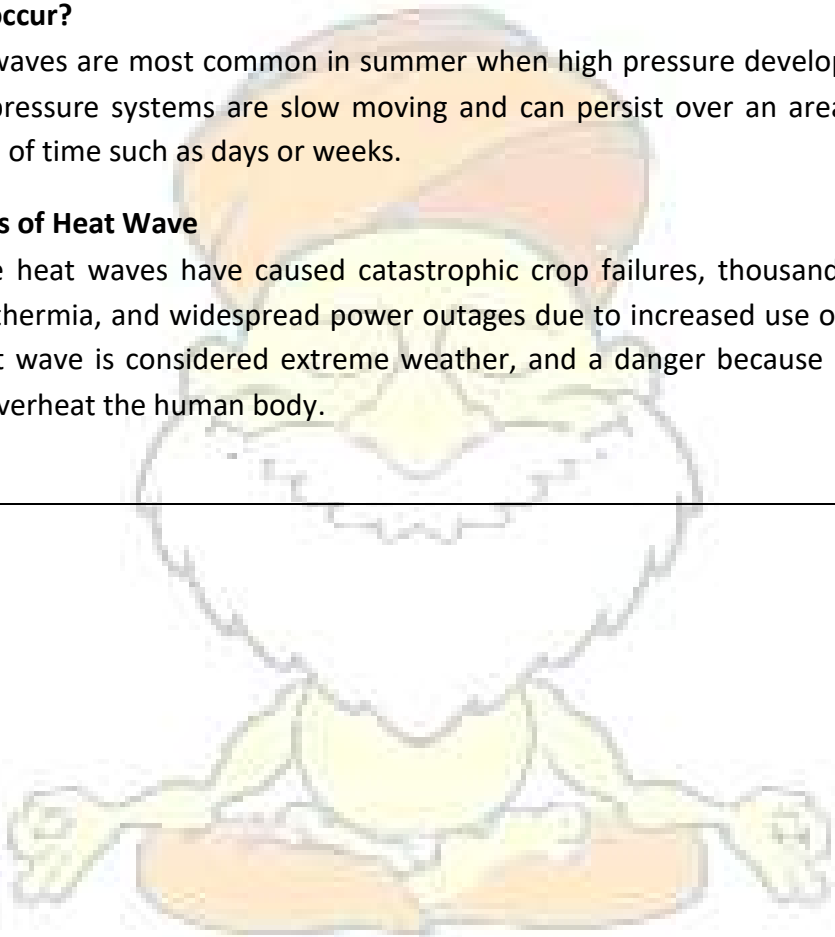
- A heat wave is a prolonged period of excessively hot weather, which may be accompanied by high humidity, especially in the west coasts of the middle latitude continents.
- A heat wave is measured relative to the usual weather in the area and relative to normal temperatures for the season. Temperatures that people from a hotter climate consider normal can be termed a heat wave in a cooler area if they are outside the normal climate pattern for that area.

How does it occur?

- Heat waves are most common in summer when high pressure develops across an area. High pressure systems are slow moving and can persist over an area for a prolonged period of time such as days or weeks.

Consequences of Heat Wave

- Severe heat waves have caused catastrophic crop failures, thousands of deaths from hyperthermia, and widespread power outages due to increased use of air conditioning. A heat wave is considered extreme weather, and a danger because heat and sunlight may overheat the human body.



GOVERNMENT SCHEMES

Loans for MSMEs in 59 minutes

Part of: GS Prelims and Mains II and III – Govt schemes and policies; Good Governance; Indian Economy – Investment; MSME sector

In news:

- PM Modi announced **12 measures to boost** the Micro, Small and Medium Enterprises (**MSME**) sector, including a portal that would enable the units to get a **loan in just 59 minutes** and **interest subvention of 2%**.
- Small businesses can use the '59-minute' portal to avail loans of up to Rs 1 crore.
- Small enterprises registered under the goods and services tax will also get a 2 percent tax rebate on incremental loans of up to Rs 1 crore.
- More than 72,000 loans worth over Rs 23,852 crore have been sanctioned.
- The portal is set up by the **Small Industries Development Bank of India**. MSMEs can register and apply for a loan.

The prime minister unveiled 12 initiatives for MSMEs, which he called “Diwali gifts”. They are:

- Loans for MSMEs up to Rs 1 crore can be granted in 59 minutes, which can also be availed through goods and services tax portal.
- A 2 percent interest subvention will be given on incremental and new loans to GST-registered MSMEs. For exporters who receive loans in pre- and post-shipment period, an increase in interest rebate has been given from 3-5 percent.
- All public-sector companies and corporates with turnover exceeding Rs 500 crore will have to mandatorily register on Trade Receivables Electronic Discounting System portal. This will improve the cash cycle for MSMEs as it will enable entrepreneurs to access credit from banks, based on their upcoming receivables.
- Public-sector undertakings will have to buy their 25 percent of their inputs from MSMEs from 20 percent earlier.
- Of the 25 percent, 3 percent of procurement will have to be done by women entrepreneurs or women-led MSMEs.
- All central public sector enterprises will have to come on board of Government e-Marketplace so that they can procure goods from MSMEs listed on the portal.
- Technology upgradation support will be given to MSMEs. About 20 technological centres will be made as hubs and 100 centres as tool rooms will be created at the cost of Rs 6,000 crore.

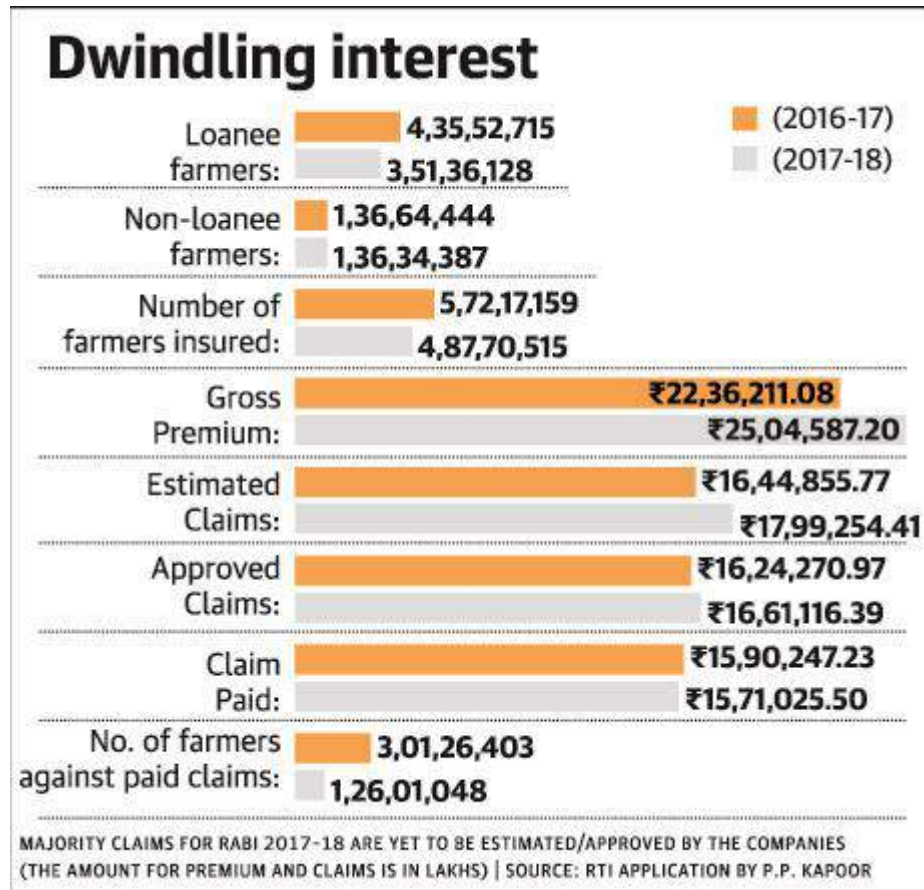
- Clusters will be created for pharma MSME companies so that they can reach customers directly. About 70 percent of the cost for creating these clusters will be borne by the central government.
- MSMEs will have to file only one return under eight labour laws and 10 central rules against two returns earlier.
- Inspection would be done based on computerised random allotment and report of inspection will have to be submitted within 48 hours on the reporting portal. This will free MSMEs from Inspector Raj (regime), Modi said.
- Process of environmental clearance has been simplified, and MSME will require only one approval for “environmental clearance” and “consent to establish” under Air and Water Act.
- Ordinance has been approved for simplifying levy of penalty for minor offences under Companies Act. This will avoid unnecessary harassment to small business owners, and they won't have to approach courts, but can correct minor violations through simple procedures.

Pradhan Mantri Fasal Bima Yojana (PMFBY): Crop Insurance Scheme

Part of: GS Prelims and Mains II and III – Government welfare schemes and policies; Farmers' issue; Social security schemes

In news:

- Pradhan Mantri Fasal Bima Yojana (PMFBY) was launched in April 2016, with the aim of bringing 50 per cent of the country's farmers under insurance cover in three years.
- However, the scheme has not been received well by farmer associations.
- More than 84 lakh farmers or around 15% of the total farmers who were insured in the first year of PMFBY (in 2016-17) withdrew themselves from the scheme in 2017-18.
- There are many reasons for this. One, while loanee farmers get mandatorily enrolled in the scheme, there is not enough effort taken to cover the non-loanee farmers.
- It is alleged that the crop insurance scheme is benefiting the private insurance companies in the name of farmers.



Pic:

https://d39gegkiaqduz9.cloudfront.net/TH/2018/11/14/DEL/Delhi/TH/5_06/94ef5522_252374_4_101_mr.jpg

Background:

- Pradhan Mantri Fasal Bima Yojana (PMFBY) was launched in April 2016
- Government scrapped down the earlier insurance schemes viz. Modified National Agricultural Insurance Scheme (MNAIS), Weather-based Crop Insurance scheme and the National Agriculture Insurance Scheme (NAIS) and made PMFBY the only flagship scheme for agricultural insurance in India.
- The scheme was launched with the aim of bringing 50 per cent of the country's farmers under insurance cover in three years.

Key Features of Scheme

- Under this scheme, farmers need to pay uniform premium of only 2% for all Kharif crops and 1.5% for all Rabi crops.
- In case of annual commercial and horticultural crops, farmers have to pay premium of only 5%.

- The premium rates to be paid by farmers are very low and balance premium will be paid by Government.
- Moreover, there is no upper limit on Government subsidy, so farmers will get claim against full sum insured without any reduction.
- Earlier, there was a provision of capping the premium rate which resulted in low claims being paid to farmers. This capping was done to limit Government outgo on the premium subsidy. This capping has now been removed and farmers will get claim against full sum insured without any reduction.
- The use of technology will be encouraged to a great extent. Smart phones will be used to capture and upload data of crop cutting to reduce the delays in claim payment to farmers. Remote sensing will be used to reduce the number of crop cutting experiments.
- PMFBY is a replacement scheme of NAIS / MNAIS, there will be exemption from Service Tax liability of all the services involved in the implementation of the scheme. It is estimated that the new scheme will ensure about 75-80 per cent of subsidy for the farmers in insurance premium.

Objectives:

- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crop as a result of natural calamities, pests & diseases.
- To stabilise the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure flow of credit to the agriculture sector.

[Pradhan Mantri Sahaj Bijli Har Ghar Yojana or “Saubhagya” scheme](#)

Part of: GS Prelims and Mains II – Government schemes and Policies; Rural development

In news:

- International Energy Agency finds India's rural electrification one of the greatest success stories this year.
- Saubhagya Scheme aims to achieve universal household electrification in all parts of the country.
- The scheme primarily benefits rural areas, which have vast majority of households without power connections.

- The beneficiaries for free electricity connection would be identified using Socio Economic and Caste Census (SECC) 2011 data.

The expected outcome of the Scheme is as follows:

- (a) Environmental upgradation by substitution of Kerosene for lighting purposes
- (b) Improvement education services
- (c) Better health services
- (d) Enhanced connectivity through radio, television, mobiles, etc.
- (e) Increased economic activities and jobs
- (f) Improved quality of life especially for women

Public bicycle sharing system launched in Odisha

Part of: GS Prelims and Mains II & III – Steps to mitigate Environmental pollution, Public transport infrastructure, use of ICT

In news:

- **The Odisha government launched a Public Bicycle Sharing system** to reduce traffic congestion, enhance space efficiency, and improve air quality in **Bhubaneswar**.
- Capital Region Urban Transport and Bhubaneswar Smart City Limited have come together for the PBS, which has been christened as **'Mo Cycle' system**.

How Public bicycle sharing system will work?

- More than 300 cyclists took part in the rally from Airport Square to Kalinaga Stadium, to generate public awareness.
- Initially, 2,000 cycles will be available at about 400 Mo Cycle stations in different locations of the city.
- According to the BSCL, riders can take cycles from any location and drop them off at any destination of their choice.
- The operators will coordinate to ensure the redistribution and availability of cycles at high-demand locations.
- Unlike rentals under the PBS system, cycles stored in a closely spaced network of stations will be made available to riders for short term shared use.
- This new system would encourage use of the same cycle by multiple riders every day.
- Users would have to **download Mo Cycle application** and register for a nominal monthly subscription.

- The rider can locate the nearest Mo Cycle station and unlock the cycle through **Quick Response Code scan**.
- **Technology interventions such as GPS and smart locks are an integral part of the system.**

Report cards to Teachers based on the performance of the students

Part of: GS Mains II – Education reforms; Government schemes and policies

In news:

- Karnataka government is all set to send out report cards that grade teachers on their performance.
- The State's department of primary and secondary education has already prepared personalised report cards for teachers in government and aided schools based on the Secondary School Leaving Certificate (SSLC) results, announced in May 2018.
- The report card will be based on the subject taught and how the class fared in it in the board exams. Teachers have been scored on a scale of zero to 10.
- The evaluation also takes into account the number of students the teacher taught that academic year, the pass percentage, and the average marks of the class.
- The personalised reports also offer suggestions on how teachers can improve their performance. Those who don't get a good rating have been asked to put in more effort.
- The move is expected to motivate teachers to prepare their students more rigorously.

Without maternity benefits: NFSA and PMMVY

Introduction

- The provision for maternity entitlements in the NFSA is very important for women who are not employed in the formal sector.
- The PMMVY, however, undermines this provision due to the dilution of the entitled amount and the exclusion criteria.
- Even in this restricted form, the scheme is yet to reach eligible women as the implementation record has been dismal till date.

Difference between National Food Security Act (NFSA) of 2013 and PMMVY

- Under the National Food Security Act (NFSA) of 2013, every pregnant woman is entitled to maternity benefits of ₹6,000, unless she is already receiving similar benefits as a government employee or under other laws.
- The PMMVY announced in December 31, 2016 violated the NFSA on 3 grounds - First, the benefits have been reduced from ₹6,000 to ₹5,000 per child. Second, they are now restricted to the first living child. Third, they are further restricted to women above the age of 18 years.

Other problems

- The application process is cumbersome and exclusionary.
- The compulsory linking of the applicant's bank account with Aadhaar often causes problems.
- Further, the PMMVY provides little assistance to women who lose their baby, because the successive payments are made only if the corresponding conditionalities are met.
- Another problem faced by women is lack of funds and their inability to improve their nutritional intake or even to eat properly during pregnancy.
- The scheme largely defeats the purpose it is supposed to serve: according to a recent analysis, it excludes more than half of all pregnancies because first-order births account for only 43% of all births in India.
- Among those who were eligible, a little over half had applied for maternity benefits.

Conclusion

- The PMMVY could help protect poor families from these financial contingencies.
- The government's maternity benefit programme must be implemented better and comply with the Food Security Act.
- Maternity benefits should be raised to ₹6,000 per child at least, for all pregnancies and not just the first living child.

Connecting the dots:

- Briefly examine the maternity benefits available in formal and informal sector in India.

INTERNATIONAL RELATIONS

Intermediate-Range Nuclear Forces (INF) Treaty

General studies 2

- *Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests*
- *Effect of policies and politics of developed and developing countries on India's interests*

Introduction

- The U.S. President declared that the U.S. is quitting the Intermediate-Range Nuclear Forces (INF) Treaty, a bilateral agreement with Russia signed in 1987.
- U.S.'s decision has generated dismay and concern that this will trigger a new nuclear arms race in Europe and elsewhere.
- What it ignores is that the INF Treaty reflected the political reality of the Cold War — of a bi-polar world with two nuclear superpowers — no longer consistent with today's multi-polar nuclear world.
- The greater challenge today is to understand that existing nuclear arms control instruments can only be preserved if these evolve to take new realities into account.

Background of the INF treaty

- By the early 1980s, the U.S.S.R. had accumulated nuclear weapons, exceeding the U.S. arsenal, and deployed more powerful weapons in Europe.
- To reassure its North Atlantic Treaty Organisation (NATO) allies about its nuclear umbrella, the U.S. began deploying Pershing IIs and GLCMs in the U.K., Belgium, Italy and West Germany, setting off a new arms race.
- Realisation dawned that any nuclear conflict on European soil would only lead to more European casualties, catalysing a movement for 'no-deployments' in Europe.
- In the 1980s, the U.S. and the U.S.S.R. began three sets of parallel negotiations — on strategic weapons leading to the Strategic Arms Reduction Treaty (START), on intermediate-range weapons leading to the INF, and the Nuclear and Space Talks to address Soviet concerns about Reagan's newly launched 'space wars' programme (Strategic Defense Initiative).
- Under the INF Treaty, the U.S. and the U.S.S.R. agreed to eliminate within three years all ground-launched-missiles of 500-5,500 km range and not to develop, produce or deploy these in future.

- The INF talks originally considered equal ceilings on both sides but then moved to equal ceilings and non-deployment in Europe to address the sensitivities of allies.
- Europe breathed a sigh of relief and the INF was hailed as a great disarmament treaty even though no nuclear warheads were dismantled and similar range air-launched and sea-launched missiles were not constrained.
- Since it was bilateral, the INF Treaty did not restrict other countries but this hardly mattered as it was the age of bi-polarity and the U.S.-U.S.S.R. nuclear equation was the only one that counted.

Changing political backdrop

- Since 2008, the U.S. has voiced suspicions that with the Novator 9M729 missile tests, Russia was in breach; in 2014, U.S. President Barack Obama formally accused Russia of violating the INF Treaty.
- On the other hand, Russia alleges that the U.S. launchers for its missile defence interceptors deployed in Poland and Romania are constituting a violation.
- China has always had a number of Chinese missiles in the 500-5,500 km range but its modernisation plans, which include the commissioning of the DF-26, today raise the U.S.'s concerns.
- The U.S.'s 2018 Nuclear Posture Review (NPR) reflects a harsher assessment of the security environment faced by the U.S. and envisages a more expansive role for nuclear weapons than in the past.
- Russia is blamed for seeking the break-up of NATO and a re-ordering of 'European and Middle East security and economic structures in its favour'.
- China is identified for the first time as a strategic competitor seeking regional hegemony in the Indo-Pacific region in the near-term and 'displacement of the U.S. to achieve global pre-eminence in the future'.
- A 30-year modernisation plan with a price tag of \$1.2 trillion with new nuclear-armed sea-launched cruise missile (SLCMs) and low-yield warheads is detailed in the NPR.
- Russia has unveiled plans to develop a new nuclear torpedo and nuclear-powered cruise missile.

What next?

- The INF Treaty is not the first casualty of unravelling nuclear arms control.
- In December 2001, the U.S. unilaterally withdrew from the 1972 Anti-Ballistic Missile (ABM) Treaty with the U.S.S.R. which limited deployment of ABM systems thereby ensuring mutual vulnerability, a key ingredient of deterrence stability in the bipolar era.
- The next casualty is likely to be the New START agreement between the U.S. and Russia, which will lapse in 2021, unless renewed for a five-year period.

- This limits both countries to 700 deployed intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missile (SLBMs) and heavy bombers and 1,550 warheads each.
- The lapse of the New START would mark the first time since 1968 that the U.S. and Russian nuclear arsenals would be unconstrained by any agreement.

Complex race of weapon development

- Even more worrisome are developments that blur the line between nuclear and conventional weapons.
- In order to lessen its dependence on nuclear weapons, the U.S. developed layered missile defences and conventional Prompt Global Strike (PGS) capabilities that use conventional payloads against strategic targets.
- Other countries have responded with hypersonics and a shift to lower yield tactical warheads.
- With growing dependence on space-based and cyber systems, such asymmetric approaches only increase the risks of accidental and inadvertent nuclear escalation.

Preserving the nuclear taboo

- In today's return of major power rivalry, it is no longer a bi-polar world, and nuclear arms control is no longer governed by a single binary equation.
- There are multiple nuclear equations — U.S.-Russia, U.S.-China, U.S.-North Korea, India-Pakistan, India-China, but none is standalone.
- Therefore, neither nuclear stability nor strategic stability in today's world can be ensured by the U.S. and Russia alone and this requires us to think afresh.

What about NPT?

- The political disconnect is also evident in the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the most successful example of multilateral arms control. It has become a victim of its success.
- It can neither accommodate the four countries outside it (India, Israel, North Korea and Pakistan) as all four possess nuclear weapons, nor can it register any progress on nuclear disarmament.
- It succeeded in delegitimising nuclear proliferation but not nuclear weapons. This is why NPT Review Conferences have become increasingly contentious.

Conclusion

- The most important achievement of nuclear arms control is that the taboo against use of nuclear weapons has held since 1945.

- Preserving the taboo is critical but this needs realisation that existing nuclear arms control has to be brought into line with today's political realities.

Connecting the dots:

- Death of INF treaty gives a lesson that existing nuclear arms control agreements need to be brought in line with today's political realities. Elucidate.

13th East Asia Summit in Singapore

Part of: GS Prelims and Mains II – India and the world; international relations

In news:

- PM Modi called for enhancing multilateral cooperation and economic and cultural ties among member-nations.
- He reiterated India's commitment to a peaceful and prosperous Indo-Pacific region; strengthening maritime cooperation and commitment to a balanced RCEP.

About East Asia Summit (EAS)

- The EAS consists of 10 ASEAN nations (Indonesia, Thailand, Singapore, Malaysia, the Philippines, Vietnam, Myanmar, Cambodia, Brunei and Laos), Australia, China, India, Japan, New Zealand, South Korea, Russia and the U.S.
- The East Asia Summit is an annual meeting of national leaders from the East Asian region and adjoining countries. (established in the year 2005)
- EAS is an initiative of ASEAN and is based on the premise of the centrality of ASEAN. The EAS was formed to further the objectives of regional peace, security and prosperity.
- The host of the 2018 East Asian Summit is also the Chairperson of ASEAN, the Prime Minister of Singapore, Lee Hsien Loong.

Moscow Format: Afghanistan Peace Talks

General studies 2

- *Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests*
- *Effect of policies and politics of developed and developing countries on India's interests*

Introduction

- Russia hosted a regional conference on Afghanistan - 'Moscow Format' to nudge the reconciliation process between the Taliban and the Afghan authorities.
- Representatives from Afghanistan, China, Pakistan, Iran, Kyrgyzstan, Tajikistan, Uzbekistan, Kazakhstan, Turkmenistan, the U.S. and India were also present at the meeting, making it the first time that all stakeholders were present in the same room.

Concerns:

- The Taliban considers the Afghan government as illegitimate and therefore had opposed the Moscow format being co-led by the Afghan government.
- The Afghan government did not send representative but had Afghanistan represented by the High Peace Council (HPC), which is supported but not part of the Afghan government.
- India sent two former diplomats as participants as being “non-official”, since India did not want to share the same stage with the Taliban.
- The U.S. was represented by its Moscow embassy officials wherein it kept an observer status in the meet.
- The Moscow Format is being led by Russia and has been criticised for not adhering to the 'Afghan led, Afghan owned' principle.

Need for Taliban

- Taliban has now been controlling the major portions of Afghanistan, and has thereby been considered as being legitimate inclusion in 'Afghan led, Afghan owned' principle.
- The Afghan government under Ashraf Ghani has also invited Taliban for direct talks and in addition, the US has also shown inclination of engaging in talks with the Taliban thereby improving Taliban's legitimacy.
- The US led forces had on times engaged with the Taliban on local level during the post-War period in Afghanistan.
- Pakistan continues to maintain support to Afghan Taliban to maintain a stronghold in Afghanistan and ensure Taliban's cooperation in Pak.-Afghan border areas.
- An initiative (Quadrilateral Coordination Group), involving the U.S., China, Pakistan and Afghanistan, was launched in January 2016, however it failed in controlling the growth of Taliban.
- There is emergence of Islamic State (IS) in Afghanistan which is in conflict with the Taliban and therefore the Taliban is required by Western allies to combat] the rise of IS in Afghanistan.

- The conflict with the Taliban has consuming resources of the US and the Afghan government wherein it can be utilised for the reconstruction of Afghanistan, therefore engaging Taliban in peace talks is a better alternative.

Way forward for India

- The Moscow format has the ability to attain the reconciliation process between the Taliban and the Afghan authorities, in consensus of the other stakeholders.
- India has supported the Moscow Format during the recent visit of Russian President Vladimir Putin and therefore should continue its commitment to the Moscow Format.
- India has supported an 'Afghan-led and Afghan-owned' peace process where in it should continue to maintain presence in all international peace processes on Afghanistan.
- India doesn't have the leverage to play spoiler but its presence is recognition that its economic cooperation programmes make it the most widely accepted development partner.

Connecting the dots:

- What is "Moscow Format"? Do you think it is in line with India's ambitions of 'Afghan-led and Afghan-owned' peace process? Critically analyse.

India to join Afghanistan peace talks

Part of: GS Prelims and Mains II – India and its neighbour; International Relations

In news:

- Two former senior diplomats will attend talks on the Afghanistan peace process to be held in Russia.
- The talks, known as the **"Moscow format"** will include a "high-level" delegation from the Taliban as well as a delegation of Afghanistan's "High Peace Council", along with representatives of 12 countries.
- This is the first time an Indian delegation has been present at the table with the Taliban representatives based in Doha.
- US and Pakistan to send their representatives too.

Do you know?

- India supports all efforts at peace and reconciliation in Afghanistan that will preserve unity and plurality, and bring security, stability and prosperity to the country.
- India's consistent policy has been that such efforts should be Afghan-led, Afghan-owned, and Afghan-controlled and with participation of the Government of Afghanistan.

When giants clash: on the US-China discord

General studies 2

- *Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests*
- *Effect of policies and politics of developed and developing countries on India's interests*

Introduction

The APEC Summit was recently concluded without any form a joint statement from the member countries due to conflict of opinion between US led countries and China led camp of countries.

Do you know?

- **About APEC:** The Asia-Pacific Economic Cooperation (APEC) is a regional economic forum established in 1989 to leverage the growing interdependence of the Asia-Pacific.
- **Purpose:** It aims to create greater prosperity for the people of the region by promoting balanced, inclusive, sustainable, innovative and secure growth and by accelerating regional economic integration.
- **APEC Functioning:** APEC ensures that goods, services, investment and people move easily across borders. Members facilitate this trade through faster customs procedures at borders; more favorable business climates behind the border; and aligning regulations and standards across the region. APEC's initiative to synchronize regulatory systems is a key step to integrating the Asia-Pacific economy.

US-China rivalry in APEC:

- The on-going global trade war between China & US has split the APEC member countries between American and Chinese camps.
- US has accused China of using unfair trade practices and has been pressuring China to improve access to its markets, grant IPR to American companies, cut back on industrial subsidies and reduce the American trade deficit with China.
- China intends for greater role of BRI among APEC member countries which is not supported by US and has opposed the protectionist measures undertaken by US and its imposition of tariffs on Chinese imports.

Impacts of US-China rivalry

- If this continues, eventually global supply chains may be hit, and shrinking trade volumes may cause companies to seek out new trading routes and partners.

- Institutionally, multilateral rule-making bodies such as the WTO may lose their authority, and an interlocking system of bilateral trade treaties and punitive sanctions networks may substitute the consensus-based approach that was forged so painstakingly after World War II.
- Asia will be at the heart of this war of attrition because strategic control of its high-value maritime trading routes is the key to China's dreams of global trade dominance.

Conclusion

After the APEC summit the world is still poised on the edge of the trade war vortex. The forthcoming G20 meeting in Argentina offers an opportunity to pull back from the brink.

Connecting the dots:

- Analyse the impacts of US-China trade war on global rule and consensus based trade approach.

30th Asia Pacific Economic Cooperation (APEC) Summit

Part of: GS Prelims and Mains II – International Relations; Effect of Policies & Politics of Countries on India's Interests

In news:

- 30th Asia Pacific Economic Cooperation (APEC) Summit took place in Papua New Guinea.
- For the first time since its inception APEC has failed to release a joint communique due to lack of consensus among the members over trade and security issues.
- All 20 countries except China agreed to the joint statement.

Lack of consensus between China and the US

- US targeted China's Belt and Road Initiative (BRI) and called it as "constricting belt" and a "One-way Road".
- US also warned smaller countries to be cautious of "debt-trap" by China and said not to accept debt which compromise sovereignty.
- China defended BRI and said that there is no geo-political agenda behind it and it is not an exclusive club closed to non-members, nor is it a trap.
- China targeted US policy of "America First" and said that erecting barriers and cutting ties is a short-sighted approach doomed to fail.
- The U.S.-China discord at APEC highlighted the dangers of their trade war, trade war between the US and China could cripple the Pacific Rim economy.

Do you know?

- Due to the tariff war International Monetary Fund has downgraded its global growth outlook for 2018 and 2019.
- If this continues, global supply chains will be impacted, and shrinking trade volumes may cause companies to seek out new trading routes and partners.

About APEC

- It was established in 1989 and has 21 members. (India is not a Member)
- APEC is the premier Asia-Pacific economic forum. Primary goal of APEC is to support sustainable economic growth and prosperity in the Asia-Pacific region.
- India has requested membership in APEC, and received initial support from the United States, Japan, Australia and Papua New Guinea. Officials have decided not to allow India to join as India does not border the Pacific Ocean, which all current members do.
- India was invited to be an observer for the first time in November 2011.

Along the new Silk Roads: Multilateralism & Trade War**General studies 2**

- *Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests*
- *Effect of policies and politics of developed and developing countries on India's interests*

Introduction

- In the context of the onslaught on the multilateralism in the form of on-going trade war, there is inevitable need to promote “Shared” and “Inclusive” multilateralism.
- In this regard, the impact of China’s BRI on the multilateralism is significant, but there are concerns that in spite of other countries joining BRI, it would always remain a Chinese led project with an underlying ambition to influence the world.

BRI- More Inclusive and Shared Multilateralism?

- China has labeled BRI as a project that would be based on more inclusive and connected multilateralism in order to promote trade integration.
- However, in spite of the underlying economic objectives, the BRI would always remain political project of china with an agenda to influence the world. China has given its own flavour to BRI by “Sinicising” the concepts of free trade agreements.
- Normally, the conventional trade agreements are based on sound legal texts. The BRI is not backed by any comprehensive legal framework. It is based on normative framework

in the form of general agreements, guiding principles, and declarations etc which are just standards to abide by and are not legally binding.

- The non-legal framework is deliberately adopted by China to constantly adjust to the changing environment.
- Further, unlike other conventional trade agreements, China is preparing for domestic resolution of BRI disputes through creation of dedicated branches of the China International Commercial Court.
- The BRI mobilises support from other institution such as Shanghai Cooperation Organisation, Asian Infrastructure investment Bank (AIIB) etc which are mainly dominated by China.

Conclusion

- The BRI is not a tool for economic integration. On the other hand, RCEP is better equipped to deal with aspects related to trade integration.
- However, as the global trade has increasingly come under pressure in the recent times, there is possibility that BRI would embrace greater liberalisation goals.

Connecting the dots:

- China's BRI is based on more inclusive and connected multilateralism and would promote trade integration. Critically analyse.

Russia and Ukraine tensions

Part of: GS Prelims and Mains II – International Relations

In news:

- Russia has captured three Ukrainian naval ships and over 20 crew members in the disputed Azov Sea.
- This move has refocussed international attention on the conflict on Europe's eastern corridors.
- Ukraine has declared martial law and demanded that the sailors be treated as prisoners of war.
- Ukraine insists that the patrol of the Kerch Strait, where the vessels were impounded, was authorised under a bilateral agreement with Moscow.
- The latest incident coincides with the anniversary of the November 2013 Maidan Square protests in Ukraine demanding integration with Europe, which was the prelude to Russia's invasion of Ukraine's Crimea in 2014.

Do you know?

- The 2014-15 Minsk peace accords prohibited air strikes and heavy artillery firing.
 - The Ukraine-Russia conflict has also widened religious schisms.
-



INDIA AND THE WORLD

Define 'strategic partners': India-U.S. Relations

Introduction

- The U.S. President Donald Trump has turned down an invitation from India to attend next year's Republic Day parade as the chief guest even though India is a purported U.S. strategic partner.
- **India and U.S. differ on what constitutes as being 'Strategic' in their relationship.**

Transformation in India US relationship

- **For more than a decade, a bipartisan consensus in Washington had supported India's entry into an exclusive club of the U.S.'s strategic partners.**
- Along with India, only Israel, the U.K., Australia, Japan, South Korea and Saudi Arabia enjoy the "strategic" or "special" relationship designation.
- The former U.S. President Barack Obama shifted the date of his State of the Union address so that he could come to India in January 2015.
- **The U.S.'s relationship with India, and the broader world, is drastically different now,** amid the revolution in its foreign policy since Mr. Trump's arrival in the White House.
- Today, U.S. officials pay lip service to notions of a strategic partnership with India; the Trump administration, led by its businessman-in-chief, is transactional to the core.

What is Strategic relationship?

- **India currently does not define Strategic relationship.**
- Its usage in international diplomacy signifies a bilateral **relationship more important than others**, but stops short of an actual alliance.
- **The term "strategic" further implies a future convergence of interests in areas that are vital: security, defence and investment.**
- However the term is now **being used in a loose sense**, with India having strategic relationship with over 50 countries ranging from US to Rwanda.

Where do India & US differ?

- **India expects technology transfers, intelligence sharing in defence cooperation,** however **the US still consider India as importer of defence equipment and not co-developer of defence equipment.**

- **US expects operational cooperation with India** such as through LEMOA, however cooperation under these foundational defence agreement is yet to move forward on the ground.
- **Both countries are yet to have a common understanding with regards to Rise of China and terrorism from Pakistan.**
- **India-US relationship is largely a transactional relationship** under Donald Trump that focuses on achieving a set of objectives but may not be considered as a priority that a strategic relationship entails.

Conclusion

- To fully take advantage of the relationship's repositories of trust and goodwill, and of its enduring shared interests — from China's rise to terrorism — these fundamental questions must be addressed.

Connecting the dots:

- Critically examine the "Strategic Partnership" between India and US.

India-US: How not to choose among allies

General studies 2

- *Policies of developed and developing countries and their impact on India's interests.*
- *Bilateral and multilateral agreements and their impact on India's interests*

Background

- In May 2012, U.S. secretary of state, on behalf of the Western countries negotiating **the Joint Comprehensive Plan of Action (JCPOA), or the nuclear deal, with Iran**, tried hard to convince India to cut its oil imports from Iran.
- These cuts were to put pressure on Iran to return to the negotiating table for the six-party talks. Eventually, **India agreed to cut its imports by only about 15%.**
- But cumulative global pressure had the desired impact on Iran, where inflation had risen more than 40% and oil exports declined from 2.5 million barrels of crude each day to about 1 million.
- **JCPOA negotiations that followed eventually led to a deal hailed by the United Nations.**

Changed times

- **Again similar negotiations started between India and U.S.,** but with a completely different backdrop.
- The sanctions that the U.S. now proposes and trying to ensure India adheres to, have been placed not in order to forge any deal, but because the **Trump administration has walked out of the JCPOA.**
- In this, **the U.S. has no support from any other country involved in the deal,** and the UN has expressed grave misgivings about the decision.
- **The U.S. has given no evidence that Iran in any way violated the terms of the JCPOA.**
- **The International Atomic Energy Agency's June report** concluded that Iran's stockpile of uranium and heavy water as well as its implementation of additional protocols were **"in compliance" with the agreement.**
- **Unlike in 2012, the U.S.'s EU allies are now working closely with arch rivals like Russia and China to put a "special payments mechanism",** primarily with a view to supporting trade to Tehran to ensure that the Iranian regime does not walk out of the nuclear deal as well.
- While **the U.S.** may succeed in squeezing Iran economically, it is increasingly **isolated politically,** as was evident at the most recent Financial Action Task Force meet in Paris where the U.S. proposed sanctions on Iran for terror funding.
- Even so, the U.S. has continued on its unilateral path, without a care for the very "rules-based international order" that it so often invokes.

Impact of American sanctions on India

- For India, the impact of the American sanctions plan would be manifold, regardless of the waiver.
- First, **Iran is India's third largest supplier** of oil. There are not only **rising costs of oil** to contend with, but also the added cost of having to recalibrate **Indian fuel refineries** that are used to process Iran's special crude.
- The **second impact would be on India's investment in the Chabahar port,** which would face both direct and indirect sanctions.
- Problem will only get more acute as sanctions kick in, threatening India's \$500 million investment in the port and its \$2 billion plan for a railway line to circumvent Pakistan and reach Afghanistan and Central Asian trade lines.
- **Finally, there would be the impact on India's regional security situation,** which could see the Iranian-Arab divide deepen, Afghanistan's choices dwindle and an angry Iran pitched closer into the China-Russia corner.

Waiver for Indian

- Most worrying for India is that all of the above outcomes will follow regardless of whether the U.S. gives India a waiver for sanctions or not.
- While the 'waiver' list, would stave off penalties and allow India to continue some of its trade with Iran, it will not restore the pre-2018 situation.
- The U.S. is only issuing temporary waivers, and the waivers are strictly linked to the condition that countries receiving them keep cutting down their purchases from Iran.
- Along with the JCPOA-linked sanctions, India continues to face sanctions linked to the Countering America's Adversaries Through Sanctions Act, which puts more strictures on dealings with Iran, Russia and North Korea.
- The waiver is therefore no magic wand to be wished for, as it only pushes the problems for India down the road.

Iran's options

- little thought has been given to Iran's reaction if India keeps submitting to the U.S.'s sanctions regime against it.
- **With trade levels receding, the Iranian regime may well lose interest in the Chabahar option, and focus on its main port of Bandar Abbas instead, derailing India's grander plans for regional connectivity.**

Conclusion

- Given the heavy costs and in the complete absence of any benefits, **India should have been more vocal in its protest against the U.S.'s actions.**
- If India will not protest and the U.S. presses on with sanctions, it **would be a marked failure of Indian diplomacy.**
- And if the waiver does come through, it will be no victory, but signify an abject submission to the sanctions themselves.
- With no gains in the offing from a policy of 'pragmatism', India may have been better off sticking to principle instead.

Connecting the dots:

- What is CATSAA? Critically analyse the U.S.'s sanctions and their impact on India's geopolitical and economic relations.

[US sanctions on Iran: India, China get relief](#)

Part of: GS Prelims and Mains II - International Relations; India and the world

In news:

- India is one of eight countries to receive temporary exemptions from U.S. sanctions on Iran.
- China, India, Italy, Greece, Japan, South Korea, Taiwan and Turkey – are the eight countries.

India, China and Pakistan: India protests China-Pakistan bus via PoK

Part of: GS Mains II – India and its neighbours; International Relations

In news:

- India reiterates its opposition to a proposed luxury bus service between Pakistan and China that would pass through parts of Pakistan-occupied Kashmir and Gilgit-Baltistan — territory that India claims — terming it “a violation of India’s sovereignty.
- China says move part of ‘China-Pakistan Economic Corridor’ (CPEC), doesn’t reflect Beijing’s position on Kashmir.

China Pakistan: Growing Ties

Part of: GS Prelims and Mains II –International Relations

In news:

- Pakistan is expected to receive a \$6 bn aid package from China during PM Imran’s visit.
- Pakistan’s Prime Minister has reinforced Islamabad’s bonds with Saudi Arabia, and has kept the door open for the re-entry of West-backed International Monetary Fund (IMF) into his country.
- Analysts point out that China needs Pakistan’s full support to make the CPEC a success.
- China has billed the \$62 billion project as the flagship undertaking of its Belt and Road Initiative (BRI).

China-Pakistan Ties and India-China Wuhan consensus

Part of: GS Prelims and Mains II - International Relations; India and its neighbours

In news:

- China backs Pakistan’s efforts **to resolve issues with India.**

- China also to support Pakistan on two other key topics — the **expansion of the Nuclear Suppliers Group (NSG)** and **counterterrorism**.

Do you know?

- China is an observer at South Asian Association for Regional Cooperation (SAARC).
- SAARC has **eight member countries** (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri-Lanka) and **eight observer status** countries (China, the European Union, Iran, Japan, South Korea, Mauritius, Burma/Myanmar and the United States of America).
- India-China **Wuhan consensus** focus on – Communication, Cooperation, Contacts, Coordination and Control.

India, Singapore begin sea drills

Part of: GS Prelims and Mains II and III – International Relations; Defence and Security ties

In news:

- 25th edition of the **India-Singapore bilateral naval exercise, SIMBEX**, had begun at the tri-services command in Port Blair.
- The two countries have vastly expanded their military cooperation in recent years under **India's Act East policy**.
- Late last year, the two countries signed a naval agreement which has a provision for mutual logistical support and gives India access to the **Changi naval base**.

Do you know?

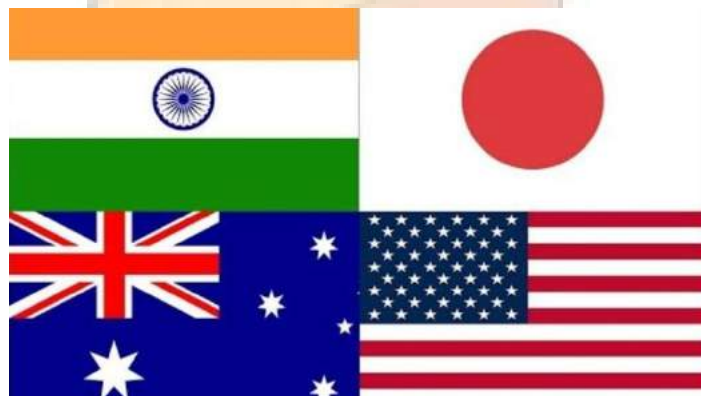
- Started as basic Anti-Submarine Warfare (ASW) exercises in 1994, today these exercises have graduated to complex maritime combat drills, including missile and torpedo firings, and shore-based intensive professional exchanges.
- India and Singapore are working on a trilateral exercise with an Association of South East Asian Nations (ASEAN) country, likely Thailand, and eventually plan to scale it up to a multilateral format.

Third Quad Round in Singapore

Part of: GS Prelims and Mains II – India and the world; International Relations

In news:

- 'Quadrilateral' grouping - India, Australia, Japan and the U.S.
- The Quad is billed as four democracies with a shared objective to ensure and support a "free, open and prosperous" Indo-Pacific region.
- Quad members to meet in Singapore soon. During this round, the four countries are expected to discuss infrastructure projects they are working on, and building humanitarian disaster response mechanisms.
- The four countries are expected to talk about regional developments, including elections in the Maldives, the collapse of the government in Sri Lanka and the latest developments in North Korea.
- However, despite the potential for cooperation, the Quad remains a mechanism without a defined strategic mission.



Pic: <https://blog.forumias.com/wp-content/uploads/2017/12/maxresdefault-1.jpg>

Recent developments:

- India and Japan have announced combined efforts on a number of projects in South Asia, including bridges and roads in Bangladesh, an LNG facility in Sri Lanka and reconstruction projects in Myanmar's Rakhine province.
- Australia has unveiled an ambitious \$2 billion project to fund infrastructure and build maritime and military infrastructure in the Pacific region, on which it is willing to cooperate with other Quad members.

Concerns:

- Quad members still face the challenge of defining its common agenda.
- The Quad grouping was first formed following cooperation after the 2004 tsunami, the idea was to better coordinate maritime capabilities for disaster situations.
- When revived in 2017, the grouping seemed to have become a counter to China's growing inroads into the region, despite denials that any particular country had been targeted.

- The entire focus on the Indo-Pacific makes the Quad a maritime, rather than land-based, grouping, raising questions whether the cooperation extends to the Asia-Pacific and Eurasian regions.
- Even on maritime exercises, there is a lack of concurrence. India has not admitted Australia in the Malabar exercises with the U.S. and Japan, despite requests from Australia, and has also resisted raising the level of talks from an official to the political level.

Four corners: Quad grouping

Introduction

- The Quadrilateral Group, which includes India, U.S., Japan Australia, is going to meet in Singapore on the sidelines of the East Asia Summit.
- Their challenge will be to accurately describe their common agenda.

The Quad

- In 2007, when the grouping was first formed following cooperation after the 2004 tsunami, the idea was to better coordinate maritime capabilities for disaster situations.
- When revived in 2017, the grouping seemed to have become a counter to China's growing inroads into the region, despite denials that any particular country had been targeted.
- The Quad democracies have a shared objective to ensure and support a "free, open and prosperous" Indo-Pacific region.

Expectations from the meet

- The four countries are expected to discuss infrastructure projects they are working on, and building humanitarian disaster response mechanisms.
- India and Japan have announced they will combine efforts on a number of projects in South Asia, including bridges and roads in Bangladesh, an LNG facility in Sri Lanka and reconstruction projects in Myanmar's Rakhine province.
- Australia has unveiled an ambitious \$2 billion project to fund infrastructure and build maritime and military infrastructure in the Pacific region, on which it is willing to cooperate with other Quad members.
- The four countries are expected to talk about regional developments, including elections in the Maldives, the collapse of the government in Sri Lanka and the latest developments in North Korea.

- With Quad talks being held on the sidelines of the East Asia summit, the Regional Comprehensive Economic Partnership summit and the ASEAN-India informal summit, discussions will include some of the overlapping issues among these groupings.

The Quad is yet to define a common agenda

- Despite the potential for cooperation, the Quad remains a mechanism without a defined strategic mission.
- Even a common definition of the geographical area encompassed has yet to be found. While Washington sees the U.S. and India as “bookends” of the Indo-Pacific, India and Japan have included the oceans up to Africa in their definition.
- The entire focus on the Indo-Pacific makes the Quad a maritime, rather than land-based, grouping, raising questions whether the cooperation extends to the Asia-Pacific and Eurasian regions.
- Even on maritime exercises, there is a lack of concurrence. India has not admitted Australia in the Malabar exercises with the U.S. and Japan, despite requests from Canberra, and has also resisted raising the level of talks from an official to the political level.
- The fact that India is the only member not in a treaty alliance with the other Quad countries will slow progress somewhat, although each member is committed to building a stronger Quadrilateral engagement.

Conclusion

- The outcome of the third round in Singapore will be judged by the ability of the group to issue a joint declaration, which eluded it in the first and second rounds.

(Note: this news is in transition, we have to wait for further details after the meeting)

Connecting the dots:

- Quad; a land based or maritime grouping? Elucidate.

New ripples in Andaman Sea

General studies 2

- *Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests*
- *Effect of policies and politics of developed and developing countries on India's interests*

Introduction:

- Prime Minister Narendra Modi's second visit to Singapore this year is nicely framed by the largest ever naval exercise between the two nations (India and Singapore) in the Andaman Sea and the Bay of Bengal.
- The exercises, called the Simbex, began 25 years ago as India embarked on the so-called Look East Policy that sought a renewed economic, political and military engagement with South East Asia.
- The two sides hope that these bilateral exercises will eventually involve the participation of other South East Asian nations and form the basis for a cooperative security framework in the heart of the Indo-Pacific.

Indo-Pacific Region:

- Indo-Pacific is also a sum of its many sub-regions that include the East China Sea, South China Sea and South Pacific to the east of the Malacca Straits as well as the Bay of Bengal, Arabian Sea and the waters of Africa to the west.
- PM Modi outlined India's broad vision for the Indo-Pacific in his address to the Shangri La Dialogue, an annual forum that brings the region's defence establishments together.
- The PM's speech on the Indo-Pacific helped bring the new geopolitical construct to the centre of India's worldview.
- A "stable, secure and prosperous Indo-Pacific Region" is an "important pillar" of India's strategic partnership with the United States.
- The emphasis shown by the US on the 'Indo-Pacific' can be termed as its strategic initiative towards India.
- ASEAN is one of the crucial building blocks of the Indo-Pacific. United States, India, Japan, and Australia the "Quad" group is emphasizing "Indo-Pacific" as a new strategic space.

Brief History about Andaman Sea:

- The consolidation of British hegemony in the Indian Ocean at the dawn of the 19th century and its accommodation with France (in Indo-China) and the Netherlands (in the East Indies, now known as Indonesia) left the Andaman Sea in a tranquil state.
- The extended peace was shattered during the Second World War when Japan occupied large parts of East Asia, ousted Great Britain from Singapore and raced towards Northeast India through Burma.
- Imperial Japan also occupied the Andaman and Nicobar Islands. It needed a massive collaborative effort to reverse the aggression.
- After the Second World War, the Andaman Sea and the Bay of Bengal became marginal to the power play between Washington and Moscow during the Cold War.

- Now, the rise of China and Beijing's projection of naval power way beyond its home waters is beginning to put the Andaman Sea back in play.

Importance of Sub-region of the Andaman Sea:

- The Andaman Sea is flanked by the Andaman and Nicobar chain of islands in the West, Myanmar to the north, the Thai-Malay peninsula to the east, and the Sumatra island to the south.
- It funnels into the Straits of Malacca that connects the Indian and Pacific Oceans.
- The large amount of shipping that enters the Andaman Sea from the east heads to Singapore, from where it turns the Pacific Ocean.
- Andaman Sea is rapidly regaining its strategic salience. At the dawn of the modern era, many of the geopolitical contestations involving the Portuguese, Dutch, French and the British took place in the waters of the Andaman Sea.

Recent Actions by China in Sub-region of Andaman Sea:

- Beijing signed an agreement with Myanmar on building a deep-water port at Kyaukpyu. It will be an important part of the China-Myanmar Economic Corridor, which would connect Kyaukpyu to the Yunnan Province through rail and highways.
- China already built an oil and gas pipeline system that moves hydrocarbons from Kyaukpyu to inland China.
- Thailand ordered a feasibility study of the Kra Canal, which will cut through the Kra Isthmus and link the Andaman Sea to the Gulf of Thailand. There is a push from china to launch the Project.
- Beijing has sold submarines to Thailand and Bangladesh and its military cooperation with other littoral states of the Andaman Sea has grown steadily. Recently, China conducted naval exercises with Thailand and Malaysia.
- Building strategic infrastructure, like China-Myanmar Economic Corridor and the Kra Canal allows Beijing reduce its current dependence on the Malacca Straits and access the Indian Ocean directly.

Conclusion:

- As the waters of the Andaman Sea turn turbulent, India too has begun to accelerate the development of civilian and military infrastructure in the Andaman and Nicobar Island Chain.
- It has also stepped up political engagement with the Andaman littoral states. But Delhi's pace might turn out to be too slow to cope with the rapid strategic transformation of the Andaman Sea.
- Therefore, ASEAN must form the geographic core to any Indo-Pacific architecture.

- India must increase its strategic alignment with the other countries in Indo-Pacific region in order to balance the security concerns emanating from China's aggressive stance.
- Freedom of navigation, unimpeded commerce, and peaceful settlement of disputes in accordance with international law will make our sea lanes the pathway to prosperity.

Connecting the dots:

- Briefly examine the geopolitical significance of Andaman Sea for India.

(Note: look for Kra Canal, Gulf of Thailand and Andaman Sea. And study the map surrounding this region from prelims point of view.)

India, Pak. commit to Kartarpur corridor

Part of: GS Prelims and Mains II – India and its neighbours; International Relations

In news:

- India and Pakistan agreed to build the **Kartarpur Sahib corridor** for Sikh pilgrims to visit the Gurdwara in Kartarpur (Pakistan)
- Both the countries exchanged letters committing to build the required infrastructure for **visa-free direct travel by Sikh pilgrims to Pakistan's Kartarpur Sahib gurdwara.**
- November 2019 marks 550th birth anniversary of Guru Nanak Dev

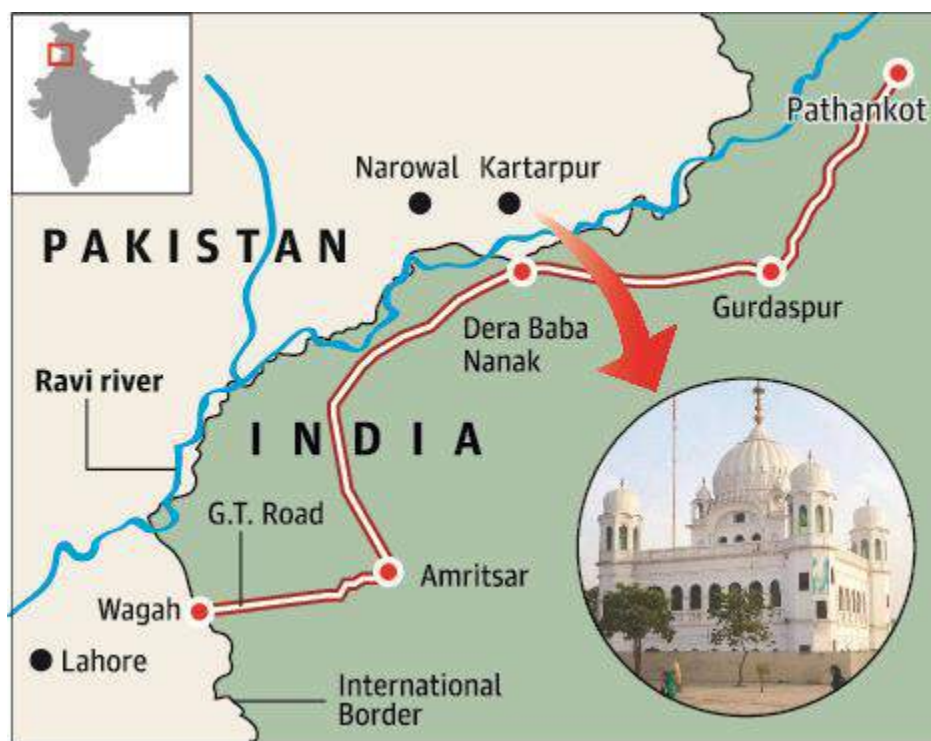
Do you know?

- India had first proposed the Kartarpur Sahib corridor in 1999 when the then Prime Minister Atal Bihari Vajpayee took a bus ride to Lahore.

Gurdwara in Kartarpur

- The gurdwara in Kartarpur is located on the bank of river Ravi in Pakistan
- It is about four km from the Dera Baba Nanak shrine, and about 120 km northeast of Lahore
- It was here that Guru Nanak assembled a Sikh community and lived for 18 years until his death in 1539
- The shrine is visible from the Indian side, as Pakistani authorities generally trim the elephant grass that would otherwise obstruct the view
- Indian Sikhs gather in large numbers for darshan from the Indian side, and binoculars are installed at Gurdwara Dera Baba Nanak
- The gurdwara was opened to pilgrims after repairs and restoration in 1999, and Sikh jathas have been visiting the shrine regularly ever since

- Sikh jathas from India travel to Pakistan on four occasions every year- for Baishakhi, the martyrdom day of Guru Arjan Dev, the death anniversary of Maharaja Ranjit Singh, and the birthday of Guru Nanak Dev.



https://d39gegkjaqduz9.cloudfront.net/TH/2018/11/23/DEL/Delhi/TH/5_01/88722918_254465_0_101_mr.jpg

Kartarpur corridor can build bridges: Venkaiah

Part of: GS Prelims and Mains II & III – India and its neighborhood, infrastructure

In news:

- Founding stone for the four-lane “human corridor” i.e. **Kartarpur corridor** was laid, it is to be **completed by November 23, 2019**, in time for **Sikh founding Guru Nanak’s 550th birth anniversary**.
- A public rally was organised for the event in the border town of Dera Baba Nanak, just 2 km from the International Border with Pakistan.
- It is hoped that the corridor would pave the way for peace and greater progress of all people.
- **The corridor will drastically cut down the journey** pilgrims have to make from more than **200 km to just 6 km**.

Do you know?**The shrine:**

- The **gurdwara in Kartarpur stands on the bank of the Ravi**, about 120 km northeast of Lahore.
- It was here that **Guru Nanak assembled a Sikh community and lived for 18 years until his death in 1539.**
- The shrine is visible from the Indian side, Sikhs gather in large numbers for darshan from the Indian side, and binoculars are installed at Gurdwara Dera Baba Nanak.

Access to gurdwaras in Pakistan:

- Sikh jathas from India travel to Pakistan on four occasions every year — for Baisakhi, the martyrdom day of Guru Arjan Dev, the death anniversary of Maharaja Ranjit Singh, and the birthday of Guru Nanak Dev. These Indian pilgrims are given access to all gurdwaras in Pakistan.

Pakistan's Prime Minister calls for fresh start**Part of: GS Mains II – India and its neighbours; International Relations****In news:**

- Pakistan's Prime Minister Imran Khan called for India to make a fresh start during his term to revive the dialogue process between the two countries.
- The talks have been stalled on the issue of terrorism for more than a decade.

Concern areas:

- Kashmir has been the bedrock issue between both the nations and has been an unresolved boundary dispute.
- Terrorism, particularly targeting India which is bred on Pakistani soil is yet another major issue which has mired the relationship.
- Pending investigations into the 1993 and 2008 Mumbai attacks
- Pending case against Dawood Ibrahim and Lashkar-e-Taiba chief Hafiz Saeed
- Attack on the Indian Air Force Base in 2016 (Pathankot)
- Increased terrorist attacks on security forces and the attack on the Uri Army base camp in September 2016
- Kulbushan Jadhav case - a retired Indian Naval officer arrested near the Iran-Pakistan border in Baluchistan region by the Pakistani establishment and accused of espionage by Pakistan.

Looking beyond the optics: India – Vietnam relations

Introduction

- President Ram Nath Kovind visited Vietnam. Vietnam is a close 'ally' of India for over 70 years, and not limited to official diplomatic ties.
- Vietnam is critical for India's foreign policy at the regional and systemic levels.
- There is a need to understand how Vietnam has calibrated its domestic and foreign policy shifts and where India's relevance can fit into these policy changes.

Growing Vietnam

- Vietnam's Doi Moi policy, a political and economic renewal campaign started in 1986.
- Since then Vietnam has made dramatic strides.
- Today it is a rapidly growing, regional economic giant, showing both dynamism and pragmatism in its calculations.
- While earlier it imported agricultural products, today it is a major exporter.
- Agricultural competence has furthered Vietnam's entry into the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).
- The Vietnam National Assembly ratified the CPTPP, asserting its growing economic impact globally, with exports increasing to approximately \$240 billion for the year 2018.
- Membership to the CPTPP will boost Vietnam's economic growth, from 6.8 % in 2017-18, by a further 1.1% to 3.5% by 2030.
- India is focused on furthering cooperation with Vietnam in agriculture and innovation-based sectors, pushing the potential for increasing bilateral trade to \$15 billion by 2020.

Common ground of health

- An area of potential convergence for both Vietnam and India is health care.
- The National Congress of the Communist Party of Vietnam highlighted the importance of linking economic growth to universal health care, whereby 80% population would be covered by health insurance.
- India too has been focusing on the need to deliver accessible and affordable health insurance to weaker sections of society.
- With Indonesia ratifying the India-ASEAN Services agreement, India is a step closer to signing the Regional Comprehensive Economic Partnership, bringing India to the forefront of the services sector globally.

- A potential area of convergence in the realm of health care through joint public-private partnership agreements can be explored by the two countries.

Vietnam's foreign policy

- Internationally, Vietnam's foreign policy is characterised by 'multidirectionalism', which addresses regional asymmetries of the power balance by engaging across a broad spectrum of states to achieve its interests.
- Asymmetrical power structure in the region, offset by the rise of China, is bringing regional and extra-regional states together to address the shifts in the normative order. Within this context, Vietnam even normalised relations with the U.S., its former opponent.

Security concerns

- Today there is increasing commonality of security concerns between Vietnam and its ASEAN partners — as well as with Australia, India, Japan and the U.S., particularly in the areas of maritime security and adherence to the United Nations Convention on the Law of the Sea.
- India also referred 'rules based order in the Indo-Pacific', reiterating India's own concerns over troubled maritime spaces.
- The two countries have planned a bilateral level maritime security dialogue in early 2019.

Focus on sub-regionalism

- As ASEAN continues to focus on its centrality in the region, there will undoubtedly be shifts in how smaller members of ASEAN perceive the centrifugal forces of China's rise.
- Vietnam has helped to mitigate these by focussing on both sub-regionalism and regionalism as the core of its priorities.
- India too looks at both sub-regionalism and regionalism as priority avenues to pursue its foreign policy.
- The India-Vietnam Joint Statement of March 2018 reiterates the focus given to sub-regionalism and the Mekong Ganga Cooperation framework.
- Another area is emerging in the CLV, or Cambodia-Laos-Vietnam growth triangle sub-regional cooperation, bringing these three countries together.

Way forward

- India and Vietnam can jointly explore the potential for enhancing capacity building and providing technical assistance and training within sub-regional groupings.

- In the 'cooperation model', India offers providing choices and opportunities for its friends. This model highlights India's willingness to address issues on which increasing synergies need to evolve.
- One such area where convergence is likely, but has been held back due to individual preference, is the \$500 million line of credit offered to Vietnam.
- Both India and Vietnam possess the capacity to find compatibility in areas promoting defence cooperation and infrastructure simultaneously.
- Vietnam's role as country coordinator for India in ASEAN will come to a close in 2018.
- While the ties have progressed under the Look East and Act East Policies, going forward they need to factor in pragmatism, helping relations to move forward.

Connecting the dots:

- Vietnam is crucial to India's Look East Policy. Critically comment.



ECONOMY

Ease of Doing Business Index: India jumps to 77th rank

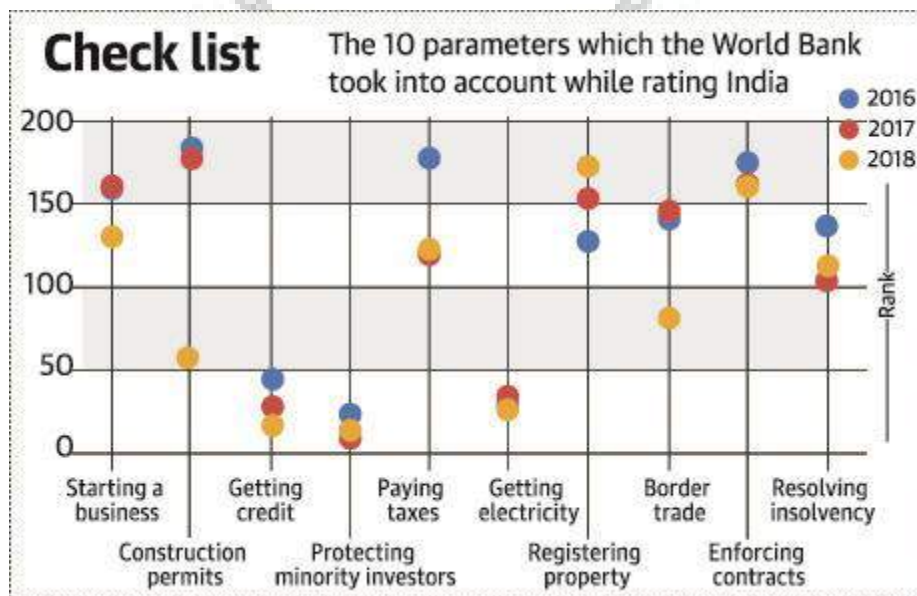
Part of: GS Prelims and Mains III - Indian Economy; Inclusive growth and issues arising from it.

About:

- Ease of doing business: This index is an aggregate figure that includes different parameters which define the ease of doing business in a country.
- The index ranks 190 countries based on 10 indicators across the life-cycle of a business, from “starting a business” to “resolving insolvency.” (observe figure below)

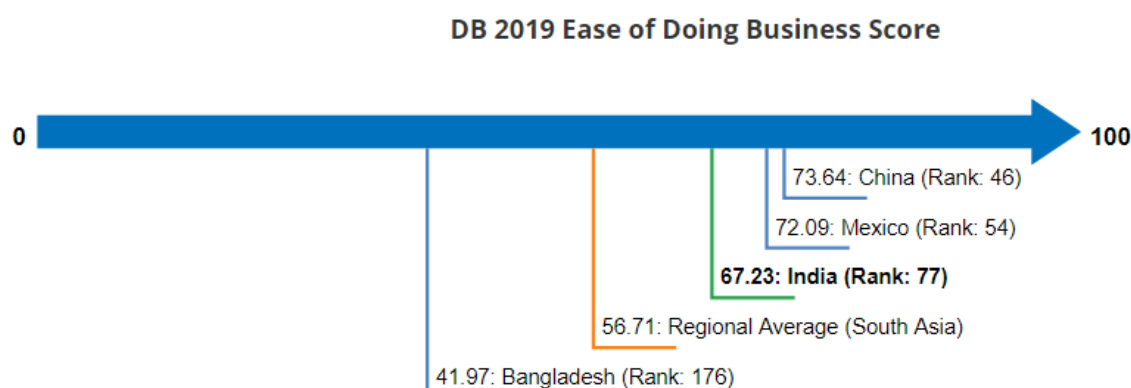
In news:

- India jumped 23 ranks in the World Bank’s Ease of Doing Business Index 2019 to 77 (for 2018). In the 2018 report, the country was ranked 100 (for 2017).
- India became the top ranked country in South Asia for the first time and third among the BRICS.
- In the last two years the country has climbed 53 notches, a performance matched in the past only by Bhutan.
- The biggest gain was in construction permit where India climbed 129 ranks to 52nd place on the back of targeted government effort to remove hurdles.



Pic:

https://d39gegkiagduz9.cloudfront.net/TH/2018/11/01/DEL/Delhi/TH/5_01/a85c539d_2496872_101_mr.jpg



Ease of Doing Business Index: Serious business

General studies 3

- *Government policies and interventions*
- *Economic Growth and Development*

Introduction

India's ranking in the latest edition of **the World Bank's Ease of Doing Business Index** has **jumped 23 spots to 77 among 190 economies**. It is a substantial improvement over the last couple of years.

Analysis of Index and India's performance

- **The Index seeks to measure 11 areas of business**, among them the procedures, timelines and cost related to construction, protection of minority investors, payments of tax, time and cost to export a product or import it and to resolve commercial dispute, the quality of the judicial process and time taken and the cost for resolution or insolvency.
- **India's score was boosted this time because of the strides in cross-border trading with the streamlining of paper work and documentation** — the country's score has moved up from 146 last year on this count to 80 this time.
- **The scores should improve further next time with recognition of the laws on GST and more companies taking the resolution route under the insolvency.**
- **The other area of improvement is in construction permits.** All these underline the importance of supply-side reforms.
- **The other important take away from the Index is that what is common among the top-ranked economies is the pattern of continuous reform.**

- India has considerable ground to cover on this front: When it comes to enforcing contracts, the country's score has barely moved in the latest ranking.

What more needs to be done?

- **The lesson here is the absence of judicial reforms, bureaucratic and legal hurdles are hurting the economy.**
- In a federal structure like India, **cutting the red tape or easing procedures** across states is not easy.
- However, the signs are that many states have recognised the need to remove hurdles to attract industry.
- Businessmen complain about the **steep cost of doing business and the constraints they face in translating ideas into viable commercial ventures.**
- As the **World Bank** points out, **economies with better business regulations are the ones that create more job opportunities and the countries with more transparent and accessible information have lower levels of corruption.**

Conclusion

- It is good to benchmark the country's progress on various counts of starting a business, but it is also important not to lose sight of the fact that this does not measure macro stability policies and development of the financial sector.
- The boost to ranking has come at a time when investment activity is far from vibrant.
- The key is a revival in demand, but removing systemic constraints would help business and industry become more competitive.

Connecting the dots:

- Supply-side reforms boost India's profile, but red tape and opaque systems continue to pull back growth. Comment.

Filling the gap: significance of MSMEs

General studies 3

- *Indian economy; inclusive growth*
- *Banking and credit facilities*
- *Government policies and issues arising out of their design and implementations*

Introduction

- The micro, small and medium enterprises (**MSMEs**) have been impacted adversely by the twin shocks of **demonetisation and goods and services tax (GST)**.
- Demonetisation made it difficult for these units to pay their **contractual labour in cash and access credit**, which is again largely through informal channels.
- GST similarly led to **an increase in compliance costs**, apart from depriving them of the inherent advantages of doing business in cash without leaving a paper trail.
- **Th outstanding gross bank credit to MSMEs has shrunk** — from Rs 4.71 lakh crore to Rs 4.69 crore between September 2014 and September 2018.
- Despite refinancing schemes such as Pradhan Mantri Mudra Yojana, this shrunk is proof of formal lending institutions being unable to fill the void either.

Why MSMEs are important?

- The MSME sector accounts for an estimated **30 per cent of the country's GDP, 45 per cent of its manufacturing output and 40 per cent of merchandise exports**.
- MSMEs have contributed **least to the banking system's non-performing assets crisis**, even while disproportionately bearing the brunt of demonetisation and GST.

Steps taken by government

- The government **announcing a 2 per cent interest subvention** on both fresh and incremental loans taken by MSMEs having GST registration, besides **launch of a portal enabling credit sanctions of up to Rs 1 crore "in just 59 minutes"**.
- **GST, along with digitisation, allows for creation of a database of transactions**, bank account statements and tax returns of all firms.
- That should make it **possible for assessing the creditworthiness of any applicant in a reasonably short period**.
- Whether this would work on the ground will, depend on the banks.
- **Central government has also promised that factory inspectors** will be permitted to conduct **visits through random computerised allotment**, with compulsory publication of reports within 48 hours.
- In addition, there would be only **a single environmental approval** for both air and water pollution. But the implementation here, too, is dependent mainly on the states concerned.

State of NBFCs

- The state of non-banking finance companies (NBFCs) is another thing to worry.
- NBFCs' share in total formal credit to MSMEs has almost doubled from around 5.5 per cent in December 2015 to 10 per cent in March 2018.
- With these institutions themselves now facing a liquidity squeeze, the danger of credit flows to MSMEs being further affected cannot be ruled out.

Conclusion

- If demonetisation and GST ultimately leads to an ecosystem, wherein MSMEs are able to obtain better access to formal finance and without fear of harassment by tax/enforcement authorities, the short-term pains may still turn out to be worth having endured.

Connecting the dots:

- Explain in brief the significance of MSMEs in Indian economy.

Political economics: credit stimulus for MSMEs

General studies 3

- *Economic development, MSMEs*

Introduction

- The Centre has announced an important credit stimulus package for micro, small, and medium enterprises (MSMEs).
- The main rationale behind the government's move for the announcement for the credit stimulus package is due to adverse impact on MSMEs due to twin shocks arising from demonetization and GST.
- Further, there are concerns related to decrease in credit flow by NBFCs due to IL&FS Crisis.

What is Credit Stimulus?

- Credit Stimulus is the policy which seeks to enhance credit flow to various critical sectors in the economy by providing loans at the cheaper rate of interest.
- The main idea behind the credit stimulus is to promote growth and development of the critical sectors and to reduce their dependence on informal borrowings.

Overview of Credit Stimulus package

- The sanction of business loans of up to ₹1 crore within a time frame of 59 minutes, in order to encourage faster credit flow to MSMEs.
- An interest subvention of 2% under the scheme and support from public sector units, which will now be mandated to make at least 25% of their overall purchases from MSMEs.
- There are five key aspects for facilitating the MSME sector and the government has taken 12 measures that will be addressed to each of these five categories.:

1. Access to credit
2. Access to market
3. Technology upgradation
4. Ease of doing business
5. Security for employees

Criticism of the package

- The scheme has signs of state-led economic planning written all over it.
- The biggest risk of a credit stimulus is the misallocation of productive economic resources.
- Pumping extra credit into MSMEs now may well lead to a temporary boom but it can lead to a painful bust when the stimulus ends some day.
- Another unintended consequence is the likely deterioration in credit standards as financial institutions are pushed to lend aggressively to MSMEs.
- Efforts to expedite business loan approvals may be welcome from the point of view of growth and job creation, but they rarely end well when motivated by political reasons.
- Conceptually, this credit scheme is no different from the MUDRA loan scheme, which has been troubled by soaring bad loans.
- Former RBI Governor had warned that loans extended under the MUDRA scheme could turn out to be the source of the next financial crisis.

Way forward

- Care needs to be taken to see that the new MSME loan scheme does not pose a similar risk in the future.
- Also, the demand that PSUs must procure a quarter of their inputs from MSMEs could breed further inefficiency in the economy.
- Rather than taking temporary measures, need is of long term solution.

Connecting the dots:

What is credit stimulus scheme? Critically analyse the role of MSMEs in the Indian economy.

Poverty in all its faces

General studies 3

- *Poverty and inclusive growth*

Introduction

Amidst the noise caused by the story of rising billionaires, the message on India's poverty decline in the recent report of the Oxford Poverty and Human Development Initiative has been lost.

Report on Global Multidimensional Poverty Index (MPI)

- UNDP and Oxford University released the report on Global Multidimensional Poverty Index (MPI) 2018.
- This report covers 105 countries. The MPI is based on 10 indicators: Health, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing and assets.
- This report has specifically discussed the case of India. The incidence of multidimensional poverty was almost halved between 2005/6 and 2015/16, climbing down to 27.5 per cent.

What other national reports say?

- The estimates of poverty-based on consumer expenditure and using the **Tendulkar committee** methodology show over a seven-year period between 2004-05 and 2011-12, the number of poor came down by 137 million despite an increase in population.
- According to **the Rangarajan Committee methodology**, the decline between 2009-10 and 2011-12 is 92 million, which is 46 million per annum. For a decade, it will be larger than that of global MPI.
- The poverty ratios based on Tendulkar and Rangarajan Committee methodologies are lower than as estimated by global MPI.

Criticism over MPI

- Multidimensional indicators/measures raise several issues regarding their measurability, aggregation across indicators, and of databases that provide the requisite information at reasonably short intervals.
- In principle, indicators should be independent. Access to safe drinking water, for example, cannot be aggregated with indicators like child mortality.
- One can analyse the progress of non-income indicators like education, health, sanitation, drinking water, child mortality etc. over time with income or consumption poverty.
- But, converting all of them into an index poses several problems.
- Deaton and Dreze (2014) also indicate that "it is important to supplement expenditure-based poverty estimates with other indicators of living standards, relating for instance to nutrition, health, education and the quality of the environment".
- In the minds of most people, being rich or poor is associated with levels of income. The various non-income indicators of poverty are, in fact, reflections of inadequate income.

- Defining poverty in terms of income or — in the absence of such data — in terms of expenditure, seems more appropriate and it is this method which is followed in most countries.
- Of course, it can be supplemented with non-income indicators but without aggregating them into index.

Inequality: in consumption, income and wealth

- In recent years, there has been a lot of discussion on increasing inequality.
- It is true that rising inequality has adverse economic and social consequences.
- Income and wealth inequalities are much higher than consumption inequality.
- **Gini coefficient** for consumption is 0.36 in 2011-12 in India. The Gini coefficient for consumption has shown only a small rise over a period of 10 to 12 years.
- Inequality in income for 2011-12 is high with a Gini coefficient of 0.55 while the Gini coefficient for wealth is 0.74 in 2011-12.
- Thus, the income Gini is 20 points higher than the consumption Gini, while the wealth Gini is nearly 40 points higher than the consumption Gini in India.
- The reasons for sharp differences between the consumption and income Gini coefficients have to be analysed. In some of the other countries, such differences are no more than 5 to 10 points.

Impact of Growth on poverty

- The trends in poverty show that the pace of reduction was much higher in the post-reform period, particularly during the high-growth period.
- The impact of higher growth on poverty reduction can also be seen from the decile-wise growth in per capita consumption expenditure.
- A comparison of the growth rate of per capita consumption (in real terms) during the periods 1993-94 to 2004-05 and 2004-05 to 2011-12 shows that the growth rate in the latter period is higher for every decile.
- It was Simon Kuznets who had argued that in the early period of economic growth, distribution of income tends to worsen and that only after reaching a certain level of economic development, an improvement in the distribution of income occurs.
- Measuring reduction in poverty ratio is not the same as measuring inequality. The two can move in opposite directions, particularly in a period of fast growth. That is what has happened in India.
- The goal certainly should be to lower both. But in the early stages of development, reducing the poverty ratio must be the immediate objective.

- The sharp reduction in the poverty ratio and the number of people who are poor happened at a time when the growth rate was very high as shown by the consumption-based poverty and multidimensional indicator poverty.
- Concerns are about the current behaviour of the poverty ratio in the light of the slowing down of growth recently.

Way forward

- Growth can help to reduce poverty. As growth occurs, it does affect all sections of the society.
- However, the extent to which the bottom deciles of the population will benefit will depend upon how fast and inclusive the growth is, and thus, composition of growth also matters.
- A strong growth also increases the resources available to the public authorities and this will enable them to increase the social sector expenditures.
- It is obvious that the very fact that the poverty ratio is still high means that growth by itself will not be adequate to reduce poverty.
- It is necessary to launch specific programmes which work towards directly helping poorer groups and vulnerable sections.

Connecting the dots:

- The poverty ratio in India is still high means that growth by itself will not be adequate to reduce poverty. Critically analyse.

Full disclosure: Credit rating agencies

General studies 3

- *Indian Economy and various Issues*

Introduction

- From recent the IL&FS crisis, it is evident that credit rating agencies failed to warn investors about the forthcoming risk.
- The SEBI has issued guidelines to credit rating agencies to improve the quality of their disclosures.

Do you know?

Credit Rating

- Credit rating is an assessment of the probability of default on payment of interest and principal on a debt instrument.
- These debt instruments can be in the form of Bond, Commercial Papers or treasury bills, etc.

Credit Rating Agencies

- A credit rating agency is an entity which assesses the ability and willingness of the issuer company for timely payment of interest and principal on a debt instrument.
- The rating is assigned to a security or an instrument. The Credit rating agencies are regulated by SEBI.

New norms

- Based on the new norms issued by the SEBI, the credit rating agencies will have to inform investors about the liquidity situation of the companies such as their cash balance, liquidity coverage ratio, access to emergency credit lines, asset-liability mismatch etc.
- Further, rating agencies will have to disclose their own historical rating track record by informing clients about how often their rating of an entity has changed over a period of time.

Concerns to be addressed

- A lot of the problems with the credit rating industry have to do with structural issues rather than the lack of formal rules.
- The “issuer-pays” model where the entity that issues the instrument also pays the ratings agency for its services often leads to a situation of conflict of interest.
- The credit rating market in India has high barriers to entry leading to lack of competition and hence adversely affects the interests of the investors.
- Better disclosures can increase the amount of information available to investors, but without a sufficient number of alternative credit rating providers, quality standards in ratings will not improve.
- Another severe problem plaguing the industry is rating shopping and the loyalty of credit rating agencies in general. In other words, it favours Borrowers over investors.

Conclusion

- While rating agencies already make at least some of these disclosures one way or the other, mandating the formal disclosure of these facts is still welcome. The ready availability of information can help investors make better decisions.
- The Credit rating agencies have to come up with lucrative business models which put the interests of the investors above the interests of borrowers.

- Such a change requires a policy framework that allows easier entry and innovation in the credit rating industry.

Connecting the dots:

- What is Credit Rating? Why Credit rating agencies failed to predict IL&FS crisis? Critically analyse.

RBI eases ECB hedging norms for companies

Part of: GS Prelims and Mains III – Indian Economy

In news:

- The Reserve Bank of India (RBI) has eased hedging norms for companies that raise funds through external commercial borrowings (ECB), a move that will lower the cost of hedging.
- The mandatory hedge coverage has been reduced from 100% to 70% under Track I of the ECB framework.
- **Track I refers to medium-term foreign currency-denominated ECBs with a minimum average maturity of 3-5 years.**
- The move will help reduce costs for companies that raise foreign funds.

Do you know?

- **External commercial borrowings (ECBs) are loans in India made by non-resident lenders in foreign currency to Indian borrowers.**
- They are used widely in India to facilitate access to foreign money by Indian corporations and PSUs (public sector undertakings).

Reserve Bank to inject ₹40,000 crore through open market operations (OMOs)

Part of: GS Prelims and Mains III – Indian Economy; monetary policy; open market operations

In news:

- RBI to pump in more liquidity in December by infusing ₹40,000 crore into the system through open market operations (OMOs).
- It has already infused ₹30,000 crore into the system while the balance ₹10,000 crore will be pumped in through auction.

About open market operations

- Open market operations are conducted by the RBI by way of sale or purchase of government securities (g-secs) to adjust money supply conditions.
- The central bank sells g-secs to suck out liquidity from the system and buys back g-secs to infuse liquidity into the system.
- These operations are often conducted on a day-to-day basis in a manner that balances inflation while helping banks continue to lend.
- The RBI uses OMO along with other monetary policy tools such as repo rate, cash reserve ratio and statutory liquidity ratio to adjust the quantum and price of money in the system.

Do you know?

- When RBI sells government security in the markets, the banks purchase them. When the banks purchase Government securities, they have a reduced ability to lend to the industrial houses or other commercial sectors. This reduced surplus cash, contracts the rupee liquidity and consequently credit creation / credit supply.
- When RBI purchases the securities, the commercial banks find them with more surplus cash and this would create more credit in the system. Thus, in the case of excess liquidity, RBI resorts to sale of G-secs to suck out rupee from system.
- Similarly, when there is a liquidity crunch in the economy, RBI buys securities from the market, thereby releasing liquidity.
- Its worth to note here that the market for government securities is not well developed in India but still OMO plays very important role.

Breathing space: on the strengthening rupee

Introduction

- Indian Rupee has appreciated against the US Dollar in recent week due to the fall in global crude oil prices.
- Since imported oil meets about 80% of India's total demand, the fortunes of the rupee have been tightly linked to the price of crude oil in the global markets.

Why is there a fall in global crude oil prices?

- Continuation of supply of crude oil from Iran after U.S. has softened its stance against Iran.
- U.S. turned into the largest crude oil producer in the world with the boom in shale production.
- Lowering of projection of demand of crude oil

- Faltering growth in major economies like China may have also contributed to the fall in prices.

Benefits for India

- The fall in global crude oil prices comes as a big relief to the Central government, which has faced increasing macroeconomic and political pressure due to rising prices.
- A drop of \$10 in the price of oil can improve India's current account and fiscal deficits by 0.5% and 0.1% of GDP, respectively.
- The ruling party may be pleased with falling oil prices in the run-up to the general elections next year.
- Fuel prices across major Indian cities have fallen significantly.
- The Reserve Bank of India will be relieved as it will have to worry less about the rupee and oil-induced inflation.
- Foreign investors, who have been net sellers this year, have turned net buyers this month.
- This points to an increase in investor confidence in the economy as the fundamentals improve.

Conclusion

- Amid rising global uncertainties, it may not be so easy to map what lies ahead for global crude oil prices and the rupee.
- Forthcoming meeting of the Organisation of the Petroleum Exporting Countries will make clear the response of oil producers to the sharp fall in prices.
- Shale companies are also likely to respond to falling prices by cutting production.
- India should capitalise on the relief offered by the fall in oil prices to improve its preparedness for any future jump in oil prices.

Connecting the dots:

- Fall in oil prices gives the rupee and the Indian economy a much-needed boost. Critically comment.

AGRICULTURE

How to weaken the mandi monopoly?

General studies 3

- *Agriculture economy*
- *Inclusive growth*

Introduction

- Over a quarter of a century after the liberalization process was launched, the sector that employs the largest labour force remains perversely untouched.
- The Maharashtra government's recent amendment of the Maharashtra Agricultural Produce Marketing (Development and Regulation) Act, 1963, aims to bring the state's agricultural economy up to speed.
- It is a valuable experiment at a time when various states are attempting to incorporate the changes proposed by the Centre's model Agricultural Produce Market Committee (APMC) Act.

Concerns Related Agricultural market

- **The Dalwai Committee on Doubling Farmers' Income**, set up in 2016, has noted that farmers' share in consumer prices range from as low as 15% to an anaemic 40%.
- Cartelization by middlemen and traders prevents price discovery mechanisms from functioning in mandis. Poor mandi infrastructure feeds into the problem.
- Only a quarter of them have common drying yards, less than a third have grading facilities and less than a tenth cold storage. The upshot is post-harvest losses in the 6-18% range.
- This combination of factors leads to farmers demanding higher minimum support prices (MSPs), degrading the fisc and enriching traders who are able to mop up most of the gains from higher MSPs.

Need of Private players

- The Centre's Model Agricultural Produce and Livestock Marketing (Promotion & Facilitation) Act, 2017 recognized this with its attempt to bring private actors into the sector in order to provide competition for APMCs.
- A recent study, looking at potato sales in West Bengal, found that relaying price information to farmers—a focus of various government initiatives—had “negligible average effects on farm-gate sales and revenues” in the absence of adequate competition among buyers.

Agriculture reforms in Maharashtra

- In 2016, Maharashtra government delisted horticultural produce like fruits and vegetables from the purview of APMCs.
- It has now taken the next step, allowing farmers to trade in the open market for all produce and livestock.
- APMCs' authority to regulate sales and levy a cess, which had earlier covered all activity in the talukas, has now been restricted to "principal market yard, sub-market yard and market sub-yard".

Criticism of recent reforms

- The Maharashtra government's move will dismantle APMC monopoly and open up the state's agricultural sector to private actors. In practice, it isn't that simple, the rules for implementing the changes have yet to be notified.
- Past experience—the delisting of fruits and vegetables in 2016—doesn't inspire confidence.
- Besides, the lack of basic and agricultural rural infrastructure makes farm gate sourcing and storage a costly proposition—one that may well lead private markets, companies and the like to rely on the same old middlemen cartels.
- Buyer licenses outside the mandi system could be another choke point and opportunity for rent extraction. The same goes for acquiring land and licenses for setting up private markets.

Conclusion

- The Maharashtra government's attempt at agricultural reform is welcome, but it won't be enough.
- In the absence of supporting policies here, delisting all produce and livestock is likely to remain a notional reform.
- It makes little sense for agricultural markets to remain constrained by state boundaries when the goods and services tax has created a common market in other sectors.

Connecting the dots:

- Even after 25 years of the economic liberalization, the sector that employs the largest labour force remains neglected. Critically analyse the agriculture market reforms in India.

[A reinstated right to property will protect the poor](#)

General studies 2&3

- *Indian constitution: right to property*
- *Farmers issues*

Introduction

- The impoverished farmers who won a million hearts in Mumbai with their quiet dignity are now on their way to New Delhi to make their voice heard outside national Parliament.
- The list of demands is a long one, which is not surprising given the intensity of rural distress.
However, one of their demands shows why it is now time to reinstate the right to property as a fundamental constitutional right.

Demand of right over land

- The farmers from Nashik district of Maharashtra have been demanding that the government should recognize their legal rights over the land they till.
- Many of the protesters are tribals who have been cultivating land controlled by the forest department.
- The Forest Rights Act of 2006 seeks to correct a historical wrong cemented during the colonial era.
- The lack of land rights has ensured that generations of tribal cultivators have got a raw deal from governments as well as banks. Hence the demand for property rights from the marching farmers.

Right to property in Indian constitution

- It is well known that the Indian Constitution originally recognized the right to property as a fundamental right.
- That right came under attack beginning with the first amendment in 1951.
- Many of the subsequent laws that undermined property rights were hidden away from judicial scrutiny in the Ninth Schedule.
- Another big blow came during the epic legal battles after the nationalization of banks in 1969.
- The Morarji Desai government eventually scrapped the fundamental right to property with the forty-fourth amendment in 1978.
- In its place came Article 300-A that makes it possible for a citizen to be dispossessed without compensation through an act of legislation.

Why right to property was scrapped from fundamental rights?

- Successive governments chipped away at the right to property by arguing that it was an obstacle in the way of pursuing the social justice agenda embedded in the directive principles of state policy.
- Consider the issue of farm land. It was very unequally divided when India became an independent country because of the colonial institution of zamindari.
- The estates kept growing in size as indebted peasants were dispossessed after loan defaults.
- Think of Do Bigha Zameen, the heart-wrenching 1953 movie directed by Bimal Roy. Even liberals saw the value in land reforms.
- The implicit assumption all the way till the right to property was removed from the list of fundamental rights was that it was essentially a concern of the rich.
- The poor had little stake in property rights; in fact, property rights were an obstacle in the battle against mass poverty.

Need to reinstate right to property

- The poor have neither the legal resources nor the political heft to fight laws or administrative orders that allow governments take over their land.
- The poor do not have enough opportunities to make a living in formal jobs in case they are forcibly separated from their property.
- There is now a lot of research that shows how property rights help the poor.
- The security of property provides incentives for a small farmer to invest in his land or a slum dweller to spend on basic infrastructure.
- The Peruvian economist Hernando De Soto has also shown how secure property rights allow the poor to raise capital by offering the property as collateral to formal lenders.
- The Odisha state government has recently begun offering formal property rights to slum dwellers.

Conclusion

- Indian political parties have mostly steered clear of making any commitment to a reinstated fundamental right to property, perhaps because of the belief that they would be seen to represent the interests of the rich rather than the poor.
- It is time to break this misconception. The poor also have a stake in better property rights—from land titling to legal safeguards.
- Women also need to be equal partners in property. Property rights today are a tool of inclusion rather than exclusion.

Connecting the dots:

- Right to property should be a fundamental right. Do you agree?

[India to export sugar to China](#)

Part of: GS Prelims and Mains II and III – International Relations; Bilateral ties; Economy

In news:

- India to export sugar to China in early 2019 → major boost to sugar mills sitting on surplus stocks. (Initial contract is to dispatch 50,000 tonnes)
- India is also engaged in talks to finalise exports to Indonesia and Malaysia as well.

Do you know?

- Raw sugar is the second product after non-basmati rice that China will import from India.
- It is a move to reduce the \$60 billion trade deficit that China has with India. India's exports to China in 2017-18 amounted to \$33 billion while imports from China stood at \$76.2 billion.
- India is the world's largest sugar producer with a production of 32 million tonnes in 2018. However, domestic consumption is only around 25 million tonnes.

[India steps up agro-diplomacy with China](#)

Part of: GS Prelims and Mains II and III – India and its neighbours; Bilateral economic ties

In news:

- As the trade war with the United States continues to impact, China appears to be opening up to non-U.S. imports.
- India has stepped up its agro-diplomacy with China, as China would look first at its food security by diversifying imports in view of the trade war.
- India has started exporting soya bean, sugar, black tea, non-Basmati rice etc. after China has imposed more levy on U.S. imports.

[Solar Bubble Dryer](#)

Part of: GS Mains III – Role of Technology in Agriculture sector

In news:

- Innovative crop drying technology – Solar Bubble Dryer – was demonstrated for the first time in Odisha.

- Solar Bubble Dryer - developed jointly by International Rice Research Institute, Philippines; Grainpro, a leading post-harvest solution providing company; and University of Hohenheim, Germany.
- The SBD is a low-cost drying technology that aims to provide a simple and flexible alternative to sun-drying, while protecting from spillage, animals, weather and vehicles running over the grains.
- The quantitative loss in traditional sun-drying method is estimated to be in the range of 15 to 30% between harvesting and milling. Due to quality loss, farmer do not get proper price of their produce.



GrainPro Solar Bubble Dryer (SBD)TM

GrainPro's safe drying technology

The Solar Bubble DryerTM (SBD) is the latest in state-of-the-art drying technology and engineered with the University of Hohenheim and the International Rice Research Institute to mitigate the negative effects of unpredictable weather patterns. Able to simulate sun drying even under rainy conditions, the SBD's design allows it to protect grains such as rice, corn and coffee, and prevent any post-harvest losses which has constantly challenged farmers in tropical regions of the world.

Made of durable UV-resistant and water-repelling materials, the commodities being dried are enclosed in an inflatable bubble equipped with small ventilators to drive out grain moisture while keeping the bubble inflated. The SBD is run using readily available power sources and can dry in both sunny and rainy days, even at night time.



The SBD set up with the solar panel

Advantages/Features

- A safe drying technology designed to address the challenges of climate change protects the grain and prevent postharvest losses.
- Can perform solar drying both in sunny and rainy days using UV radiation and even at night time using cosmic energy.
- Can be assembled on any flat surface i.e. cemented pavement, top soil, and others.
- Can be used to dry paddy, corn, coffee beans and other agricultural commodities.
- An environment-friendly technology: solar power or electricity from the grid can run the ventilators.
- The dryer is collapsible and easy to transport and assemble.



View inside the inflatable bubble

		GrainPro Inc. 200 Baker Ave., Suite 309 Concord, MA 04742 USA Tel. +1 978 371 7416 Fax +1 967 371 7411 sales@grainpro.com	GrainPro Philippines, Inc. Subic Bay Gateway Park SBFZ 2222 Tel. +63 47 252 7884 Fax +63 47 252 7885 salesasia@grainpro.com	GrainPro Kenya Space Apartments, GF Shop A2 Maimahiu Rd. Nairobi West Tel. +254 737 177 767 Fax +254 710 933 717 salesafrica@grainpro.com
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Worldwide distributors and specifications for the entire product line are available at www.grainpro.com

<http://www.knowledgebank.irri.org/images/stories/grainpro-solar-bubble-dryer.jpg>

Drought warning

General studies 3

- *Agriculture and related issues*
- *Infrastructure: irrigation facilities*
- *Disaster management*

Introduction

After two years of relatively good rains, large parts of Maharashtra (especially the Marathwada region and the adjoining districts of Jalgaon, Nashik, Ahmednagar, Sholapur, Amravati and Yavatmal), North Gujarat, Saurashtra, Kutch and North Karnataka are reeling under drought.

Farmers' distress this year

- What is different this time is that it has been induced by the southwest monsoon's failure in the second half of the season.
- The rains were, in fact, quite good in most of these areas during June-July. The monsoon's timely arrival led to the area sown under kharif crops being more or less normal.
- Farmers were, however, caught unaware by the extended dry spell from August, when their already planted crops were in the late vegetative growth stage.
- These farmers are in no position to plant a rabi crop; there's hardly any soil and subsoil moisture left to allow that.
- What would worry them more is providing water and fodder to their cattle and buffaloes.
- Farmers already burdened by successive years of low crop realisations and the more recent spike in the cost of diesel, fertiliser and pesticides.

Drought: When, and how, does a state govt declare one?

While the word 'drought' usually brings to mind a period of unusually dry weather, crop damage and water supply shortages, there are guidelines in place for a state government for declaring a drought in a state or area.

A manual published by the Ministry of Agriculture in 2016 suggests a three-step approach.

- **The first step** is to look at two mandatory indicators — rainfall deviation and dry spell.
- Depending on the extent of deviation, and whether or not there is a dry spell, the manual specifies various situations that may or may not be considered a drought trigger.
- **The second step** is to look at four impact indicators — agriculture, vegetation indices based on remote sensing, soil moisture, and hydrology.
- Each impact can be assessed on the basis of various indices.

- If all three chosen indicators are in the 'severe' category, it amounts to severe drought; and if two of the three chosen impact indicators are in the 'moderate' or 'severe' class, it amounts to moderate drought.
- **The third step** comes in after both previous triggers have been set off.
- States will conduct sample survey for ground truthing, in order to make a final determination of drought.
- The finding of field verification exercise will be the final basis for judging the intensity of drought as 'severe' or 'moderate'.
- Once a drought is determined, the state government needs to issue a notification specifying the geographical extent. The notification is valid for six months, unless de-notified earlier.

Way forward

- For the governments at the Centre and in the concerned states, the most sensible option is to act fast.
- Maharashtra has claimed that more than half of its talukas are already facing "drought-like" conditions.
- There is no reason to delay sending Central teams to ascertain the ground situation and officially declare drought.
- Rabi season drought may be a somewhat rare phenomenon, but its impact on crop production and supply of water and fodder is no less, extending to the following summer.
- Preparation for starting fodder camps, taking up MGNREGA works or making direct benefit transfers to the most vulnerable families should start sooner than later.

Connecting the dots:

- How drought is declared in a state? Briefly explain the procedure. What are the reasons behind frequent droughts in comparatively more developed states of Maharashtra and Gujarat?

[Agriculture Ministry takes back report on impact of demonetization on farmers](#)

Part of: GS Mains III – Indian Economy and issues related to it; Social/Welfare issue

In news:

Earlier, a report submitted by the Union Agriculture Ministry to the Parliamentary Standing Committee on Finance highlighted that –

- Farmers were badly hit by demonetization, as many were unable to buy seeds without enough money.
- Demonetisation came at a time when farmers were engaged in either selling their Kharif crops or sowing the Rabi crops. Both these operations needed huge amounts of cash, which demonetisation removed from the market.
- Even bigger landlords faced a problem such as paying daily wages to the farmers and purchasing agriculture needs for growing crops.

However, now, reversing its earlier report, the Union Agriculture Ministry has submitted a fresh report claiming that there was no “adverse impact.”

Farmers assemble in Delhi to demand policy change

Part of: GS Mains II and III – Farmers/Welfare issue; Agrarian crisis; Agriculture reforms

In news:

- All India Kisan Sangharsh Coordination Committee members and farmers demanded that the – government pass legislation guaranteeing loan waivers and remunerative prices for their crops.
- The last major farmers’ rally in the capital, organised by the Bhartiya Kisan Union on Gandhi Jayanti, resulted in violent clashes with the police.
- The farmers are demanding a special session of parliament to ensure minimum crop prices and a nationwide waiver of farm loans amid rising costs of fertilizers and agricultural inputs.

Do you know?

- PM Modi earlier this year approved a 50 per cent return over the cost of production. Still, prices of crops including rice, pulses and oil seeds in some wholesale markets are below the government-set rates.
- Lower prices, combined with inadequate government purchases, have triggered the protests.
- The government's procurement agencies, which are mandated to purchase agricultural commodities at guaranteed rates to support prices, buy only a small portion of total output, leaving millions of farmers across the country at the mercy of middlemen.

ENVIRONMENT

Choked by smog

General studies 3

- *Sustainable development*
- *Environment and ecology, pollution*

Introduction

- Air pollution is choking several cities in the northern States once again, as changes in temperature and slowing winds trap soot, dust and fine particulate matter.

Causes of air pollution in northern states

- The National Capital Region is badly hit, as the burning of agricultural residue in Punjab and Haryana is releasing large volumes of smoke containing, among other pollutants, highly damaging fine particulates, or PM2.5.
- Farm stubble burning is a major contributor to the problem, and its footprint may be growing because of wider use of mechanical harvesters that is producing more waste.
- The problem is aggravated by the burning of urban waste, diesel soot, vehicular exhaust, road and construction dust, and power generation.
- With the steady growth in the population of the capital and other cities, the trauma is set to worsen.

Effects of air pollution

- The UN Environment Programme's recent report titled 'Air Pollution in Asia and the Pacific: Science-Based Solutions' has sounded a warning, pointing out that only 8% of the population in the countries of the region get to breathe air of acceptable quality.
- One study of degradation of Delhi's air over a 10-year period beginning 2000 estimated premature mortality to have risen by as much as 60%.

Lack of consistent actions

- Although India has nine of the 10 most polluted cities in the world, it has not taken consistent action on pollution.
- Tens of millions live with ambient air quality that is well short of even the relaxed parameters the country has set for fine particulates, compared with those of the World Health Organisation.
- This year's 'severe' air quality rating for Delhi and poor conditions prevailing in other cities in the Indo-Gangetic Plain should compel a decisive shift in policy.

Way forward

- India should give high importance to the WHO warning about air pollution being the new tobacco.
- The Centre and the State governments need to get into crisis mode to dramatically reduce emissions.
- They must address the burning of carbon, which is a direct source, and emissions with oxides of nitrogen and sulphur from vehicles that turn into fine particulates through atmospheric reactions.
- An innovative approach could be to use climate change funds to turn farm residues into a resource, using technological options such as converting them into biofuels and fertilizers.
- From an urban development perspective, large cities should reorient their investments to prioritise public transport, favouring electric mobility.
- The World Bank has said it is keen to enhance its lending portfolio to tackle air pollution, opening a new avenue for this.
- Governments should make the use of personal vehicles in cities less attractive through strict road pricing mechanisms.
- Sharply escalated, deterrent parking fees can be implemented.

Conclusion

- The critical issue of pollution control needs immediate attention.
- Failure to take sustainable and urgent measures will inflict long-term harm on public health, affecting children even more by putting them at higher risk for diseases.

Connecting the dots:

- What are the causes and factors responsible for winter pollution in northern states of India. Critically analyse the steps taken by central and state governments.

Smoke overdose: Delhi air worsens a day after Diwali

Part of: GS Prelims and Mains III – Environment concerns; Pollution

In news:

- We had earlier read about Supreme Court's order that **permitted the sale of only 'green crackers'**, which reduce particulate matter emissions by 35% at least, and specified that even these only **be used between 8 p.m. and 10 p.m.** on Diwali. (especially in Delhi and NCR region)

- However, many regions of Delhi's National Capital Region reported instances of crackers being burnt beyond this interval. Moreover, because such green crackers weren't commercially available, the crackers that were burnt were likely illegal.
- In simple, Supreme Court restrictions on crackers were violated.

Concerns:

- Delhi's Air Quality Index (AQI) in the 'severe' category.
- Some of Delhi's pollution monitoring stations recorded particulate matter (PM) levels that exceeded 999 microgram per cubic metre.
- This corresponds to air quality that's harmful to even healthy people and severely afflicts those with underlying respiratory illnesses.

A passage to clean air

General studies 3

- **Environment and Ecology: Pollution**

Introduction

- Globally, rapid economic and social development has resulted in severe air pollution that kills around 7 million people every year. India is home to 14 of the world's 20 most polluted cities.
- Winter came along with accompanying murmurs and hints of action to ameliorate the air quality situation in Delhi. However, to win the battle against air pollution, India needs a comprehensive action plan for the whole year.

Examples of China and South Korea

- China had also faced severe air pollution problems. On January 12, 2013, the Air Quality Index (AQI) in Beijing rose to a record 755.
- It was "Beyond index" on a scale where the worst level and concentration of PM_{2.5} reached 886 µg/m³, about 35 times the guideline set by the World Health Organisation on what is called the "Blackest Day".
- In response, China acted firmly. In September 2013, the Chinese government announced an Air Pollution Action Plan with a PM 2.5 reduction target of 33 per cent in Beijing by 2017, with 2013 as the base year.
- The measures adopted were costly, controversial and implemented with seriousness, enabling the city to achieve its target.

- Along similar lines, in 2017, the South Korean government also set a target of PM 2.5 reduction by 30 per cent by 2022, with base year 2017.
- Based on China and South Korea's experience, and other insights, we feel that India needs three action measures to begin its journey towards clean air.

Action measures for India:

The first is a comprehensive plan and setting of goals.

- On this count the Indian government announced a draft of the "National Clean Air Programme (NCAP)" with a framework and multiple strategies to reduce air pollution in the entire country.
- There was some criticism for not setting up any goals or schedule to reduce air pollution.
- Responding to the same, the government finally announced time-bound air pollution reduction targets at the first global conference on air pollution and health in Geneva.
- According to the announcement, the Ministry of Environment, Forest and Climate Change (MoEF) has set a target to cut down PM levels by 30 per cent in five years, with 2019 as the base year.

The second corresponds to; Designating an in-charge, empowered with the due mandate.

- While Delhi does have the Graded Response Action Plan (GRAP), statutory notifications, court orders and several other measures in place, the multiplicity of the agencies involved makes the implementation everybody's burden and nobody's mandate.
- Therefore, with air quality goals clearly in place, Delhi now needs an "Air Quality Manager" with a clearly defined mandate and powers.
- This need is so obvious that it is conspicuous by its absence.
- In China, air pollution prevention and control is the responsibility of the central environmental protection inspector, and in cities where air pollution prevention and control work is ineffective, special inspections are carried out to strengthen the accountability of inspectors.
- There is chain of responsibilities and accountability from Ministry of Ecology and Environment till local leader.
- The Chinese government has established the "five-step" supervision mechanism that involves investigation, assignment, verification, interview and special inspection.

The third action measure is about driving a change in perspective.

- A view often touted about pollution reduction plans is that they are economically and politically difficult.

- However, clean air programmes can actually provide significant economic opportunity in areas of technology, business, innovation, and enterprise while addressing the challenges of air pollution.
- Some evidence for this already exists, and some steps have already been taken.
- For instance, both India and China are focusing on renewable energy sources (especially solar photovoltaic) to reduce the air pollution problem.
- According to the NITI Aayog report on “Zero Emission Vehicles (ZEVs): Towards a Policy Framework”, electric vehicles could launch new business opportunities in areas such as battery charging and swapping infrastructure, service, or integrated transport.
- There are several other studies globally that suggest an overall positive impact on the GDP, employment, society and political economy upon introduction of EVs in fuel importing service dominated economies.
- In the Indian context, coupled with the generation of renewable power, the battery manufacturing industry in India can become bigger than the total amount spent on import of crude oil, thus providing a huge boost to the Indian economy.
- Even the loss in tax revenue corresponding to the oil sector can be potentially compensated by the tax revenue from other economic sectors.

Conclusion

- Clean air, apart from better health and quality of life, can also bring in higher GDP, more jobs, more business, social benefits and higher tax revenues.
- It certainly doesn't look like an economically or politically difficult proposition.
- Perhaps, a visionary leader and statesman can complete this picture and take it to the masses.

Connecting the dots:

- To win the battle against air pollution, India needs a comprehensive action plan for the whole year. Comment.
- Explain the potential benefits of renewable energy technologies for economy and society along with environment.

Phasing out hydrofluorocarbons (HFC)

Part of: GS Prelims and Mains III – Environment and Ecology concerns; Global warming

In news:

- In 2016, India was a signatory to a compact of 107 countries to “substantially phase” out a potent greenhouse gas, called hydrofluorocarbons (HFC), by 2045 and move to prevent a potential 0.5 C rise in global temperature by 2050.
- HFCs are a family of gases that are largely used in refrigerants at home and in car air-conditioners. They substantially worsen global warming.
- India, China, the United States and Europe have committed themselves to reducing the use of HFC by 85% by 2045.

Concern:

- By 2022, India is expected to have a fourth of the world’s air conditioning units, and the risks to climate from this could be immense.

Role of non-state actors and women's movement against the felling of trees in Jhinkargadi forest

Part of: GS Mains III – Environment and Ecology concerns; Deforestation; Role of Non-State Actors

In news:

- Odisha Chief Minister cancelled the setting up of a brewery plant in Dhenkanal district where hundreds of trees were felled despite strong protests by the villagers.
- The government took the decision following a massive public outcry against the felling of trees and maintaining the ecological balance.
- The brewery plant (₹102-crore project, which was to be set up by P&A Bottlers Private Limited) was to come up on 12 acres of forestland in Jhinkargadi.

Do you know?

- The movement is in same lines of Chipko movement, a non-violent agitation in 1973 that was aimed at protection and conservation of trees.



Pic:

https://d39gegkjaqduz9.cloudfront.net/TH/2018/11/20/DEL/Delhi/TH/5_06/dab32569_2538013_1_mr.jpg

Virtual climate summit

Part of: GS Prelims and Mains III – Environment and Ecology; Climate Change; Global warming

In news:

- World leaders to participate in an innovative climate change summit that will take place entirely online so it is carbon neutral.
- The Virtual Climate Summit is the brainchild of Marshall Islands President Hilda Heine, whose low-lying Pacific island nation will drown beneath rising seas if global warming continues unabated.
- It will be the first global political meeting to be held online.
- The virtual summit's main aim is to encourage the international community to keep global warming to 1.5 degrees Celsius above pre-industrial levels.
- The latest round of UN climate talks, COP24, will open in the southern Polish city of Katowice on December 2 with the aim of reinvigorating the Paris agreement.

Atmosphere and Climate Research-Modelling Observing Systems & Services (ACROSS) and National Facility for Airborne Research (NFAR)

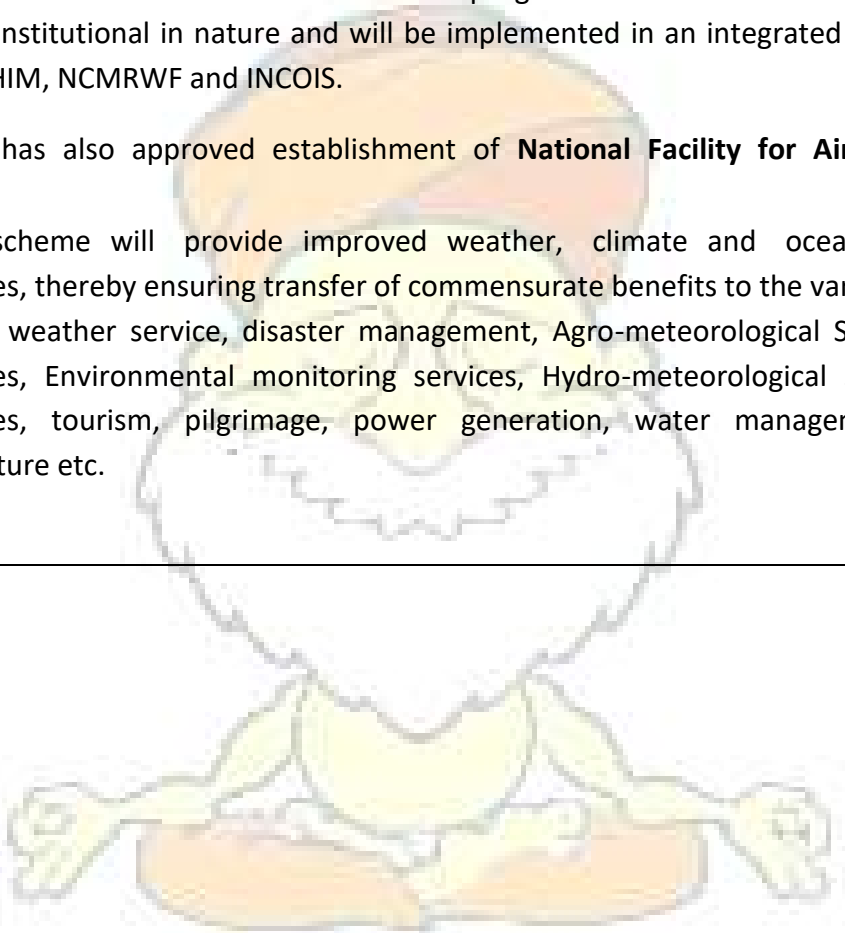
Part of: GS Prelims and Mains II and III – Government schemes and policies; Environment and Ecology; Pollution

In news:

- The Government has approved continuation of the nine sub-schemes of the umbrella scheme "**Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS)**" during 2017-2020.
- The scheme will be implemented by the Ministry of Earth Sciences.
- ACROSS scheme pertains to the atmospheric science programs of the Ministry of Earth Sciences (MoES) and addresses different aspects of weather and climate services, which includes warnings for cyclone, storm surges, heat waves, thunderstorms etc.
- The ACROSS scheme consists of nine sub-programmes which are multi disciplinary and multi institutional in nature and will be implemented in an integrated manner through IMD, HIM, NCMRWF and INCOIS.

Government has also approved establishment of **National Facility for Airborne Research (NFAR)**.

- The scheme will provide improved weather, climate and ocean forecast and services, thereby ensuring transfer of commensurate benefits to the various services like Public weather service, disaster management, Agro-meteorological Services, Aviation services, Environmental monitoring services, Hydro-meteorological services, climate services, tourism, pilgrimage, power generation, water management, Sports & adventure etc.



ANIMALS/NATIONAL PARKS IN NEWS

461 elephants electrocuted in country in 8 years since 2009

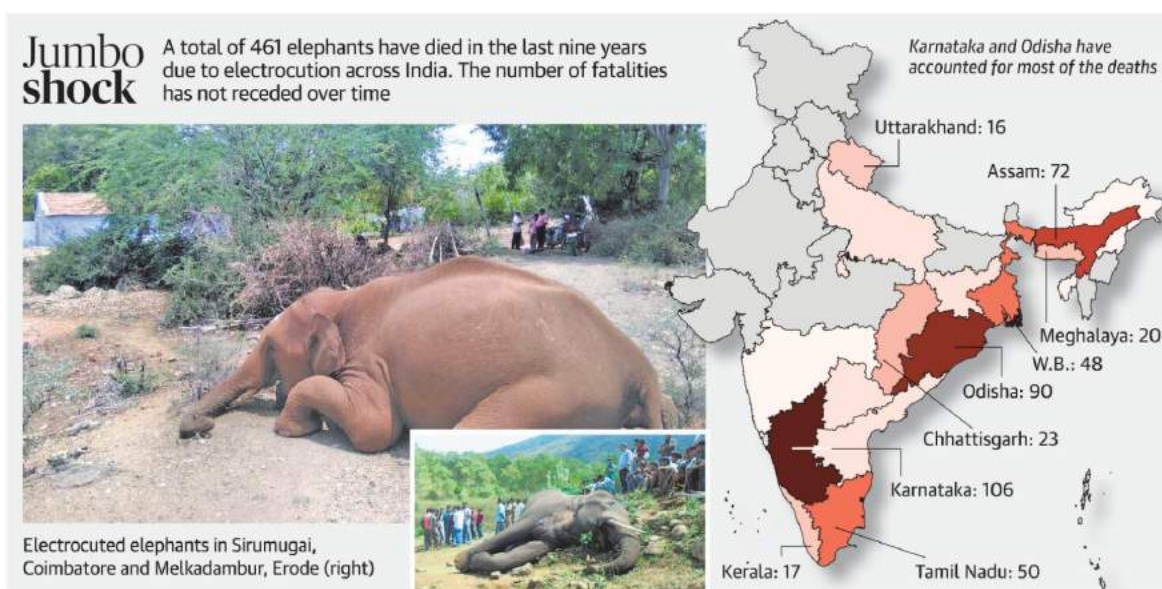
Part of: GS Prelims and Mains III – Animal Conservation; Man-Animal Conflict

In news:

- More than a dozen elephants were electrocuted between August to October 2018.
- Human-elephant conflict remains a major concern for policy makers and conservationists.
- Electrocution of elephants is turning out to be a critical area in the management of India's elephant population.

Do you know?

- Every year, about 50 elephants have died on average due to electrocution.
- A total of 461 elephant deaths due to electrocution occurred in the eight years between 2009 and November 2017.
- The States with the highest elephant population are Karnataka (6,049), followed by Assam (5,719) and Kerala (3,054).



Concerns:

- Karnataka, which has the highest population of elephants, has recorded the highest casualties by electrocution, numbering 106.
- In Odisha, 90 elephants died of electrocution.

- 70 elephants died of electrocution in Assam; 48 elephants in West Bengal; and 23 elephants in Chhattisgarh.

Solution:

- Need for greater surveillance and protection of elephant corridors.
- Need for greater coordination between the Forest Department and different agencies, including the Power Department, as well as continuous monitoring of electrical wires passing through areas of elephant movement.
- Stop illegal electrical fencing, and having proper guidelines for maintaining the height of high tension electrical wires.
- Come up with a proper zone-wise management plan for different elephant landscapes — where to allow elephants and where to restrict their movement.

Not Burning Bright: Human-Animal Conflicts

General studies 3

- **Biodiversity**

Introduction

- The tiger is in the news, and yet again for the wrong reasons. Two tigers were killed, one in Yavatmal (Maharashtra) and other in Dudhwa (Uttar Pradesh).
- The big cats were victims of human-tiger interface conflict.

India: Global leader in tiger population

- India is in a leadership position on the tiger front with almost 70 per cent of the global tiger population.
- India pioneered tiger conservation with Project Tiger and by conserving 2.4 per cent of its geographical area as tiger reserves.

Repeated Human animal conflicts

- India's tiger reserves, national parks and sanctuaries exist only as islets in a vast sea of human, cattle and unsustainable land use.
- The stakeholders are many in this heterogeneous mosaic, from primary (local people) to secondary (government departments) and tertiary (business groups, semi-urbanscape).
- Urbanisation and growth agendas alter landscape dynamics, which has a cascading effect on the ecological dynamics of wildlife.

- This results in ecological dislocation of sorts, wherein endangered wild animals like tigers either cause distress or land themselves in trouble.

One Reason: The statistics; population pressure

- India's 3.28 million sq km land area amounts to 2.4 per cent of the planet's geographical area. But we have almost 17 per cent of the world's human population and 16 per cent of global livestock.
- Our per capita forest is just 0.064 ha compared to the global average of 0.64 ha, which partly explains the forest resource dependency of a large number of rural people.
- India's 668 protected areas add up to 14 per cent of her forest area and 4.9 per cent of her geographical area. Of these, 50 protected areas are tiger reserves.
- Against this backdrop, we hold two-thirds of the global tiger population, the largest population of Asiatic elephants and so on.

Some other reasons of rising conflicts

- Barring protected areas, our forests are not very rich. And the concessions in our forests have caused overuse and abuse of resources.
- Loss of forest productivity in terms of forage for wild herbivores has meant that the bulk of our forests cannot sustain medium-sized wild herbivores like deer, megaherbivores like elephants or big cats like tigers.
- Successive assessments have revealed that tigers are largely confined to their source areas (core areas of tiger reserves) and their fringes (buffers).
- The bulk of other forests in most of India's tiger states have practically lost their habitat value owing to excessive biotic pressure.
- Consequently, agriculture and cash crops beyond protected areas readily lure wild pigs and other preys, which in turn lure big cats.
- The inevitable outcome is "conflict of interface" between wildlife and humans, which cause distress to people.
- And once wild animals earn a pest value, they get trapped in snares or succumb to revenge or avoidance killings, more often than not through a silent method of poisoning using pesticides.
- This "interface" is further influenced by urbanisation, rail and road transport infrastructure and intensive operations like mining or special economic zones — part of the growth agenda in any developing country.

Way forward

- The, hum an-wildlife interface is here to stay. While there can be no "co-existence" with tigers or elephants, a "co-occurrence" agenda with a proactive management control is available.

- The National Tiger Conservation Authority (NTCA) has brought out several Standard Operating Procedures (SOPs) to deal with various challenges of the human-tiger interface.
- An incapacitated tiger or leopard has to be captured on priority. A prime animal straying close to human settlements requires active monitoring and translocation to suitable habitat.
- For example, tigers were shifted from the fringes of Bandhavgarh to Satpura. All this requires 24x7 monitoring using technology, management of corridors, building up the frontline capacity, creating village teams for reporting wild animal presence, and, an intersectoral portfolio at the landscape level akin to the “master plan” envisaged for an eco-sensitive zone.

Conclusion

- Human-tiger interface management demands proactive measures. One cannot allow a big cat to get habituated and then brutally eliminate it.
- It is a tragic end for our national animal, and a complete travesty of the responsibility reposed on foresters and wildlife experts.

Connecting the dots:

- Recently, killing of tigers and elephants was in news due to human-animal conflicts. What are the reasons behind rise in human-animal conflicts? Suggest some measures to mitigate it.

Make elephant corridors eco-sensitive zones: NGT

Part of: GS Prelims and Mains III – Environment and Ecology; Protected areas - Eco-Sensitive Zones

In news:

- National Green Tribunal (NGT) has asked the Ministry of Environment, Forests and Climate Change (MoEF&CC) to consider declaring all elephant corridors in India as eco-sensitive zones.

About Eco-Sensitive Zones (ESZs)

Eco-Sensitive Zones (ESZs) are areas notified by the Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India around Protected Areas, National Parks and Wildlife Sanctuaries.

- The purpose of declaring ESZs is to create some kind of “shock absorbers” to the protected areas by regulating and managing the activities around such areas.
- They also act as a transition zone from areas of high protection to areas involving lesser protection.
- The new ESZ guidelines include a broad list of activities that could be allowed, promoted, regulated or promoted.
- The guidelines said activities, including commercial mining, setting of saw mills and industries causing pollution, commercial use of firewood and major hydro-power projects, are prohibited in such areas.
- It also prohibits tourism activities like flying over protected areas in an aircraft or hot air balloon, and discharge of effluents and solid waste in natural water bodies or terrestrial areas.
- Felling of trees, drastic change in agriculture systems and commercial use of natural water resources, including groundwater harvesting and setting up of hotels and resorts, are the activities regulated in the areas.
- Activities permitted in the areas include ongoing agriculture and horticulture practices by local communities, rainwater harvesting, organic farming, adoption of green technology and use of renewable energy sources.
- The width of the ESZ and type of regulation may vary from protected area to area. However, as a general principle, the width of the ESZ could go up to 10 kms around the protected area.

Do you know?

- The rules for the ESZ or the Eco-Fragile Zones are based on the Environment Protection Act, 1986. However, the Environment (Protection) Act, 1986 does not mention the word “Eco-Sensitive Zones”.
- The Act says that Central Government can restrict areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards.

Greater flamingoes at Hope Island after 25 years

Part of: GS Prelims and Mains III – Animal Conservation; Biodiversity

In news:

- Flock of five greater flamingoes has been spotted along the coast of Hope Island, a part of the Coringa Wildlife Sanctuary in Andhra Pradesh.

About Coringa Wildlife Sanctuary (CWS)

- The Coringa Wildlife Sanctuary (CWS) is a wildlife sanctuary and estuary situated in Andhra Pradesh. It covers an area of 235.7 square kilometers.
- It is the second largest stretch of mangrove forests in India with 24 mangrove tree species and more than 120 bird species.
- It is home to the critically endangered white-backed vulture and the long billed vulture.

Animal in news: 490 Indian star tortoises seized

Part of: GS Prelims and Mains III – Animal conservation

In news:

- Customs officials seized 490 Indian star tortoises when they were about to be smuggled out of Chennai harbor.
- Wildlife Protection Act, 1972 and Convention on International Trade in Endangered Species (CITES) prohibits the exports and imports of star tortoises.
- In countries like Malaysia, Thailand and Singapore, there is a huge demand for star tortoises. They are traded usually for use in traditional medicines, for food and also to be kept as exotic pets.

Animal in news: Sangai deer

Part of: GS Prelims and Mains III – Animal conservation

In news:

- The sangai is an endemic and endangered subspecies of brow-antlered deer found only in Manipur, India. It is also the state animal of Manipur and is under threat from poachers.
- There are less than 260 deer in its natural habitat, the 40 sq. km. Keibul Lamjao national park.

About Sangai

- The sangai is an endemic and endangered subspecies of brow-antlered deer found only in Manipur, India. It is also the state animal of Manipur. Its common English name is Manipur brow-antlered deer or Eld's deer and the scientific name is , *Rucervus eldii* eldii.

- The brow-antlered deer or the dancing deer is found in its natural habitat only at Keibul Lamjao National Park over the floating biomass locally called "phumdi" in the south eastern part of Loktak Lake.
- Phumdi is the most important and unique part of the habitat. It is the floating mass of entangled vegetation formed by the accumulation of organic debris and biomass with soil. Its thickness varies from few centimeter to two meters. The humus of phumdi is black in colour and very spongy with large number of pores. It floats with 4/5 part under water.
- IUCN status: Endangered

Animal in news: Ortolan Bunting

Part of: GS Prelims and Mains III – Environment and Ecology; In news:

- 'First photo' of Ortolan Bunting in India is out; the bird was photographed near Mangaluru.
- 'Ortolan Bunting' - breeds from Mongolia to Europe and migrates to Africa via the Middle East.
- IUCN status: "Least Concern" category

Protect the little helpers

General studies 3

- *Environment and Biodiversity*
- *Agricultural practices*
- *Science and technology*

Introduction

- Across India's agrarian plains, plantations and orchards, millions of birds, bats and insects toil to pollinate crops.
- However, many of these thousands of species may be in dangerous decline.

Significance of Pollinators

- In 2015, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) found that pollinators lead to huge agricultural economic gains.

- The report estimated pollinator contribution in India to be \$0.831-1.5 billion annually for just six vegetable crops.
- This is an underestimation considering that nearly 70% of tropical crop species are dependent on pollinators for optimal yields.

Do you know?

What is IPBES?

- It is an independent intergovernmental body, established by member States in 2012. Around 130 states are member to it.
- It provides policymakers with objective scientific assessments about the state of knowledge regarding the planet's biodiversity, ecosystems and the benefits they provide to people, as well as the tools and methods to protect and sustainably use these vital natural assets.

Mission of IPBES

- To strengthen knowledge foundations for better policy through science, for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.

What does IPBES do?

To some extent IPBES does for biodiversity what the IPCC does for climate change.

- Assessments
- Policy Support
- Building Capacity & Knowledge
- Communications & Outreach

Decline of Pollinators and its impact

- The decline of moths, bees, butterflies, hoverflies and other pollinators is undeniably linked to human activity: large tracts of natural habitats have been cleared for monoculture cultivation, while the use of pesticides and fertilisers is pushing out nature's little helpers.
- In a series of studies at the University of Calcutta, researchers have showed that native Indian bees, when exposed to multiple pesticides, suffer from memory and olfactory impairment, lower response rates, and oxidative stress which damages cells.
- A study estimated that between 1964 and 2008, there was a 40-60% growth in relative yields of pollinator-dependent crops, while pollinator-independent crops such as cereals and potatoes saw a corresponding 140% rise in yields.
- In Kashmir, researchers have pinned lowering yields of apple trees on the declining frequency of bee visits.

- In north India, lowering yields of mustard cultivation may be caused by disappearing pollinators.

What steps various countries has taken?

- At the turn of the millennium, many countries, particularly the U.S., observed with some anxiety the phenomenon of bees deserting their hives.
- By 2014-15, the U.S. had established a Pollinator Health Task Force and a national strategy that focused on increasing the monarch butterfly population and planting native species and flowers in more than 28,000 sq km to attract pollinators.
- Around the same time, the U.K. developed 23 key policy actions under its National Pollinator Strategy.
- After the IPBES report, almost 20 countries have joined the Coalition of the Willing on Pollinators.

Way forward

- Apart from promoting organic farming and lowering pesticide usage, landscape management is the key.
- The EU Pollinators' Initiative adopted in June can provide pointers to India, particularly a policy of direct payment support to farmers to provide buffer strips for pollinators for nectar- and pollen-rich plants.
- India has millions of hectares of reserve forests, some of which have been converted to pulpwood plantations. Much of this can be restored to become thriving homes for pollinators.
- The same can be done in gram panchayat levels. Fallow areas and government land can be used to plant flowering species for pollinators.

Connecting the dots:

- What is the role of Pollinators in agricultural and horticultural production? What are the reasons of declining pollinators' population? Suggest some measures to revive them.

Wildlife and Bird Sanctuary in news: Point Calimere

In news:

- Point Calimere Wildlife and Bird Sanctuary is a protected area in Tamil Nadu.
- The sanctuary was created in 1967 for conservation of the near threatened blackbuck antelope, an endemic mammal species of India. It is famous for large congregations of waterbirds, especially greater flamingos.

- This sanctuary is an area of high biodiversity, with many unique species of animals and birds.
- The flagship species of the sanctuary is the near threatened blackbuck antelope, one of the four antelope species in India (Chinkara, Chausingha and Nilgai being the other three) and the most numerous large animal in the sanctuary.
- This site has recorded the second largest congregation of migratory waterbirds in India, with a peak population in excess of 100,000, representing 103 species.

Concerns:

- Major threats to the natural biodiversity and ecological balance of the sanctuary are: loss of habitat for waterbirds, soil and water salinisation by adjacent salt pans, spread of the invasive *Prosopis juliflora*, cattle grazing and scarcity of fresh water.
- The pH and salinity of the waters exceeded permissible limits for ecologically sensitive zones.
- The wildlife sanctuary comprises sandy coastal, saline swamps and thorn scrub forests around the backwater. Though it is a protected area and a Ramsar site, chemical companies and small-scale shrimp farms around the wetland have started to pose a threat to the biodiversity and ecosystem of the sanctuary.

National Park/Tiger reserves in news:

Part of: GS Prelims and Mains III – Environment and Ecology; Biodiversity; Animal Conservation; Protected Areas

- Kanha Tiger Reserve in Madhya Pradesh
- Bandhavgarh Tiger Reserve in M.P.
- Satkosia Tiger Reserve in Odisha
- Parambikulam Tiger Reserve in Kerala
- Chinnar Wildlife Sanctuary in Kerala

Why in news?

- National Tiger Conservation Authority (NTCA) has hinted at first-ever inter-State tiger translocation project in **Odisha's Satkosia Tiger Reserve**.
- Odisha's Satkosia Tiger Reserve planned to get 6 tigers from **MP's Kanha Tiger Reserve**.
- **Parambikulam Tiger Reserve** was in news for its forest filled with 221 varieties of butterflies (11 of which are endemic to the area).

- Survey team spotted - **Red-disc Bushbrown**, a high-altitude species endemic to Western Ghats; rare species — **Dark Blue Tiger** and **Common Crow** and also **Budha Peacock** or **Budha Mayoore**, which was recently declared as **State butterfly of Kerala**.
- Rare bird - **Sri Lankan Frogmouth** - was sighted in **Kerala's Chinnar sanctuary**.

About Sri Lankan Frogmouth

- Sri Lankan Frogmouth (*Batrachostomus moniliger*) is a relative of Nightjar, a crepuscular and nocturnal bird breeding in Europe and temperate Asia. Its preferred habitat is a dry and open area with some small trees or bushes.
- It is usually found on the western side of the Ghats but its presence was noticed on the eastern side of the Western Ghats for the first time. (This has sparked much interest among ornithologists)
- The Sri Lankan Frogmouth, like the Nightjar, eats insects and mainly seeks prey during night time.
- The main feature is that it **lays only one egg a year** after the mating season in April-May. The nest is made using moss or leaves of soft plants and the bark of the trees. The male bird destroys the nest and flies away with the new born bird.
- The bird has a unique habitat in Sri Lanka and is also believed to be present in the Thattekad bird sanctuary. It is also found in Karnataka, Goa, and Maharashtra.
- It was believed that the species had gone extinct in the State after its presence was not noticed for a long period.
- IUCN status: **Least Concern**

[Wildlife and Bird Sanctuary in news: Point Calimere](#)

Part of: GS Prelims and Mains III – Protected areas; Conservation of biodiversity

In news:

- After Cyclone Gaja struck, the wildlife sanctuary looks like a deserted war zone, hundreds of birds have died, trees have been uprooted or their branches broken or defoliated.
- The Point Calimere sanctuary, covering 1728.81 hectares, is home to 564 flowering plants, 198 medicinal plants, 14 types of mammals, 18 reptiles and nine amphibians.

About Pt Calimere

- It is a protected area in Tamil Nadu.

- The flagship species of the sanctuary is the near threatened blackbuck antelope, one of the four antelope species in India (Chinkara, Chausingha and Nilgai being the other three) and the most numerous large animal in the sanctuary.
- This site has recorded the second largest congregation of migratory waterbirds in India, with a peak population in excess of 100,000, representing 103 species.
- Great flamingo, Painted Stork, Little Stint, Seagull and Brown-headed gull are normally found in the sanctuary.

For more: <https://iasbaba.com/2018/11/iasbabas-daily-current-affairs-prelims-mains-focus-14th-november-2018/>

Tiger Reserves/National Parks in news: Dudhwa Tiger Reserve and Bhitarkanika National Park

Part of: GS Prelims and Mains III – Environment and Biodiversity; Animal conservation; Protected Areas

In news: Dudhwa Tiger Reserve

- Dudhwa Tiger Reserve is a protected area in Uttar Pradesh.
- It comprises the Dudhwa National Park, Kishanpur Wildlife Sanctuary and Katarniaghat Wildlife Sanctuary.
- The protected area is home for tigers, leopards, Asiatic black bears, sloth bears, Swamp deer, rhinoceros, elephants, cheetal, hog deer, barking deer, sambar, wild boar and hispid hare.
- It shares the north-eastern boundary with Nepal and hence Dudhwa Tiger Reserve and border security agency Sashastra Seema Bal have joined hands to provide security to Dudhwa forests and its rich wildlife.

In news: Bhitarkanika National Park

- Bhitarkanika National Park : : Odisha
- The Bhitarkanika National Park is one of the largest habitats of endangered estuarine crocodiles in the country .
- It is a prominent heronry (breeding ground for migratory birds) of the State.

About Saltwater crocodile

- The saltwater crocodile, also known as the estuarine crocodile, is the largest of all living reptiles, as well as the largest riparian predator in the world.

- As its name implies, this species of crocodile can live in marine environments, but usually resides in saline and brackish mangrove swamps, estuaries, deltas, lagoons, and lower stretches of rivers. They have the broadest distribution of any modern crocodile, ranging from the eastern coast of India throughout most of Southeast Asia and northern Australia.
- IUCN status: Least Concerned

Do you know?

- In India, the BNP, the Sundarbans and the Andaman & Nicobar Islands are the prime habitats of the saltwater crocodile.

Andaman & Nicobar Islands: home to a tenth of India's fauna species

Part of: GS Prelims and Mains III – Environment and Biodiversity; Animal conservation; Protected Areas

In news:

- Andaman & Nicobar Islands, which comprises only 0.25% of country's geographical area, has 11,009 species, according to a publication by the Zoological Survey of India.
- Zoological Survey of India (ZSI) has for the first time come up with a database of all faunal species found on the island, putting the number at 11,009.
- ZSI report highlighted that - tourism, illegal construction and mining are posing a threat to the islands' biodiversity, which is already vulnerable to volatile climatic factors.

Do you know?

- The **Narcondam hornbill**, its habitat restricted to a lone island; the **Nicobar megapode**, a bird that builds nests on the ground; the **Nicobar treeshrew**, a small mole-like mammal; the **Long-tailed Nicobar macaque**, and the **Andaman day gecko**, are among the 1,067 endemic faunal species found only on the Andaman and Nicobar Islands and nowhere else.
- The population of the islands, which includes six particularly vulnerable tribal groups (PVTGs) — Great Andamanese, Onge, Jarawa, Sentinelese, Nicobarese and Shompens — is not more than 4 lakh.
- In a recent development, the Government of India relaxed the Restricted Area Permit (RAP) norms for some foreign nationalities notified under the Foreigners (Restricted Areas) Order, 1963, to visit 29 of its inhabited islands, till December 31, 2022. This has triggered further concerns of increased anthropogenic pressures over the islands' ecosystem.

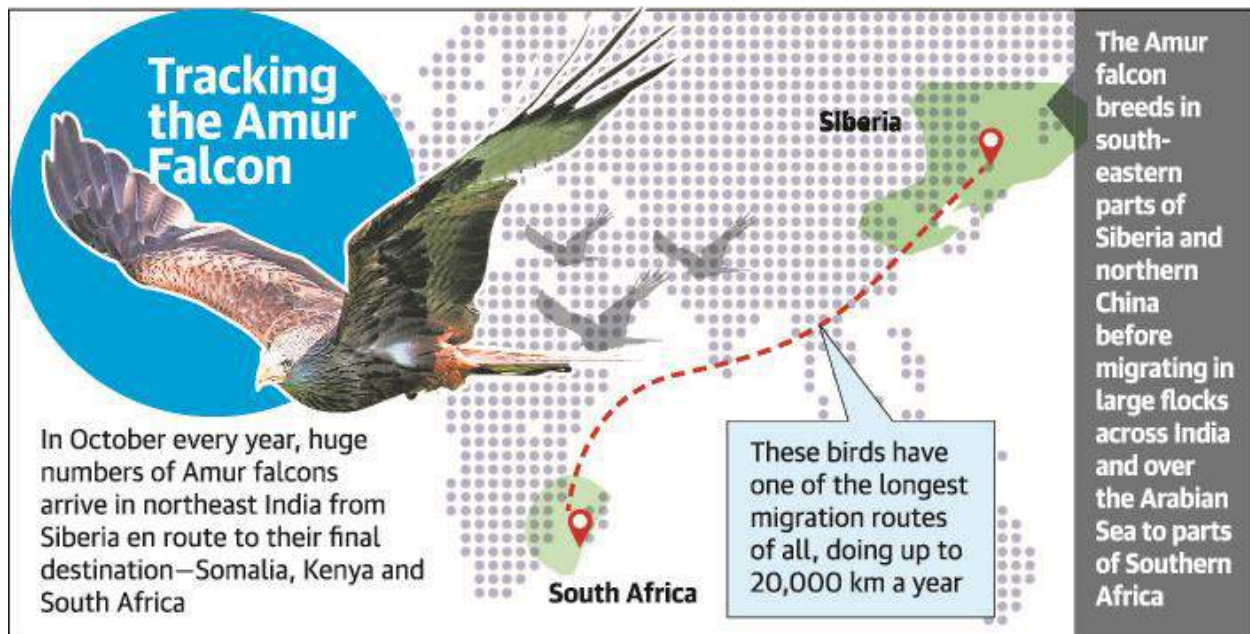
- Of the ten species of marine fauna found on the islands, the **dugong/sea cow**, and the **Indo-Pacific humpback dolphin**, are both classified as **Vulnerable** under the IUCN (International Union for Conservation of Nature) Red List of Threatened Species.
- Among the 46 terrestrial mammalian species found, three species have been categorised as Critically Endangered — **Andaman shrew** (*Crocidura andamanensis*), **Jenkin's shrew** (*C. jenkinsi*) and **Nicobar shrew** (*C. nicobarica*). Five species are listed as Endangered, nine species as Vulnerable, and one species as Near Threatened, according to the IUCN.
- Among birds, endemism is quite high, with 36 among 344 species of birds found only on the islands. Many of these bird species are placed in the IUCN Red List of threatened species under the Wildlife Protection Act (WPA).
- Another unique feature of the islands' ecosystem is its marine faunal diversity, which includes coral reefs and its associated fauna. In all, 555 species of scleractinian corals (hard or stony corals) are found in the island ecosystem, all which are placed under Schedule I of the WPA.

[Animal in news: Amur falcon](#)

Part of: GS Prelims and Mains III – Environment and Biodiversity; Animal conservation

About:

- Amur falcon is a small raptor of the falcon family.
- It breeds in south-eastern Siberia and Northern China before migrating in large flocks across India and over the Arabian Sea to winter in Southern Africa.
- The raptor (bird of prey) — the size of a pigeon — makes its home in Nagaland, flying a staggering 22,000 km from there to South Africa, then onto Mongolia and back to Nagaland. The bird has one of the longest and most fascinating migratory paths in the avian world.
- The falcon breeds in south-eastern Siberia and north-eastern China, where the Amur River divides the Russian Far East and China.



Pic:

https://d39gegkjaqduz9.cloudfront.net/TH/2018/10/29/DEL/Delhi/TH/5_07/1a7c222d_2490893_101_mr.jpg

Do you know?

- It is a small raptor, of the size of a pigeon. It covers one of the largest migratory distances from Mongolia and Russia to South Africa.
- It is not a critically endangered species and is found in large numbers. However, due to indiscriminate killing, their numbers are rapidly coming down.
- It is considered as a delicacy in Nagaland and widely hunted and sold in the local market.
- The Centre decided to develop Doyang Lake in Nagaland, famous as a roosting site for longest travelling raptors Amur Falcons, as an eco-tourism spot for bird-watchers.

INFRASTRUCTURE/ENERGY

Against the current: Access to Internet in India

General studies 3

- *Information Technology*
- *Inclusive growth and equal access to resources*

Introduction

- A new report from Internet pioneer Tim Berners-Lee's World Wide Web Foundation has found that while the growth rate of Internet access dips worldwide, India has escaped the slide because of slashed prices.
- This is clearly the product of healthy market competition, but the report also attributes it to growth in infrastructure, good policymaking and the role played by TRAI, which has created an open-access system to measure quality of service.

Internet accessibility in India

- India has had an advantage over the developed countries because it had less legacy systems to write off and could tap directly into the mobile internet boom.
- Competition, led by the disruptive entry of Reliance Jio, ensured that access prices fell while transparent measurements assured maintenance of quality.
- The WWW Foundation's study is based on purchasing power, comparing the price of 1GB of data against average household income.
- India has the fastest-falling ratio, indicating a rise in affordability, but the lowest rates are found in other Asian countries like Pakistan, Sri Lanka, Myanmar and Vietnam.
- There is room for improvement, which is actually needed worldwide.

Digital divide in the world

- Despite the global communications boom, one out of every two humans is still offline, and the majority of the disconnected are in nations that are either developing, or small, or both.
- This deprivation is nothing but a digital divide.
- The half-way mark was expected to be bridged by 2016, but it appears that it will be reached only next year.

Conclusion

The digital divide represents a continuation of old inequalities, is a tremendous waste of human capital and an affront to the right to hear and be heard. And it can be corrected only by making access affordable.

Connecting the dots:

- While growth in Internet access falls worldwide, it's surging in India. Yet the digital divide continues to be a challenge. Comment.

Further stressed by thermal power: Water stress in India***General studies 3***

- ***Environmental degradation and Environment Impact assessment***

Introduction

- In pursuit of cooperative and competitive federalism, NITI Aayog has been laying emphasis on developing indicators on various social sectors.
- As a step further in direction and keeping in view the criticality of water for life, NITI Aayog has prepared a report on Composite Water Management Index (CWMI).
- Since India is one of the most vulnerable countries to water scarcity, it is important to discuss factors involved in aggravating the stress situation.

Do you know?**Water Stress**

- Water stress occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use.
- Water stress causes deterioration of fresh water resources in terms of quantity (aquifer over-exploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.)

The Composite Water Management Index (CWMI)

- CWMI has been developed by NITI Aayog and published in association with the Ministry of Water Resources, Ministry of Drinking Water and Sanitation and the Ministry of Rural Development.
- It is comprised of 9 broad sectors with 28 different indicators covering various aspects of ground water, restoration of water bodies, irrigation, farm practices, drinking water, policy and governance.
- For the purposes of analysis, the reporting states were divided into two special groups – 'North Eastern and Himalayan states' and 'Other States', to account for the different hydrological conditions across these groups.
- **Purpose of the CWMI:** The NITI Aayog alludes to this while describing the CWMI: "This Index is expected to establish a public, national platform providing information on key

water indicators across states. This platform will help in monitoring performance, improving transparency, and encouraging competition, thereby boosting the country's water achievements by fostering the spirit of 'competitive and cooperative federalism' among the states.

Findings of the report:

- The Composite Water Management Index (CWMI) by the NITI Aayog, which was released in June 2018, shows that 600 million people face high to extreme water stress in India.
- It places India at a dismal 120 among 122 countries in the water quality index.
- It predicts that a persistent water crisis will lead to an eventual 6% loss in the country's Gross Domestic Product by 2030.
- A vast gulf has been predicted between the demand and supply of fresh water, by 2030.
- In the projections that the Central Water Commission (CWC) released in 2015, the sector-wise requirement of water (that is, for drinking and domestic use, industry and energy) will rise steeply between 2030 and 2050.

Impact of Energy sector on water stress levels in India

- As per the Central Electricity Authority (CEA), March 2018, thermal electricity accounts for more than 86% of India's total power generation.
- About 77% of India's total electricity comes from thermal power plants that are dependent on freshwater sources.
- Of all the freshwater-cooled thermal plants, 38.9% of generation capacity is installed in areas with high or extremely high water-stress.
- The share of water consumed by power sector was 0.62% in 2010, which is pegged to rise upto 1.37% in 2030 and 8.98% in 2050.
- By 2030, more than 70% of India's existing thermal power utilities are likely to experience an increased level of water competition from agricultural, urban and other industrial demands.

Issues related to data

- The CWMI raised three main issues related to data: limited coverage, unreliable data and limited coordination and sharing.
- Measuring water consumption by power plants has been a challenge for long.

Way forward

- Issue of data can easily be tackled by using the existing CEA reporting mechanism for daily generation.
- To do so, daily water withdrawal and consumption reporting should be mandated.

- Information about water stress, power plant siting (location) and so on must be shared seamlessly across departments — a service that the CWMI could perform.
- The mounting rise in water demand is starkly evident in the energy sector, which is key to India's ambitious developmental plan.
- The projected water demand of the energy sector makes it an important point for the NITI Aayog to consider while bringing out future iterations of the CWMI.
- As the power sector consumes more water, competition between power and the other thirsty players is only likely to increase — a factor that future editions of the CWMI will have to consider.

Conclusion

- The CWMI is an important tool to assess and improve the performance of States/ Union Territories in efficient management of water resources.
- The water-scarce States such as Gujarat, Madhya Pradesh, Andhra Pradesh, Karnataka, Maharashtra and Telangana are leaders in the CWMI Index.
- This is likely driven by necessity in the face of looming water shortages.
- Factoring in the water-energy nexus linkages will only help make the Index better and the States better prepared to manage their water and power resources.

Connecting the dots:

- Explain briefly, the water stress in India. Examine the major contributors to this stress.

9th round of City Gas Distribution(CGD)

Part of: GS Prelims and Mains II and III – Government schemes and policies; Environment and Ecology; Pollution

In news:

- Prime Minister laid the foundation stone to mark the commencement of work for 9th round of City Gas Distribution(CGD).
- Major aim is to move towards a gas based economy and promote the usage of environment friendly clean fuel i.e. natural gas as a fuel/feedstock across the country.
- Presently the share of gas in the country's energy mix is just over 6% and the aim is to reach the 15% figure, while the world average is 24%.

Do you know?

- The Petroleum and Natural Gas Regulatory Board (PNGRB) has initiated the process of new CGD bidding round covering 124 districts in 14 States to increase the potential coverage to about 53% of the country's area covering 70% of country's population.
- CGD will help in supporting governments various clean energy initiatives of the Union Government like Ethanol Blending, Compressed Biogas plants, increased LPG coverage and introduction of BS-6 fuels for automobiles.



SCIENCE AND TECHNOLOGY

The legacy of NASA's Kepler

Part of: GS Prelims and Mains III – Science and Technology; Space mission

In news:

- NASA's Kepler space telescope, which retired after running out of fuel, is being widely described as the most prolific planet-hunting machine in history.
- By June 2017, it had discovered more than 4,000 planet candidates and 2,300 confirmed planets.

Below are 10 landmark findings:

DOUBLE SUNSET: The Star Wars franchise showed the planet Tatooine as part of a double-star system, hence two sunsets. Kepler showed that double sunsets do exist; it discovered Kepler-16b, the first known planet (mostly likely a gas giant) around a double-star system.

EARTH-LIKE PLANETS: Kepler found planets near in size to Earth and orbiting at a distance where liquid water could pool on the surface. Kepler-62f, for example, is about 40% bigger than Earth and is likely rocky.

PLANET CANDIDATES: Many of the planet candidates are likely to have small rocky cores enveloped by a thick atmosphere of hydrogen and helium, and some are thought to be ocean worlds. That doesn't necessarily mean the oceans are full of water.

LIFE CANDIDATES: Kepler's survey has made it possible to measure the number of Earth-size habitable zone planets in the galaxy. Scientists hope to determine how many planets like Earth exist.

SIZE CLASSIFICATION: Kepler's discoveries showed that a lot of planets are either approximately 1.5 times the size of Earth or just smaller than Neptune. They are, therefore, called Super Earths and mini-Neptunes.

'LAVA WORLD': Kepler-10b has a year that lasts less than an Earth day, and density so high that it is probably made of iron and rock. One of Kepler's early discoveries, the first solid evidence of a rocky planet outside the Solar System.

LIGHT & 'ALIENS': Kepler detected fluctuating light from "Tabby's Star", triggering mass speculation of an alien megastructure. Astronomers, however, have since concluded that it is probably an orbiting dust cloud.

'CANNIBAL' STAR: What happens when a solar system dies? Kepler discovered a white dwarf, the compact corpse of a star in the process of vaporising a planet.

EXPLODING SUPERNOVA: Kepler recorded a sped-up version of a supernova called a "fast-evolving luminescent transit" that reached its peak brightness at breakneck speed. It was

caused by a star spewing out a dense shell of gas that lit up when hit with the shockwave from the blast.

SOLAR SYSTEM COUSIN: In 2014, scientists using data from Kepler discovered seven planets orbiting Kepler-90, a Sun-like star located 2,500 light-years away. Later, an eighth planet was identified in this planetary system, tying it with our own Solar System in having the highest number of known planets.

[NASA's historic Dawn mission comes to an end](#)

Part of: GS Prelims and Mains III – Science and Technology; Space mission

In news:

- Earlier we read about retirement of NASA's Kepler space telescope mission.
 - Now **NASA's pioneering Dawn spacecraft** — which orbited the two largest objects in the asteroid belt — has run out of fuel, ending a 11-year mission that unravelled many mysteries of our solar system.
 - The \$467 million Dawn mission, launched in 2007 to study the **protoplanet Vesta** and the **dwarf planet Ceres**, missed scheduled communications sessions with NASA's Deep Space Network on October 31 and November 1.
 - The astounding images and data collected from Vesta and Ceres are critical to understanding the history and evolution of our solar system.
-

[NASA's Insight rover heads for 6.5 minutes of terror](#)

Part of: GS Prelims and Mains III – Science and Tech; Space research

In news:

NASA's Mars Insight spacecraft landed on Mars.

About InSight:

- Mars InSight's goal is to listen for quakes and tremors as a way to unveil the Red Planet's inner mysteries, how it formed billions of years ago, and by extension, how other rocky planets like the earth took shape.
- The unmanned spacecraft, launched nearly seven months ago, is NASA's first to attempt to touch down on Mars since the Curiosity rover arrived in 2012.

- More than half of 43 attempts to reach Mars with rovers, orbiters and probes by space agencies from around the world have failed.
- NASA is the only space agency to have made it, and is invested in these missions as a way to prepare for the first Mars-bound human explorers in the 2030s.

ISRO's GSAT-29

Part of: GS Prelims and Mains III – Science and Technology; Space; indigenous achievements

In news:

- ISRO is set to launch its communication satellite **GSAT-29** on its heavy-lift vehicle, the **GSLV-MkIII** (on November 14).
- ISRO is also preparing for a **PSLV mission** on November 26 to launch **HySIS, a new variant of Earth observation satellites**, along with 20-30 small commercial satellites.

Do you know?

- Lunar lander-rover Chandrayaan-2 is slated for launch in January next year.



Sky is the limit

The Satellite

- GSAT-29 is a 3,500 kg communication satellite for high quality Internet services
- It was built at an estimated cost of ₹360 crore with a lifespan of 10 years
- Will provide or augment digital communication in remote Village Resource Centres



A portion of the GSLV-MkIII-D2 being transported. ■ PHOTO: ISRO

The Launcher

- GSLV-MkIII-D2 is the second test flight of the heavy lift vehicle carrying the satellite
- D2's success will regularise the launch vehicle's services & ease dependence on foreign service providers

Pic:

https://d39gegkjaqduz9.cloudfront.net/TH/2018/11/12/DEL/Delhi/TH/5_05/0a4fcfc2_2519956_101_mr.jpg

GSAT-29 and GSLV-MkIII-D2 rocket

Part of: GS Prelims and Mains III – Science and Technology; Space mission; Achievements by ISRO

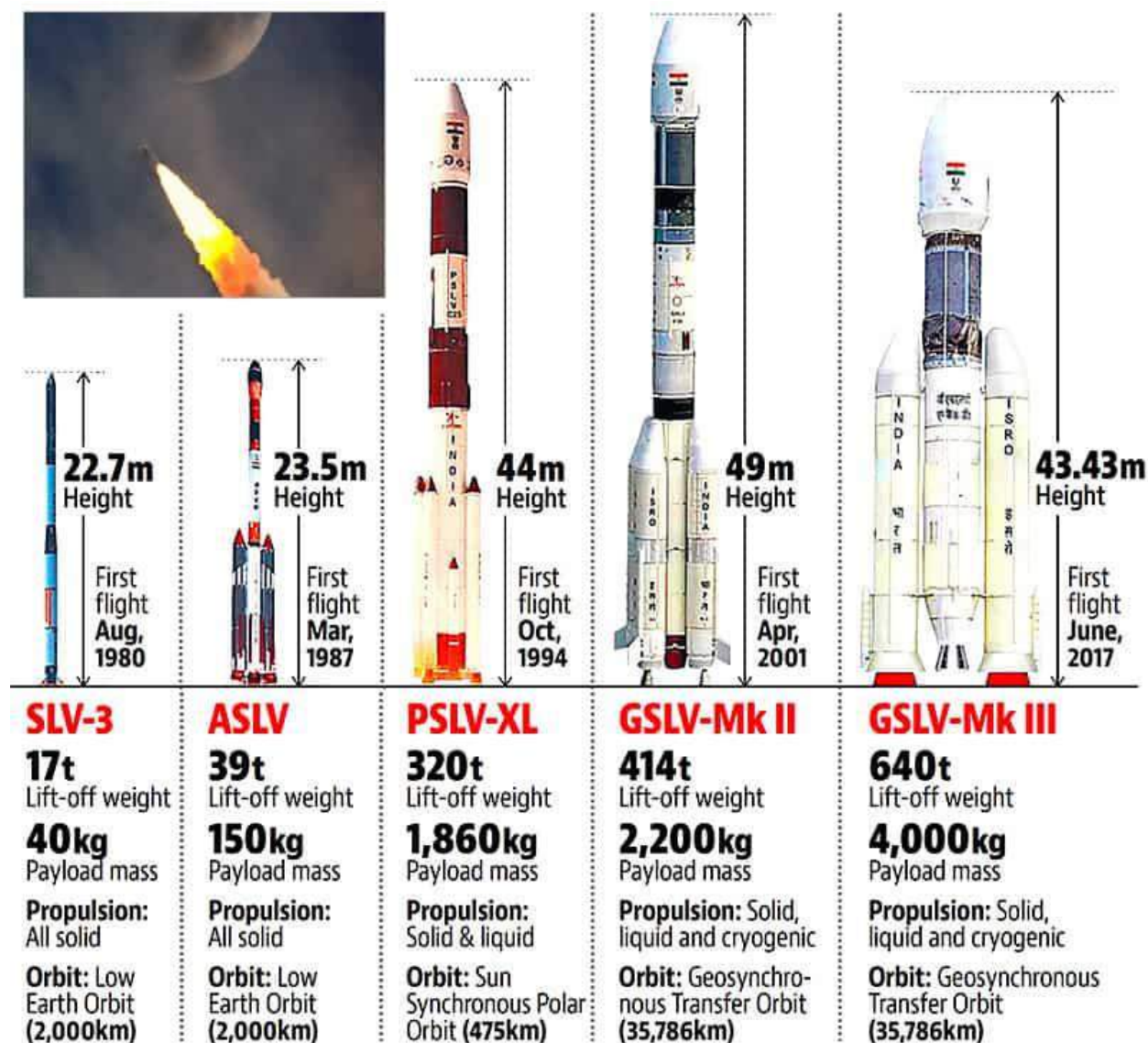
In news:

- ISRO successfully placed another communication satellite (GSAT-29) in a geostationary transfer orbit.
- ISRO also achieved a crucial success of GSLV-MkIII rocket which is slated to launch two big missions --Chandrayaan-2 and the human space mission -- in the next four years.
- The satellite is equipped with powerful transponders intended to meet the communication requirements of users in remote areas in the Northeast and Jammu and Kashmir.

Do you know?

- GSLV-MkIII rocket is India's most powerful rocket, and it lifted off with a 3,423 kg GSAT-29 satellite, heaviest satellite in Indian History that set in orbit.
- It is an important milestone for the Indian Space Programme towards achieving self-reliance in launching heavier satellites.





Pic: <https://www.hindustantimes.com/static/ht2018/11/1511flap1.jpg>

Understanding the basics

Geostationary Orbit (GEO)

If we need a satellite for the purpose which needs this satellites to remain at a particular distance from earth at all the time, then we need circular orbits so all the points on circular orbit are at equal distance from earth's surface. The circular equatorial orbit is exactly in the plane of equator on the earth. If the satellite is moving in the circular-equatorial orbit and its angular velocity is equal to earth's angular velocity, the satellite is said to be moving along with the earth. This satellite would appear stationary from the earth and this orbit would be called Geostationary Orbit.

Features of geostationary satellite

- The orbit is circular The orbit is in equatorial plane i.e. directly above the equator and thus inclination is zero.
- The angular velocity of the satellite is equal to angular velocity of earth Period of revolution is equal to period of rotation of earth.
- Finish one revolution around the earth in exactly one day i.e. 23 hours, 56 Minutes and 4.1 seconds
- There is ONLY one geostationary orbit.

Geosynchronous Orbit

There is a difference between the geostationary and geosynchronous orbits. We should note that while other orbits may be many, there is ONLY ONE Equatorial orbit, i.e. the orbit which is directly above the earth's equator. Sometimes we send a satellite in the space which though has a period of revolution is equal to period of rotation of earth, but its orbit is neither equatorial nor Circular. So, this satellite will finish one revolution around the earth in exactly one day i.e. 23 hours, 56 Minutes and 4.1 seconds, yet it does NOT appear stationary from the earth. It looks oscillating but NOT stationary and that is why it is called Geosynchronous.

Features of a geosynchronous satellite

- The orbit is NOT circular
- The orbit is NOT in equatorial plane i.e. directly above the equator, it's in inclined orbit The angular velocity of the satellite is equal to angular velocity of earth Period of revolution is equal to period of rotation of earth.
- Finish one revolution around the earth in exactly one day i.e. 23 hours, 56 Minutes and 4.1 seconds
- There are many geosynchronous orbits.

[Ripples of discord: on gravitational waves](#)

General studies 3

- *Science and technology*

Introduction

- On September 14, **2015**, the **Laser Interferometer Gravitational-wave Observatory (LIGO)** made the **Nobel Prize** winning detection of gravitational waves.
- These observations are again in news due to some controversy among scientists over noise in detection.

What are Gravitational waves?

- **Gravitational waves are 'ripples' in the fabric of space-time** caused by some of the most violent and energetic processes in the Universe.
- **Albert Einstein predicted** the existence of gravitational waves in 1916 in his general theory of relativity.

What causes Gravitational Waves?

The most powerful gravitational waves are created when objects move at very high speeds. Some examples of events that could cause a gravitational wave are:

- When a star explodes asymmetrically, for example, supernovas
- When two big stars orbit each other
- When two black holes orbit each other and merge

Why it is difficult to detect gravitational waves?

- The objects that create gravitational waves are far away. And sometimes, these events only cause small, weak gravitational waves.
- The waves are then very weak by the time they reach Earth. This makes gravitational waves hard to detect.

How are Gravitational Waves detected?

- When a gravitational wave passes by Earth, it squeezes and stretches space. LIGO can detect this squeezing and stretching.
- Each LIGO observatory has two “arms” that are each more than 2 miles (4 kilometers) long.
- A passing gravitational wave causes the length of the arms to change slightly.
- The observatory uses lasers, mirrors, and extremely sensitive instruments to detect these tiny changes.

Role of LIGO

- This is where LIGO'S detection of such waves in the universe gains significance in understanding the nature of black hole and its effect on space and time.
- LIGO has made six of such detection of these waves. Five of these were mergers of black holes in very different locations in space. One was the detection of a merger of two neutron stars.
- Each of these mergers of black holes had different characteristics with respect to their mass.
- Physicists had earlier modeled such mergers of black holes. LIGO provided them with actual data of the event. The last few detections of such merger have been done by another detector VIRGO.

The Controversy

- A group of scientists questioned the validity of the data collected by LIGO after first detection.
- The scientists argued that weeding out noise from such experiments was important which was not done properly by LIGO Scientific Collaboration (LSC).
- On this, LIGO has put up a clarification regarding the claim on noise and LSC plans to come out with a research paper that carries detailed explanations on the disputed issue of noise.

Connecting the dots:

- What are Gravitational waves? Why it is important to study them? Explain the role of India in research in Gravitational waves.

Universities and patents

General studies 2&3

- *Human Resource development; Education*
- *Science and Tech: Issues related to IPR*

Introduction:

- India witnessed significant changes in IPRs since the introduction of the National IPR Policy in 2016.
- There was a **32% increase in the number of patents granted in 2017-18** compared to the earlier year.
- While the disposal rate has increased, the filing rate for patents has not changed significantly.
- **In 2016-17, the Patent Office reported a dip of 3.2% in filing** compared to the previous financial year.
- To create entrepreneurial universities, the University Grants Commission (**UGC**) has asked all universities in India to set up Intellectual Property (IP) Centres.

Reasons behind increase in Patent disposal rate: Reforms in Patent office

- The Patent Office increased its workforce with the inclusion of new examiners and is on the lookout for more.
- The timeline for filing responses to official objections for patents has been reduced by half.

Intellectual Property and Universities

- **Patents help universities to improve their ranking, establish an innovation ecosystem, incubate knowledge-based start-ups, earn additional revenue and measure research activity.**
- The number of patents applied for, granted and commercialised by universities and institutes is factored in **the National Institutional Ranking Framework (NIRF) rankings.**
- The top ranked engineering institutes in India are also the leading filers of patents.
- **The National Assessment and Accreditation Council awards up to 24 points** to an institute which sets up an innovation ecosystem and has a facility for identifying and promoting IPRs.

The problem: Dearth of IP professionals

- Despite the policy push to have more IP, we simply **do not have enough IP professionals in the country.**
- The rising dearth of IP professionals is **due to various international treaties and trade agreements, along with the legal-centric approach where law schools and colleges are the only institutions which mandate teaching these subjects.**
- India has a poor patent agent density, with only about 2,000 registered patent agents currently in practice.
- The last time when the Patent Office conducted the patent agent exam, in 2016, around 2,600 candidates took it, a paltry number if one looks at the ambitious goals set by the IPR Policy.

Qualifications for an IP professional: Patent exam

- **The Central government conducts the only competitive examination in the country to check a person's proficiency in IP.**
- This year, the government conducted the competitive examination to test proficiency in patent law, a type of intellectual property right (IPR), after a gap of two years.
- **Any Indian citizen with a bachelor's degree in science or technology can take the examination.**
- **Upon clearing it** the person is entitled to practise before the Patent Office as a **registered patent agent.**
- Qualifying the exam allows science graduates **to draft, file and procure patents from the Patent Office on behalf of inventors.**

Centres in universities

- **The new policy has pushed universities to file more patents.**
- Kindled by the call to have more IPRs, the higher education sector has witnessed many reforms.

- The UGC's call to universities has come after a series of policy directives to introduce awareness about IP in higher educational institutions.
- The All India Council for Technical Education (AICTE) model curriculum for its member institutions lays emphasis on the need for IPR education in technical institutes.
- **The lack of IP professionals to teach IP was one of the reasons the institutes of higher education do not have the mandatory IP courses.**
- **Online courses on IPR are available on the National Programme on Technology Enhanced Learning platform.** Though thousands register every year, much needs to be done to build capacity on IP in universities.
- Despite the infrequent manner in which the examination has been conducted, the private sector does give good weightage to the examination as it is considered to be the de facto IP qualification today.

Way ahead

- The ambitious goal set by India's IPR Policy will be realised only when the **examination becomes the foundation for making a career in IPR.**
- **Fine-tuning the patent agent examination** to cater to the growing IP needs of the country can be a successful way to build a band of professionals and create career opportunities.
- In a dynamic field such as intellectual property, in order to create a band of qualified IP professionals there should be a push towards **post-qualification continuous education as well.**
- **To achieve this, the format, membership, syllabus and the frequency of the patent agent examination will need to be addressed.**
- This will not only increase the number and quality of IP professionals in the country but also become **a new career choice for graduates** with a degree in science and technology.

Connecting the dots:

- The ambitious goal set by India's IPR Policy rests on how universities embrace patents. Critically analyse the state of innovations in Indian higher education institutes.

[SpiNNaker: world's largest brain-mimicking supercomputer](#)

Part of: GS Prelims and Mains III - Science and Technology

In news:

- SpiNNaker – the world’s largest supercomputer designed to work in the same way as the human brain has been switched on for the first time.
- The Spiking Neural Network Architecture machine is capable of completing more than 200 million million actions per second, with each of its chips having 100 million transistors.

Do you know?

- SpiNNaker, built at the University of Manchester in U.K., can model more biological neurons in real time than any other machine on the planet.
- Biological neurons are basic brain cells present in the nervous system that communicate by emitting ‘spikes’ of pure electro-chemical energy.

Neutrino facility has miles to go

General studies 3

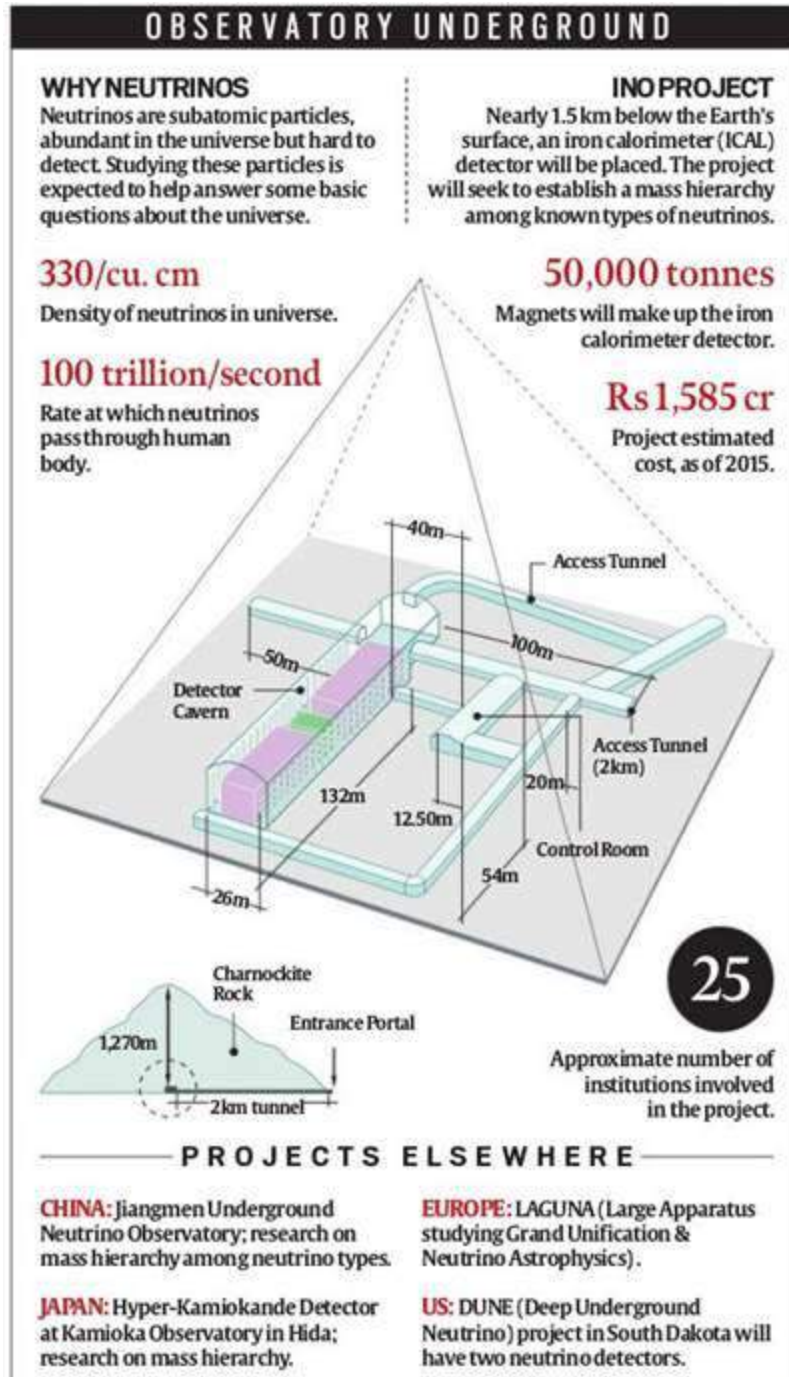
- *Science and Technology*
- *Infrastructure*

Introduction

- The National Green Tribunal (NGT) upheld the environmental clearance granted to the India-based Neutrino Observatory (INO), a major research facility proposed in Theni district of Tamil Nadu.
- While this removes all current legal hurdles in building the facility, there are still other obstacles to be overcome before work can begin on this project, which has been in planning since 2001.

What are Neutrinos?

- These are extremely tiny elementary particles that are omnipresent in universe but very difficult to detect because they pass seamlessly through all kinds of matter.
- Neutrinos carry no electric charge.
- Predicted in 1931, neutrinos were detected for the first time in 1959, and are now considered to be the second most abundant particle in the universe — after the photon, or light particle.
- Groups in many countries are carrying out research on neutrinos, believed to hold important clues to some of the basic questions on the universe.
- Research on neutrinos has led to award of the Nobel Prize in Physics in 1988, 1995, 2002 and 2015.



<https://images.indianexpress.com/2018/11/graph-1.jpg>

INO: Obstacles and delays

- The INO promises to be a one-of-its-kind facility to detect and study neutrinos. Once built, INO would be the biggest research facility in India.
- The underground laboratory will be located nearly 1.5 km below the Earth's surface, where a giant neutrino detector is to be placed.

- The laboratory will consist of a cavern of size 132 m × 26 m × 20 m and with several small rooms, and will be accessed by a tunnel nearly 2 km long and 7.5 m wide.
- The project has been mired in all kinds of trouble — litigation, public protests, opposition from NGOs and political parties, besides government apathy.
- It has had to move locations once, because the nearby Mudhumalai National Park had been declared a tiger reserve during the same time.
- Environmental clearance granted in 2011 for the second site, too, was put in abeyance by the NGT because the project was within 5 km of the Mathikettan Shola National Park in Idukki.
- Fresh environmental clearance was given last March by the Expert Appraisal Committee (EAC) of the Ministry of Environment and Forest.
- The result of all these obstacles has been that work, originally scheduled to start in 2012, is yet to take off.
- The original timeline had envisaged experimental work starting from 2017, later advanced to 2020. It is now unlikely to begin before 2025, even if construction starts next year. Construction of the underground facility would take at least five years.
- The project cost, too, likely to escalate. The Union government had, in 2015, approved a budget of Rs 1,583 crore for the project. That budget was based on cost assessments done in 2012. It is estimated the project would now cost at least 25% more than that amount.

More challenges ahead

- Bigger uncertainties in terms of government approvals, meanwhile, are still to come. The project applied for clearance from the National Board of Wildlife only in January this year. That approval is still awaited.
- Last year, the INO was told it would also need building approval from relevant state government agencies.
- The Tamil Nadu government took two years for the state government to grant approval to a change in land use, from residential to residential-cum-educational, to the project's control facility in Madurai.
- Again, for three years, the state's Pollution Control Board did not take any action on the application for the final go-ahead after environmental clearance had been obtained in 2011.

Conclusion

- Political and bureaucratic hurdles are causing delay to one of the most significant project.

- Such delays will not only increase the economic cost but also leave India behind in the modern technological research race.
- To harness the immense talent in India, infrastructure is one of the most important pillars.

Connecting the dots:

- National Green Tribunal upholds environmental clearance, but there are other hurdles in the way. Why is this project important for India?

Kilogram gets a new definition

Part of: GS Prelims and Mains III – Science and Technology

In news:

- Scientists have changed the way the kilogram is defined.
- For more than a century, the kilogram had been defined as the mass of a cylinder of platinum-iridium alloy kept in a high-security vault in France.
- That artefact, nicknamed '**Le Grand K**', had been the world's sole true kilogram since 1889.
- But now, the kilogram will be defined in terms of a tiny but unchanging value called the '**Planck constant**'.
- The decision was made at the **General Conference on Weights and Measures**.

Do you know?

- The 'Planck constant', which derives from quantum physics, can be used along with a Kibble balance, an exquisitely accurate weighing machine, to calculate the mass of an object using a precisely measured electromagnetic force.

Why kill off the kilogram?

- Le Grand K has been at the forefront of the international system of measuring weights since 1889. Several close replicas were made and distributed around the globe.
- But the master kilogram and its copies were seen to change - ever so slightly - as they deteriorated.
- In a world where accurate measurement is now critical in many areas, such as in drug development, nanotechnology and precision engineering - those responsible for maintaining the international system had no option but to move beyond Le Grand K to a more robust definition.

How wrong is Le Grand K?

- The fluctuation is about 50 parts in a billion, less than the weight of a single eyelash. But although it is tiny, the change can have important consequences.

Chandrayaan-2 lunar lander

Part of: GS Prelims and Mains III – Science and Technology; Space Missions

In news:

- We have read that Indian Space Research Organisation (ISRO) has postponed Chandrayaan-2, India's second mission to moon to January 2019.
- Chandrayaan-2 is India's most challenging and India's second mission to Moon. It is advanced version of previous Chandrayaan-1 mission (launched in 2008) which only involved orbiting around moon, Chandrayaan-2 is much complicated mission as it involves an orbiter, lander and rover.

Lunar lander faces crucial test – Chandrayaan-2's landing sensors will be tested at a special site in Karnataka.

The test on ground, called the **Lander Sensor Performance Test or LSPT**, will be conducted at ISRO's new R&D campus in **Chitradurga district, Karnataka**.

The lander is being developed and tested by the **U.R. Rao Satellite Centre in Bengaluru**.

Litmus test

The Chandrayaan-2 lander's sensors are all set to be tested at Challakere, Karnataka

HOW WILL SENSORS HELP THE LANDER?

- Assess height from the landing spot
- Decide speed of lander
- Help lander navigate boulders or uneven surfaces

SCALED-DOWN VERSION OF LANDER



For the test, sensors need to guide ISRO's small aircraft to a soft landing on an artificial lunar surface

NOV. 24, 2018: Test flight scheduled

JAN. 31, 2019: Targeted launch of rover and lander

FEB. 2019: Expected time lander and rover will reach the moon

Pic:

https://d39gegkjaqduz9.cloudfront.net/TH/2018/11/24/DEL/Delhi/TH/5_05/90a97420_254714_9_101_mr.jpg

HysIS - Hyper Spectral Imaging Satellite

Part of: GS Prelims and Mains III – Science and Technology; Space Missions

In news:

- ISRO to launch its HysIS imaging satellite and 30 other satellites with PSLV-C43 rocket from the Satish Dhawan Space Centre in Sriharikota.
- Hyper Spectral Imaging Satellite (HysIS) – is India's own earth observation satellite
- The satellite will be put into a polar synchronous orbit, which sets it in motion along the axis that runs along the Earth's geographic North and South Pole.

ISRO PSLV-C43 mission: HysIS satellite objectives

HysIS mission is to study the earth's surface near infrared and shortwave infrared regions of the electromagnetic spectrum.

- To provide observations within the visible, near infrared and shortwave infrared bands of the electromagnetic spectrum
- To monitor atmospheric activity and climate change
- To assist studies of Earth's magnetic field

These observations will have a host of applications, prime among which relate to agriculture, forestry, water management, and coastal patterns.

Do you know?

- HysIS will continue to make observations till 2023, when the mission ends.
- After this launch, the next big event for the Indian space organisation will be its awaited mission to the moon – Chandrayaan-2 – in early 2019.

About PSLV

- Polar Satellite Launch Vehicle (PSLV) was launched in October 1994, it is the third generation launch vehicle of India.
- It is the first Indian launched vehicle to be equipped with liquid stages.
- PSLV has emerged as a workhouse launch vehicle of India with 39 consecutively successful missions by June 2017.
- This vehicle has launched 48 Indian satellites for customers from abroad.
- It has also launched Chandrayaan-1 in 2008 and Mars Orbiter Spacecraft in 2013.

NASA's InSight lands on Mars

Part of: GS Prelims and Mains III – Science and Technology; Space Missions

In news:

- NASA's Mars rover InSight touched down on the Red planet.
- InSight (Interior Exploration using Seismic Investigations, Geodesy and Heat Transport) is a NASA Discovery Program mission that will place a single geophysical lander on Mars to study its deep interior.
- It aims to unveil the Red Planet's inner mysteries, such as its formation.
- The planet's core, mantle and crust will be explored allowing scientists to find out more about the formation of the rocky planets in our Solar System and measure its' tectonic activity.
- InSight will be the first mission to use a robotic arm to place instruments on the surface of Mars.

Do you know?

- InSight stands for Interior Exploration using Seismic Investigations, Geodesy and Heat Transport.
- The InSight Lander left Earth on May 5, 2018 and took almost 7-months to get to the Red Planet and finally landed on November 26, 2018.
- It marked the eighth successful landing on Mars in NASA's history.
- The spacecraft is NASA's first to touch down on the earth's neighbouring planet since the Curiosity rover arrived in 2012.
- More than half of 43 attempts to reach Mars with rovers, orbiters and probes by space agencies from around the world have failed.

DEFENCE

India declares nuclear triad operational

Part of: GS Prelims and Mains III – Defence; Security

In news:

- India declared that its **nuclear triad**, stated in its nuclear doctrine, is operational.
- A nuclear triad is a three-pronged military force structure that consists of land-launched nuclear missiles, nuclear-missile-armed submarines and strategic aircraft with nuclear bombs and missiles.
- India's And-triad became operational with its indigenous ballistic missile nuclear submarine **INS Arihant** conducted its first deterrence patrol.

Do you know?

- The purpose of having this three-branched nuclear capability is to significantly reduce the possibility that an enemy could destroy all of a nation's nuclear forces in a first-strike attack.
- This, in turn, ensures a credible threat of a second strike, and thus increases a nation's nuclear deterrence.
- India's nuclear weapons policy is that of "no first use" and "minimum credible deterrence," which means that the country will not use nuclear weapons unless they are attacked first, but the country does have the capability to induce the second strike.
- India completed its nuclear triad with the commissioning of INS Arihant in August 2016, which was India's first submarine built indigenously.

Aligning the triad: On India's nuclear deterrence

General studies 3

- *Security challenges and their management in border areas*

Introduction

INS Arihant, India's first indigenously developed nuclear submarine, returned to the Indian shores on Monday after successfully completing its first deterrence patrol. The submarine is a vital cog in India's quest in attaining a minimum deterrent nuclear 'triad' – the ability to fire nuclear-tipped missiles from land, air and sea.

Do you know?

What is the composition of INS Arihant?

- INS Arihant is a 6,000-tonne submarine with a length of 110 meters and a breadth of 11 meters. The vessel will be able to carry 12 Sagarika K 15 submarine launched ballistic missiles that have a range of over 700 km.
- INS Arihant will be the first SSBN-type submarine in the Navy. It has also been reported that its sister vessel, the INS Aridhaman, is nearing completion.

What is SSBN type submarine?

- Strategic Strike Nuclear Submarines (SSBNs) are powered by a nuclear reactor and as a result, they can function submerged for months without having to surface. This feature allows them to travel further and with greater stealth.
- They are different from conventional SSK submarines, which use a diesel-electric engine as their power source, and have to surface daily to get oxygen for fuel combustion.

Missing Link in INS Arihant

- Induction of INS Arihant does not complete Nuclear Triad. INS Arihant would have to develop further capabilities to act as a nuclear deterrent.
- The range of nuclear tipped ballistic missile is insufficient to reach key targets in China and Pakistan.
- Further, to target enemy countries, it would have to go closer to the waters of enemy countries where it increases the chances of being detected and targeted.
- To ensure seamless and continuous presence, India needs 4 such submarines whose production and maintenance is extremely expensive.

Impact on Strategic Stability

- Induction of INS Arihant enhances maritime competition in the region, modernise naval fleet and seek to have enhanced presence in the region.
- Further, INS Arihant's aggressive posture may lead to confusion and minor conflicts which may escalate into a full-fledged war.
- Thus, there is a security dilemma involved considering that whatever actions a country takes to secure itself could actually end up making itself more insecure.
- For example, Pakistan could develop or purchase similar nuclear submarines with active help of China which may lead to increased instability in the region.
- Similarly, China's Belt and Road Initiative may lead to revival of QUAD Security dialogue between India, USA, Japan and Australia.

Command and Control

- There are concerns regarding command and control of the use of nuclear triads especially those under water. The naval leg is essentially under the military custody and control.
- There will be no civilian presence on board an Ship Submersible Ballistic Nuclear (SSBN). The captain of SSBN will be under Strategic Forces Command under military control who can launch nuclear missile on orders from political authority.
- However, the article mentions that there is no fool proof mechanism to ensure misuse of nuclear missile which can escalate into a regional war in the South Asian Region.

Way forward

- INS Arihant makes a robust nuclear deterrence, but also changes deterrence stability in South Asian Region.
- Nuclear Triad comprises of capability of nuclear strike from land, air and under-water. It is suggested to reduce investment in land and air strike capability and to increase under-water strike capability.
- USA and USSR in 1972 signed an agreement named “Incidents at Sea Agreement” which aimed to avoid confusion and accidents at sea and also to avoid escalation into full fledged war.
- India, Pakistan and China should enter into a similar agreement to avoid escalation of war in the region.

Connecting the dots:

- In the light of India’s nuclear triad, critically examine the state of India’s nuclear deterrence.

Indian Army inducts its artillery gun systems

Part of: GS Prelims and Mains III – Defence; Technology

In news:

Indian Army inducts its first artillery gun systems in three decades.

- M777 Ultra Light Howitzers : : from the U.S.
- K9 Vajra-T self-propelled artillery gun : : from South Korea

Do you know?

- The Army last inducted an artillery gun system — the Bofors guns procured from Sweden — in the early 1980s. Attempts to buy new guns did not make progress.

- India signed a \$737-million deal with the U.S. in November 2016 under the Foreign Military Sales Programme for 145 M777 Ultra Light Howitzers. (The first 25 guns will be imported and the rest will be assembled in India in partnership with Mahindra Group.)
- The M777 is a 155-mm, 39-calibre towed artillery gun. It weighs just four tonnes, making it transportable underslung from helicopters.
- The K9 Vajra-T is a 155-mm, 52-calibre self-propelled gun with a maximum range of 40 km. (The first 10 guns will be imported from South Korea and the rest will be made by L&T in India.)

The **Army's Field Artillery Rationalisation Plan, 1999**, envisages induction of 3,000 guns of various types for 220 artillery regiments.

Growing arsenal

Artillery gun systems — including the M777 A2 ultra light howitzers, K-9 Vajra self-propelled gun — and a composite towing vehicle were inducted into the Army on Friday. A lowdown on their technical specifications and procurement process:

M777 ULTRA LIGHT HOWITZER

- It is a 155-mm, 39-calibre towed artillery gun made of titanium and aluminium alloys
- It has a range of 24 to 30 km, depending on the type of ammunition used
- The gun weighs four tonnes and can be transported by helicopters

- In November 2016, India signed a \$737 million deal with the U.S. for 145 howitzers under the Foreign Military Sales Programme
- Of the 145, 20 will be imported, and the rest will be assembled back home in phases
- The Army has not inducted any artillery gun since the 1980s

The M777 ultra light howitzer being fired on Friday at the Deolali artillery centre. ■ AJAJ SHAIKH



K9 VAJRA-T GUN

- It is a 155-mm, 52-calibre self-propelled artillery gun with a maximum range of 40 km
- The fire control system has been customised for desert conditions
- In April 2017, Larsen & Toubro (L&T) and Hanwha Techwin of South Korea signed a contract to make the guns
- The gun was short-listed by the Army after extensive trials. The deal was worth about ₹4,500 crore for 100 guns

- The first 10 guns have been imported from South Korea in a semi-knocked-down state and assembled by L&T in India
- The remaining guns will largely be made in India with some major assemblies coming from South Korea
- The first regiment would be in place by July 2019, and all 100 guns will be delivered by November 2020

ARTILLERY TRACTOR

The 6x6 field artillery tractor was developed by Ashok Leyland and will replace the ageing fleet of Tatra artillery gun-towing vehicles



These guns are being inducted almost 30 years after the Bofors guns were inducted... Their induction will give a huge fillip to the fire-power capability of Indian Army on our western borders

— NIRMALA SITHARAMAN, DEFENCE MINISTER

K-9 Vajra showcases its potential. ■ PTI



https://d39gegkjaqduz9.cloudfront.net/TH/2018/11/10/DEL/Delhi/TH/5_05/d7df3414_2514670_101_mr.jpg

Defence Procurement Procedure (DPP)

Part of: GS Prelims and Mains III – Defence; Challenges to internal security; Security Related News

Basics:

- The Defence Procurement Procedure (DPP) 2013 mandates that acquisitions worth over ₹1,000 crore should be first cleared by the Cabinet Committee on Security (CCS).
- The DPP structure was introduced after the Kargil War.

Role of CCS

- Major decisions with respect to the significant appointments, issues of national security, defence policy and expenditure of India are taken by the Cabinet Committee on Security (CCS) in India.
- The Prime Minister chairs the CCS. The committee comprises the Minister of External Affairs, the Home Minister, Finance Minister and the Defence Minister.

About Defence Acquisition Council (DAC)

- DAC – is the government's highest decision-making body on procurement.
- DAC is chaired by Union Defence Minister.
- To counter corruption and speed up decision-making in military procurements.

The decision flowing from the Defence Acquisition Council are to be implemented by the following 3 Boards –

1. Defence Procurement Board headed by the Defence Secretary
2. Defence Production Board headed by the Secretary (Defence Production)
3. Defence Research & Development Board headed by the Secretary (Defence Research & Development)

[India, Singapore begin sea drills](#)

Part of: GS Prelims and Mains II and III – International Relations; Defence and Security ties

In news:

- 25th edition of the **India-Singapore bilateral naval exercise, SIMBEX**, had begun at the tri-services command in Port Blair.
- The two countries have vastly expanded their military cooperation in recent years under **India's Act East policy**.
- Late last year, the two countries signed a naval agreement which has a provision for mutual logistical support and gives India access to the **Changi naval base**.

Do you know?

- Started as basic Anti-Submarine Warfare (ASW) exercises in 1994, today these exercises have graduated to complex maritime combat drills, including missile and torpedo firings, and shore-based intensive professional exchanges.
- India and Singapore are working on a trilateral exercise with an Association of South East Asian Nations (ASEAN) country, likely Thailand, and eventually plan to scale it up to a multilateral format.

India, Russia to build stealth frigates

Part of: GS Prelims and Mains II and III – India and the world; International Relations; Defence deal

In news:

- Goa Shipyard Ltd. signs ₹500 mn deal with Russia's Rosoboronexport to locally manufacture two stealth frigates with technology transfer.
- While the ships are built by Russia, the engines are supplied by Zorya Nashproekt of Ukraine.

Do you know?

- In October 2016, India and Russia signed an **Inter-Governmental Agreement (IGA) for four Krivak or Talwar stealth frigates** — two to be procured directly from Russia and two to be built by GSL.
- Of late, GSL has maintained a good track record. It has delivered 28 ships ahead of schedule in the past four years.
- India recently signed a \$1 bn deal with Russia for direct purchase of two frigates. The basic structures of the two frigates are already ready at the Yantar shipyard in Russia and will be finished now.

DISASTER MANAGEMENT

National Cyclone Risk Mitigation Project (NCRMP)

Part of: GS Prelims and Mains III – Disaster Management; Government schemes and policies

In news:

- NCRMP was started by the Ministry of Home Affairs to mitigate vulnerability to the cyclone and hazards prone coastal communities.
- After the formation of National Disaster Management Authority (NDMA), management of the project was transferred to NDMA in September, 2006.
- NCRMP-I covers States of Andhra Pradesh and Odisha.
- NCRMP-II covers States of Gujarat, Maharashtra, Goa, Karnataka, Kerala, and West Bengal.
- The project is implemented by the Ministry of Home Affairs through National Disaster Management Authority (NDMA) and executed by the respective State Disaster Management Authorities at the State level.
- The project is partly funded by the World Bank.

Objectives of NCRMP

- The overall objective of the National Cyclone Risk Mitigation Project ('NCRMP') is to minimize vulnerability to cyclones and make people and infrastructure disaster resilient in harmony with conservation of the coastal eco-system in the cyclone hazard prone States and Union Territories of India.

For more details - <https://ncrmp.gov.in/about-ncrmp>

Cyclone Gaja: Being prepared against extreme events

General studies 3

- *Disaster management*

Introduction

- Tamil Nadu was more prepared than before to deal with Cyclone Gaja, but it still took a toll of at least 45 lives.
- The severe cyclonic storm damaged infrastructure, property and agriculture.

Role played by the government machineries before, during and after Gaja Cyclone

- The lead taken by the State Disaster Management Authority in issuing a stream of alerts ahead of Gaja helped coastal residents move to camps and adopt safety measures.
- The active measures taken by the State after the cyclone, notably to clear roads, remove fallen trees and repair power infrastructure and communications, helped restore some stability.
- In its destructive exit path, the cyclone has affected some southern districts, felling tens of thousands of trees and also 30,000 electricity poles along the coast.
- Tamil Nadu's political parties have acted in a mature manner and kept partisan criticism from getting in the way of relief and rehabilitation after Gaja.
- This is in contrast to some earlier instances, such as the Chennai flood of 2015, when the distribution of relief became politicised.

What needs to be done urgently?

- There is need to secure without delay the financial relief of ₹10 lakh that has been promised for families of the dead, compensation for lost crops, trees and livestock, provision of emergency health intervention and rehabilitation assistance to rebuild lives.

Preparedness

- The effort to professionalise disaster management through a dedicated national and State organisation initiated more than 15 years ago appears to be paying off, with bureaucracies acquiring higher efficiency in providing early warning and in mitigating the impact of cyclones.
- The National Cyclone Risk Mitigation Project started by the Ministry of Home Affairs has been working to reduce the impact of such catastrophic events on Andhra Pradesh, Odisha, West Bengal, Tamil Nadu and Gujarat, classified as States with higher vulnerability; most western coastal States are in the next category.
- However, there is a lot to be done to upgrade infrastructure and housing in coastal districts to meet higher standards of resilience in an era of extreme weather events.

Concerns remains

- The larger question, of course, is whether the coastal States have equipped themselves for an even bigger event, such as the super cyclone that hit Odisha in 1999 that killed about 10,000 people.
- Even with far fewer casualties, Cyclone Phailin in 2013 required reconstruction estimated at \$1.5 billion.

Conclusion

- India's coastline experiences a lower frequency of tropical cyclones compared to many other regions, but the loss of life and destruction is much higher.

- Therefore Coastal States must focus on reducing the hazard through policies that expand resilient housing, build better storm shelters and create financial mechanisms for insurance and compensation.

Connecting the dots:

- India's coastline experiences a lower frequency of tropical cyclones compared to many other regions, but the loss of life and destruction is much higher. Analyse the causes of such destruction, and suggest some measures to mitigate them.
- Coastal districts must continue to strengthen resilience against extreme weather events. Elucidate.

Regional Integrated Multi-Hazard Early Warning System (RIMES)

Part of: GS Prelims and Mains III – Disaster Management; International bodies

In news:

- Regional Integrated Multi-Hazard Early Warning System (RIMES) for Africa and Asia, a 45-nation international organisation on disaster warning, has termed 'Titli', the severe cyclonic storm that devastated Odisha in October, as 'rarest cyclone'.
- The UN-registered organisation said: Considering the history of cyclone tracks, no synthetic track projection captures the Titli type of cyclones. The forecast information available lacks actionable early warning information such as no indication of occurrence of secondary hazards, including landslides far away from the coasts.
- The RIMES has recommended that a detailed risk assessment has to be carried out for Odisha to understand the risks in the light of the Titli devastation.

Do you know?

- Earlier, India Meteorological Department had called the formation of Titli as a 'rarest of rare' occurrence.

Important value additions

About Regional Integrated Multi-Hazard Early Warning System (RIMES)

- The RIMES is an intergovernmental body registered under United Nations.
- It was established registered with UN in 2009.
- It is owned and managed by 45 collaborating countries in Asia Pacific and Africa Region.
- India is chairman of the body.
- It operates from its regional early warning centre located at campus of Asian Institute of Technology in Pathumthani, Thailand.

- It has evolved from efforts of countries in Africa and Asia in aftermath of 2004 Indian Ocean tsunami.

RIMES caters to differential needs and demands of its Member States by enhancing capacities for end-to-end multi-hazard early warning, in particular:

- Hazard monitoring, detection, analysis, prediction, and forecasting
- Risk assessment
- Potential impact analysis
- Generation of tailored risk information at different time scales
- Risk communication
- Application of tailored risk information in decision-making



INTERNAL SECURITY/SECURITY

Dangerous tactics

General studies 3

- *Challenges to internal security*
- *Role of external state and non-state actors in creating challenges to internal security*

Introduction

- There has been an increase in attacks by Maoists, indicating that their ability to strike remains strong.
- Recently, in two attacks in Chhattisgarh, five persons were killed in a blast in Dantewada district, and one BSF sub-inspector was killed in Kanker district.
- Maoists have also owned up responsibility for the killing of TDP MLA Kidari Sarveswara Rao and his predecessor Siveri Soma in Araku valley in Andhra Pradesh in September.

Increase in attacks but decrease in area of influence

- These attacks come amid a series of military setbacks to the Maoists in the Andhra Pradesh- Odisha border regions.
- Paramilitary and police actions have resulted in the death of senior leaders, including Cherukuri Rajkumar ('Azad') and Mallojula Koteswara Rao ('Kishenji').
- The government's strategy of using military force while earmarking funds for infrastructure and welfare programmes in the districts most affected by left-wing extremism has weakened the Maoists.
- Welfare measures, even if they have been implemented haphazardly, have enabled outreach into tribal areas where the state was hitherto absent.
- These actions have forced the Maoists to retreat further into the forest areas of central and south-central India to use them as bases to launch attacks, seeking to invite state repression on tribal people and to get recruits.

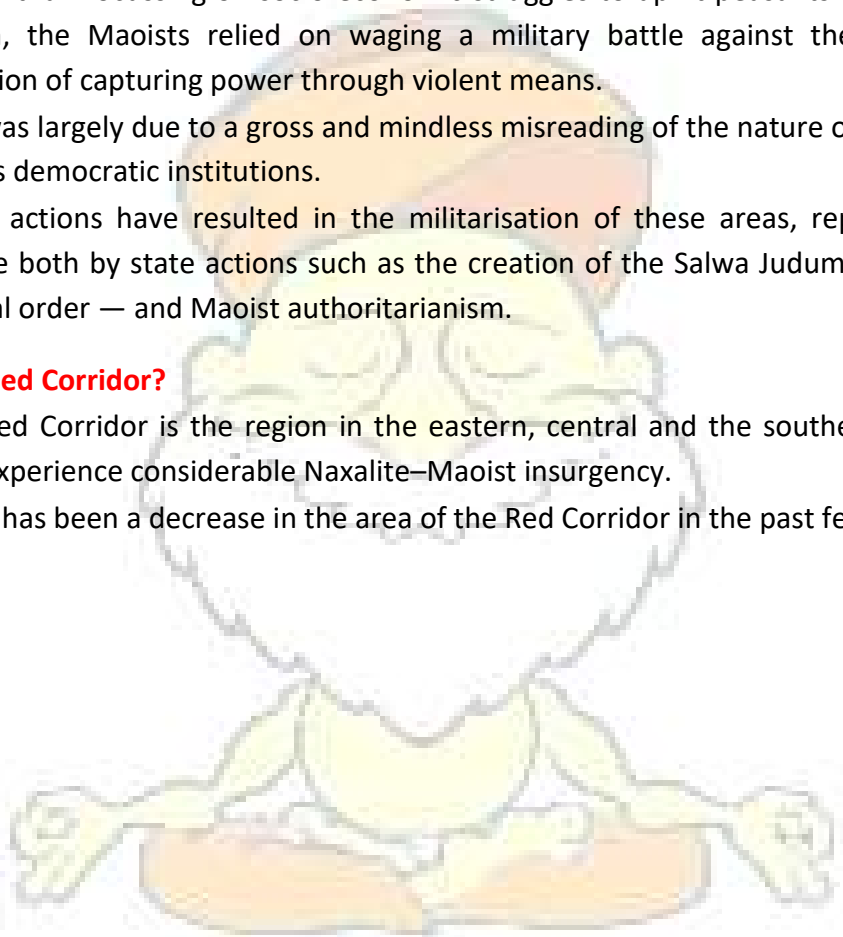
Increase in Militarization of banned CPI (Maoist)

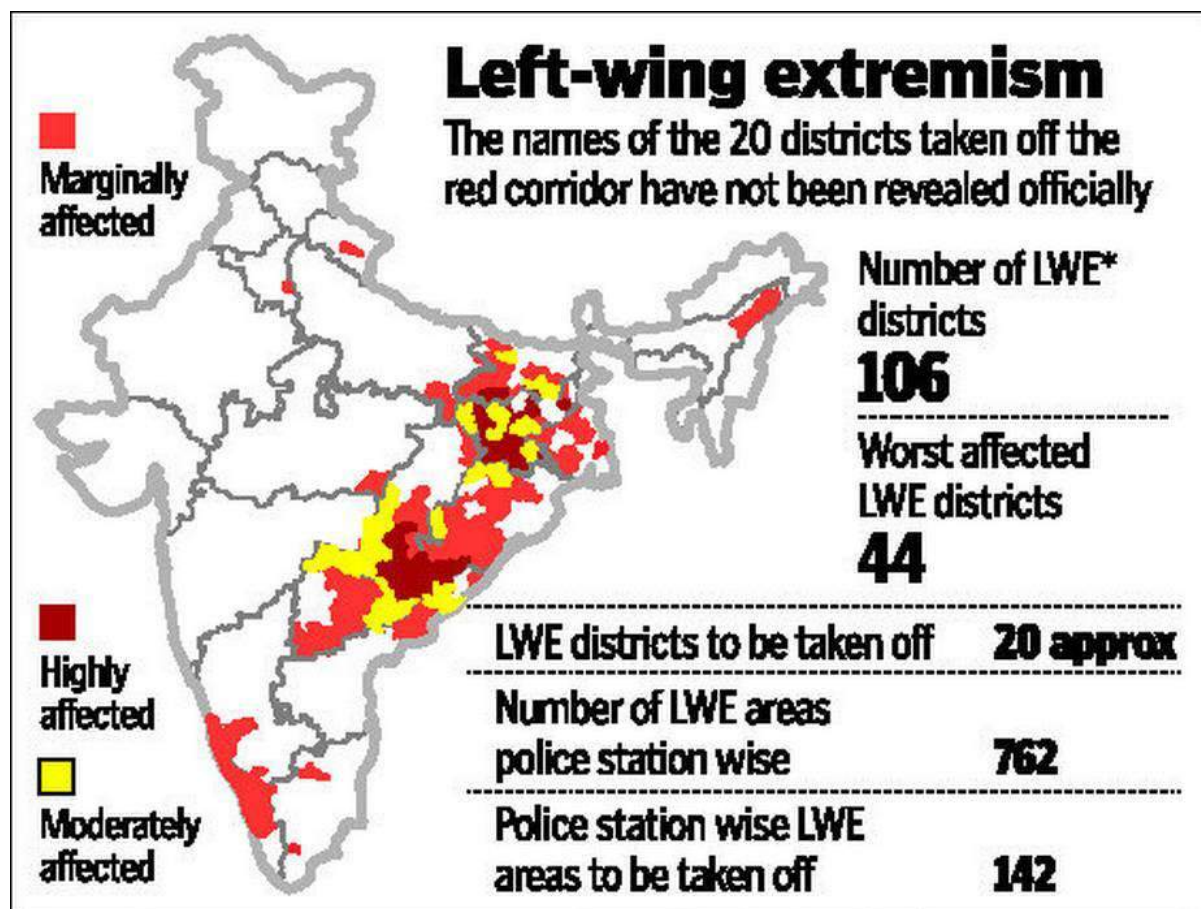
- This increase in attacks is due to the greater militarization of the banned Communist Party of India (Maoist) in areas within the Red Corridor.
- General secretary Nambala Kesava Rao ('Basavraj') is alleged to have led attacks on security forces and killings.

- The CPI (Maoist) has sought to project itself as a revolutionary political movement led by peasants and tribals, seeking to rebuild after the failures of the earlier Naxalite movement.
- After the merger of the People's War Group and the Maoist Communist Centre of India into the CPI (Maoist) in 2004, the outlawed party managed to consolidate its presence across a "Red Corridor" spanning central and north-central India, marked by rural deprivation.
- Rather than focussing on socio-economic struggles to uplift peasants and tribals in this region, the Maoists relied on waging a military battle against the state with the intention of capturing power through violent means.
- This was largely due to a gross and mindless misreading of the nature of the Indian state and its democratic institutions.
- These actions have resulted in the militarisation of these areas, repression of tribal people both by state actions such as the creation of the Salwa Judum — disbanded by judicial order — and Maoist authoritarianism.

What is the Red Corridor?

- The Red Corridor is the region in the eastern, central and the southern parts of India that experience considerable Naxalite–Maoist insurgency.
- There has been a decrease in the area of the Red Corridor in the past few years.





*LWE: Left-Wing Extremism

Source: 2015 data from South Asia Terrorism Portal

https://www.thehindu.com/migration_catalog/article14457816.ece/ALTERNATES/FREE_960/24-Vijaita-REVI+th25_LWE.eps.jpg.jpg

Conclusion

- The change in leadership of the CPI (Maoist) and its recent actions suggest there is no end in sight to this insurgency in the near term — a sad reality for tribals caught in the crossfire.
- But the government's strategy of using military force along with allocation of funds for infrastructure and welfare programmes, is bearing fruits. Need is of further consolidation of actions and speedy implementation of welfare schemes.

Connecting the dots:

- What is red corridor? Analyse the situation of Maoist threat to internal security of India.

[Big leap in intelligence infrastructure post 26/11](#)

Part of: GS Prelims and Mains III – Security challenges and their management

In news:

- Ten years after the 26\11 terror strikes, Maharashtra is better placed to benefit from **real-time, actionable intelligence, processed through its Central Monitoring System (CMS) and the Lawful Interception System (LIS).**
- As per **the International Telecom Union (ITU), Geneva**, the State is periodically obtaining a Global Cell Identity (GCI) and Location Area Identity (LAI) from the Telecom Service Providers (TSPs).

Detailed data

- The successful implementation of the CMS with inclusion of the GCI, LAI and location in the Call Data Record (CDR) has enhanced the intelligence collection abilities of the State in the past few years.
- Implementations of the CMS and LIM have helped agencies get full data without any hindrances from TSPs.
- **The R.D. Pradhan Expert Committee**, which probed lapses leading up to the November 26, 2008 terror strikes, had revealed that prior to the attacks, senior officers in the Maharashtra government did not even look at crucial intelligence inputs.

Ten years after the Mumbai attack

Introduction

- Terrorism is hardly a post-modern phenomenon. Several of the terror attacks in the 21st century reflect a paradigmatic change in the tactics of asymmetric warfare, and the practice of violence.
- Today's attacks carried out in different corners of the world by various terror outfits are very different from those witnessed in the previous century.
- The tactics employed may vary, but the objective is common, viz. achieving mass casualties and widespread destruction.
- The 26/11 Mumbai terror attack was the rarest of rare cases, where one state's resources, viz. Pakistan's, were employed to carry out a series of terror attacks in a major Indian city.
- After ten years of the terror attack, it is important to analyse state sponsored terrorism and preparedness of India.

Involvement of "deep state" of Pakistan in Mumbai Terror Attacks

- Deep state refers to unelected shadow government who takes majority of the policy and strategic decision.

- Thus, deep state is where military, bureaucracy, intelligence community and sometimes even judiciary undermine the writ of an elected government.
- It's like having a 'State within a State' whose influence is hard to overlook.
- The attack was planned strategically and in advance by the deep state of Pakistan involving the Inter-Services Intelligence Directorate, Pakistani armed forces and involvement of the Pakistani Special Forces in preparing the 10-member fidayeen group who carried out the attack.

Steps taken by India

- In the wake of the terror attack, several steps were initiated to streamline the security set-up.
- Coastal security was given high priority, and it is with the Navy/Coast Guard/marine police.
- National Investigation Agency (NIA) - a specialised agency to deal with terrorist offences was set up and has been functioning from January 2009.
- The National Intelligence Grid (NATGRID) has been constituted to create an appropriate database of security related information.
- Four new operational hubs for the National Security Guard (NSG) have been created to ensure rapid response to any future terror attacks.
- The Multi Agency Centre, which functions under the Intelligence Bureau, was further strengthened and its activities expanded.
- The Defence Intelligence Agency (DIA), created in 2002 mandated to collect, collate and evaluate intelligence from other service agencies.
- The Navy constituted a Joint Operations Centre to keep vigil over India's extended coastline.

New terror threats in the modern world driven by technology

- Despite streamlining of counter-terrorism measures, it is important to remain vigilant from the terrorist groups.
- These terrorist groups have resorted to use better and sophisticated technologies, have adopted newer and bolder methodologies and ensure execution of their deeply laid plans with the aid of state-of-the-art weapons and communication system which is difficult to trace.
- Use of 'enabled terror' or 'remote controlled terror', where violence can be unleashed guided by a controller thousands of miles away poses a much dangerous world.
- Thus, internet-enabled terrorism and resort to remote plotting is the new threat.

Conclusion

- As of now, there are no ready-made answers to this new threat operating behind a wall of anonymity and secrecy which is difficult to trace.
- Terrorism remains a major threat and with terrorism mutating into a global franchise, the threat potential has become greater.
- Thus, vigilance is important, but remaining ahead of the curve is even more vital in this modern world driven by technology.

Connecting the dots:

New terror threats have emerged as a result of use of technology. In light of this statement examine the challenges that have emerged as a result of "enabled terror". Also highlight the steps that should be taken to handle the new terror threats.



ETHICS

He understood the pain of others: Gandhi, an inspiration

General studies 1, 4 and Essay

- *Personalities in India's struggle for independence*
- *Ethics: Compassion, truthfulness and Humanity*
- *Essay*

Introduction

- Mahatma Gandhi's vision and voice have a rare resonance in numerous hearts around the world because it springs from the timeless humanistic vision of India.
- His experience with truth and his commitment to serve those in need are inspirational.
- Martin Luther King Jr, said, "If humanity is to progress, Gandhi is inescapable. He lived, thought, and acted, inspired by the vision of humanity evolving toward a world of peace and harmony. We may ignore him at our own risk."

Indian world view and Gandhi's

- The Indian worldview regards the entire world as one large family. The verse from the Ramayana, encapsulates this universal vision: "Only the narrow minded categorise people as "our own" and "others". For those who have a large heart, the entire world is just a large family." (Translation)
- A corollary of this view, which follows from the concept of the whole world being seen as one family, is the attitude of empathy, of sharing and caring, a sharp focus on alleviating the agony of fellow human beings.
- Gandhi's life is an eloquent expression of this attitude and value system. As he himself had said, "The best way to find yourself is to lose yourself in the service of others."

India for Humanity

- The vision of service and humanism, and transforming noble thoughts to tangible action, has inspired several generations of world leaders.
- The Government of India has launched "India For Humanity" in order to take the message of Mahatma Gandhi to all parts of the world over the next year.
- It seeks to celebrate the great values of humanism, which Gandhi embodied.
- For this, the government has selected one of the great scientific innovations from India that has transformed, and continues to transform, numerous lives, the Jaipur Foot.

- It is an initiative that provides to the differently-abled persons a sense of freedom and mobility, a sense of dignity and an ability to live life fully.
- Mahatma Gandhi said: “I am endeavouring to see God through service of humanity for I know that God is neither in heaven, nor down below, but in everyone.”
- It is this spirit of service to the entire humanity without any distinction of caste, creed, race or religion which India seek to capture by launching “India For Humanity”.

The Jaipur foot

- Bhagwan Mahaveer Viklang Sahayata Samiti (BMVSS) is a Jaipur-based non-profit organisation founded by D R Mehta.
- For his extraordinary contribution to humanity, the Jaipur foot, he was awarded the Padma Bhushan by the Government of India.
- BMVSS is the world’s largest organisation for equipping the differently-abled with artificial limbs, free of charge.
- The Jaipur Foot is lighter than other artificial limbs and has helped thousands lead a life of dignity.
- The first Jaipur Foot camp in the series is being launched in Africa in Malawi.
- It was in Africa that Gandhiji took his first steps towards becoming a Mahatma.

Gandhi; an inspiration

- Mahatma Gandhi’s life, his message and outlook towards humanity is embodied in the hymn: Vasihnava jan to, tene kahiye je peed paraayi jaane re. The 15th century Gujarati bhajan can be translated as “a virtuous man is one who understands the pain of others”.
- Gandhiji was an inspiration to all mankind. He truly believed that cleansing our inner being of all evils is as important as cleansing our countries of colonialism.
- His deep sense of compassion and inclusiveness permeated his outlook on humanity — this included his opponents as well.
- Through his fight against evils of apartheid, discrimination, slavery and colonialism, he sharpened his weapons which were to ultimately liberate not just India but also inspire many other countries to gain independence from colonial rulers.
- The tools he employed to fight oppression and injustice were truth, non-violence and satyagraha.

Conclusion

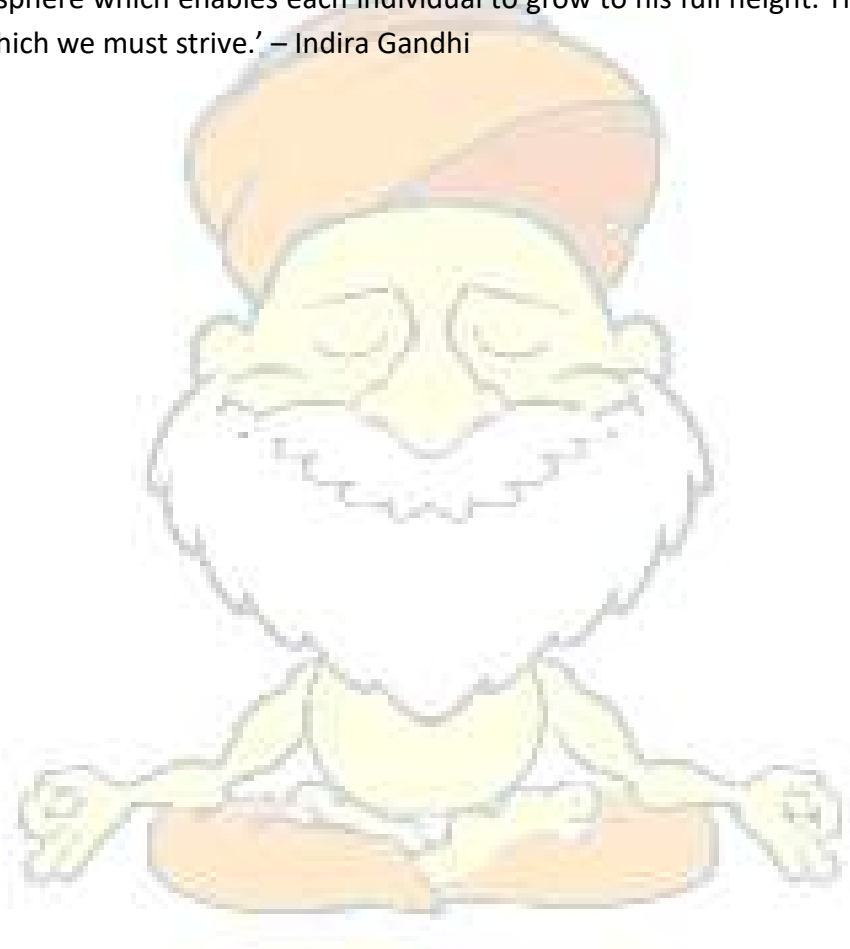
Humanity, compassion, and non-violence are the virtues which will keep the Gandhi alive forever. He is the practical example of India's world view i.e. vasudhaiva kutumbakam.

Connecting the dots:

- Write Essay on: "Gandhi's vision of service and humanism is relevant across nations and time"

Quotes:

- 'Freedom is that which helps us to break out of the confines of fear and hate, of chauvinism and obscurantism and the shackles of dead habit. Freedom is the atmosphere which enables each individual to grow to his full height. This is the freedom for which we must strive.' – Indira Gandhi



PERSON IN NEWS

Person in news	Description
1. Basant Kumar Rath (J&K IPS officer)	<ul style="list-style-type: none"> J&K people rallied in support of IPS officer Basant Kumar Rath following his transfer. He earned himself a following in Kashmir, a place where a significant section of youth is angry against security forces and engages in frequent street battles.
2. N. Ram	<ul style="list-style-type: none"> N. Ram, Chairman, THG Publishing Private Limited, The Hindu Group's publishing company, was awarded the Raja Ram Mohan Roy Award by Mr. Jaitley for his lifetime contribution to journalism.
3. Judge Vikramjit Sen and Justice Kuldeep Singh Award	<p>In news:</p> <ul style="list-style-type: none"> Former Supreme Court Judge Vikramjit Sen was awarded Justice Kuldeep Singh Award by Vice-President M. Venkaiah Naidu. The award was given to Sen during the 104th birth anniversary celebrations of former Supreme Court Justice Judge V.R. Krishna Iyer. <p>Do you know?</p> <ul style="list-style-type: none"> Justice Iyer (former Supreme Court Judge) had also served as a Cabinet Minister in the first Communist government led by E.M.S Namboodiripad in Kerala.

MISCELLANEOUS

In News	Description
1. Deal inked for biofuel research:	<ul style="list-style-type: none"> Department of Biotechnology (DBT) inks ₹11 crore deal with The Energy and Research Institute (TERI) to set up a centre to produce “advanced biofuels and bio-commodities.” This is the fifth such dedicated centre for bioenergy-research and development set up by the Department.
2. Section 7 of the RBI Act:	<ul style="list-style-type: none"> Section 7 of the RBI Act empowers the central government to issue directions to the RBI in public interest. This section has, however, never been invoked by the government so far.
3. NASA's Kepler Mission:	<ul style="list-style-type: none"> It was launched by NASA to discover Earth-size planets orbiting other stars. The Kepler space telescope has run out of fuel and will be retired after a nine-and-a-half year mission, in which it detected thousands of planets beyond our solar system and boosted the search for worlds that might harbour alien life.
4. Impact of falling rupee	<ul style="list-style-type: none"> NRIs deposits surge as rupee slides and oil prices rise. The UAE is the top source of inward remittances into India, with Kerala receiving the maximum funds sent from abroad, according to the RBI's survey of inward remittances for 2016-17.
5. NHIDCL fined ₹2 cr. for pollution	<ul style="list-style-type: none"> The National Green Tribunal has levied a fine of ₹2 crore on the National Highways Infrastructure Development Corporation Ltd. (NHIDCL) for dumping muck into the Bhagirathi river in Uttarakhand during the construction of a road.
6. Centre eyes seaplanes in UDAN 3	<ul style="list-style-type: none"> Seaplanes may soon be operating commercial passenger flights in India with the Centre inviting bids for connecting selected destinations under the regional connectivity scheme (RCS). Opening the third round of the RCS, the Ministry of Civil Aviation has invited proposals for air routes that include tourist destinations.
7. Ozone layer is recovering, says UN	<ul style="list-style-type: none"> Ozone layer is recovering at a rate of one to three percent per decade. (Thanks to Montreal Protocol, a 1987 ban on man-made gases that damage the fragile high-altitude ozone layer)

8. Six airports set to be privatized:	<ul style="list-style-type: none"> • 'In principle' nod by Cabinet to PPP projects for 'world-class' non-metro airports. This will be done through the Public Private Partnership Appraisal Committee (PPPAC).
9. National parks/Sanctuaries in news:	<ul style="list-style-type: none"> • Satkosia Tiger Reserve is in Odisha • Bandhavgarh Tiger Reserve in Madhya Pradesh
10. Concept of Double Jeopardy:	<ul style="list-style-type: none"> • Article 20 (2) of the Constitution mandates that a person cannot be prosecuted or punished twice for the same offence.
11. Pneumonia and Diarrhoea Progress Report'	<ul style="list-style-type: none"> • India continues to have the highest burden of pneumonia and diarrhoea child deaths in the world (according to 'Pneumonia and Diarrhoea Progress Report' released by the International Vaccine Access Centre and supported by the Bill & Melinda Gates Foundation). Globally, pneumonia and diarrhoea led to nearly one of every four deaths in children under five years of age in 2016. • 10 key interventions to help protect against, prevent, and treat, pneumonia and diarrhea – breastfeeding, vaccination, access to care, use of antibiotics, oral rehydration solution (ORS) and zinc supplementation. • United Nations' Sustainable Development Goal target – reduce under-five mortality to at least as low as 25 per 1,000 live births by 2030.
12. Cyclone Gaja	<ul style="list-style-type: none"> • Cyclone Gaja is likely to cross the Tamil Nadu coast. Named by Sri Lanka, it is the 55th tropical cyclone since the naming convention started in 2004.
13. F1H2O power boat race	<ul style="list-style-type: none"> • Was held in River Krishna in Amaravati (Andhra Pradesh) • Team Abu Dhabi wins powerboat grand prix at Amaravati
14. Agricultural Marketing and Farm Friendly Reforms Index	<ul style="list-style-type: none"> • This index is brought out by NITI Aayog. It rates States on the basis of their performance in agricultural marketing, land and governance reforms.
15. Ease of Doing Agri-Business Index	<ul style="list-style-type: none"> • Now, Centre to roll out a new Ease of Doing Agri-Business Index which will rank the States on the basis of their performance in encouraging agri-business, especially with regard to marketing, land and governance reforms and also based on their investment in

	agriculture, increased productivity, reduction of input costs, and risk mitigation measures. (The proposed index has a wider ambit)
16. National body set up to study rare form of diabetes	<ul style="list-style-type: none"> A National Monogenic Diabetes Study Group has been formed to identify cases of monogenic diabetes across the country.
17. 'Mission Venus'	<ul style="list-style-type: none"> Indian Space Research Organisation (ISRO) plans to study planet VENUS. The Venus voyage — if approved — would be ISRO's third interplanetary dash. Venus mission would be comparable to the phenomenally popular MOM in terms of its the orbit and the cost.
18. Fitch retains rating for India at 'BBB-'	<ul style="list-style-type: none"> Fitch Ratings retained India's sovereign rating at 'BBB-', the lowest investment grade rating, although maintaining its stable outlook.
19. Barnard's star b	<ul style="list-style-type: none"> Astronomers have discovered a frozen planet with a mass more than three times that of the Earth, orbiting the closest solitary star to the Sun. The potentially rocky planet, known as Barnard's star b, is a 'super-Earth' and orbits around its host star once every 233 days. At nearly six light-years away Barnard's star is the next closest star to the Sun after the Alpha Centauri triple system. Barnard's star b is the second closest known exoplanet to our Sun. The closest — Proxima b — lies just over four light-years from Earth and orbits around the red dwarf Proxima Centauri.
20. Alpha Centauri	<ul style="list-style-type: none"> It is the closest star system to the Solar System at a distance of 4.37 light-years Centauri B together with a small and faint red dwarf, Alpha Centauri C (also named Proxima Centauri).
21. Proxima Centauri	<ul style="list-style-type: none"> Proxima Centauri or Alpha Centauri C, is a red dwarf, a small low-mass star, about 4.25 lightyears (1.30 pc) from the Sun in the constellation of Centaurus. It was discovered in 1915 by the Scottish astronomer Robert Innes, the Director of the Union Observatory in South Africa, and is the nearest-known star to the Sun.
22. International Centre for	<ul style="list-style-type: none"> International research centre to open in Denmark in 2019 which focuses on the fight against resistance to antibiotics.

Interdisciplinary Solutions on AMR in Denmark	<ul style="list-style-type: none"> The International Centre for Interdisciplinary Solutions on AMR (Antimicrobial Resistance), financed by Denmark and private investors, will open in 2019 and is expected to employ up to 500 people.
23. Composite Water Management Index (CWMI)	<ul style="list-style-type: none"> CWMI is released by the NITI Aayog and is published in association with the Ministry of Water Resources, Ministry of Drinking Water and Sanitation and the Ministry of Rural Development. CWMI has placed India at a dismal 120 among 122 countries in the water quality index. The CWMI report covers these broad themes — ground water and surface-water restoration; major and medium irrigation; watershed development; participatory irrigation management; on-farm water use; rural and urban water supply; and policy and governance. The CWMI noted that water-scarce States such as Gujarat, Madhya Pradesh, Andhra Pradesh, Karnataka, Maharashtra and Telangana are leaders in the Index.
24. Rohingya relocation plan pushed to 2019	<ul style="list-style-type: none"> Bangladesh's plans to tackle the Rohingya refugee crisis have been stalled until the new year with repatriation and relocation programmes only likely to be revisited following the year-end general election.
25. Astroscale	<ul style="list-style-type: none"> A small Japanese company founded in 2013, Astroscale, is developing a system to approach and capture space debris and broken satellites.
26. Bhudhaar scheme	<ul style="list-style-type: none"> Andhra Pradesh Chief Minister N. Chandrababu Naidu launched 'Bhudhaar', which will consist of an 11-digit unique figure aimed at enabling easy identification of details of the land parcel.
27. 33% reservation for women	<ul style="list-style-type: none"> Odisha House passes 33% reservation for women in Legislative Assemblies and Parliament.
28. India and Vietnam ties	<ul style="list-style-type: none"> India and Vietnam to launch their first "Bilateral Maritime Security Dialogue". Both the countries "share a vision for the Indo-Pacific".
29. e-registration must for jobs in 18 countries	<ul style="list-style-type: none"> Passport holders with "non-Emigration Check Required (non-ECR)" status will soon have to get themselves registered with the Ministry of External Affairs before taking up jobs abroad.
30. Rabab	<ul style="list-style-type: none"> Rabab is a lute-like musical instrument originating from central

	<p>Afghanistan. The rubab is mainly used by Pashtun, Tajik, Turkish, Kashmiri, Baluch, Azerbaijani, and Iranian Kurdish classical musicians.</p> <ul style="list-style-type: none"> • Rubab is one of the national musical instruments of Afghanistan. It is considered to be one of the Kashmir's folk music. • The word 'rabab' comes from rooh (soul) and bab (expression). It should stir the soul.
31. Sam Pitroda Committee on Prasar Bharati	<ul style="list-style-type: none"> • Public broadcaster Prasar Bharati will audit its workforce, a long-pending exercise that was recommended by the Sam Pitroda Committee in 2014. The last time the Prasar Bharati made recruitments was in 1996.
32. Vetiver	<ul style="list-style-type: none"> • Vetiver – also called as 'the wonder grass' of Tamil Nadu • Vetiver has gained popularity in the State for its wide range of applications in the pharma and cosmetic industries, besides anti-soil erosion properties. • It has huge global demand in the aromatic industry. • The grass is popular for its quality to combat soil erosion and absorb carbon dioxide, thus erasing carbon footprints. • Vetiver is ideal for the long coastline, as it is suited for sandy soil. Its moisture retention property makes vetiver a natural choice for soil conservation and replenishment of ground water. • It is ideal for dry land cultivation using organic farming practices. Another quality of vetiver is that it is an anti-depressant.

(TEST YOUR KNOWLEDGE)

Model questions: (Answers are provided at the end)

Q.1) Which of the following reports are published by IMF?

1. World Economic Outlook
2. The Fiscal Monitor
3. Global Financial Stability report
4. Ease of Doing Business

Select the code from following:

- a) 1 and 3
- b) 2 and 4
- c) 1,2 and 3
- d) All of the above

Q.2) Which of the below are part of NASA's series of Four Great Observatories satellites, designed to examine a specific wavelength/energy region of the electromagnetic spectrum (gamma rays, X-rays, visible and ultraviolet light, infrared light) using very different technologies?

1. Hubble
2. Spitzer
3. Kepler
4. Chandra
5. Compton
6. Transiting Exoplanet Survey Satellite (TESS)

Select the correct answer:

- a) 1, 2, 3 and 5
- b) 1, 2, 3 and 6
- c) 1, 2, 4 and 5
- d) 1, 2, 3 and 5

Q.3) Ease of Doing Business Index is released by

- a) World Bank
- b) International Monetary Fund
- c) World Trade Organization
- d) World Economic Forum

Q.4) Government of India launched 'Hathi Mere Sathi' Campaign to improve conservation prospects of elephants. Consider the following statements regarding that:

1. Campaign was launched by Ministry of Environment and Forest in partnership with the wildlife Trust of India.
2. It was launched during Elephant – 8 Ministerial Meeting, attended by delegates from countries representing 2/3rd of wild elephant population.
3. Elephant is India's National Heritage Animal.

Which of the above statements are correct?

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.5) Which of the following efforts have been taken for Elephant Conservation in India?

1. Elephant Corridors
2. Elephant Census
3. Elephant Reserves

Select the correct answer using code below

- a) 1 and 2
- b) 1 and 3
- c) 2 and 3
- d) 1,2 and 3

Q.6) Consider the following statements regarding the Project Elephant:

1. It was launched in 1973 to protect elephants, their habitats and migration corridors.
2. Kerala, Karnataka and Tamil Nadu are home to about 55% of the total elephant population in India.

Which of the statement(s) given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.7) Asian Elephants are

- a) Endangered
- b) Critically Endangered
- c) Extinct
- d) Vulnerable

Q.8) From the following, identify the categories which are included under

Priority Sector Lending:

1. MSMEs
2. Export Credit
3. Renewable Energy
4. Social Infrastructure

Select the correct answer using the codes given below:

- a) 1, 2 and 3
- b) 1, 3 and 4

- c) 2, 3 and 4
- d) 1, 2, 3 and 4

Q.9) Consider the following statements about Dawn spacecraft

1. It was launched as a part of NASA's New Frontiers program
2. It was launched with the mission of studying two of dwarf planet of the asteroid belt, Vesta and Ceres

Select the correct statements

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.10) Hope Island is under the administration of

- a) West Bengal
- b) Orrisa
- c) Andhra Pradesh
- d) Tamil Nadu

Q.11) The Coringa Wildlife Sanctuary (CWS) is located in which state?

- a) Andhra Pradesh
- b) West Bengal
- c) Jharkhand
- d) Manipur

Q.12) Which of the following fertilizers excessive use may be responsible for the presence of a toxic substance in groundwater?

- a) Nitrogen
- b) Phosphate only
- c) Potassium only
- d) Phosphate and Potassium

Q.13) The contamination of water by sewage is indicated by the presence of the cyst of

- a) Amoeba
- b) Pseudomonas
- c) Escherichia Coli
- d) Lactobacillus

Q.14) The Joint Comprehensive Plan of Action (JCPOA) is a nuclear agreement between

- a) India and USA
- b) China and Japan
- c) Iran and P5 +1
- d) India and Australia

Q.15) National Green Tribunal Act, 2010 has been enacted with the objectives to provide for establishment of a National Green Tribunal (NGT) for the effective and expeditious disposal of cases relating to:

- 1. Environment protection and conservation of forests and other natural resources
- 2. Wildlife Protection
- 3. Enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property

Which of the above statements are correct?

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.16) Consider the following statements with reference to the National Green Tribunal

- 1. India is the first country to have a dedicated court for environmental matters.
- 2. It has Original Jurisdiction over matters related to environment.

Which of the statements given above is/are correct?

- a) Only 1
- b) Only 2
- c) 1 and 2
- d) None

Q.17) Consider the following statements about Chlorofluorocarbons (CFC):

- 1. These are gases that are released mainly from air conditioning systems and refrigeration.
- 2. CFCs rise to the troposphere, where they come in contact with few other gases, which lead to reduction of ozone layer.

Choose the correct statement/s:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.18) Which among the following is/are the international treaties specific for the protection of the Stratospheric Ozone (Ozone layer)?

- 1. Vienna Convention
- 2. Montreal Protocol
- 3. Rotterdam Convention
- 4. Basel Convention

Choose appropriate answer:

- a) 2 only

- b) 2 and 3 only
- c) 1 and 2 only
- d) 1 and 4 only

Q.19) Which of the following substance are responsible for depletion of Ozone Layer?

- 1. Carbon tetrachloride
- 2. Methyl bromide
- 3. Hydro-Fluoro Carbons
- 4. Hydro chlorofluorocarbons

Select the correct answer using the codes given below

- a) 1 and 2 only
- b) 1 and 3 only
- c) 1, 2 and 4 only
- d) All of the above

Q.20) Quadrilateral Coordination Group (QCG) consists of which of the following countries?

- 1. Pakistan
- 2. Afghanistan
- 3. China

Select the correct code:

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.21) According to the Air (Prevention and Control of Pollution) Act, 1981, any solid, liquid or gaseous substance [(including noise)] present in the atmosphere is considered to be a pollutant if it is harmful/injurious to

- 1. Human beings
- 2. Animals
- 3. Plants

4. Property

Select the code from below:

- a) 1,2 and 3
- b) 2,3 and 4
- c) 1, 3 and 4
- d) All of the above

Q.22) Which of the following constitutes 'Particulate Matter (PM)'?

- 1. Nitrates
- 2. Pollen
- 3. Sulphates
- 4. Black Carbon
- 5. Fungi

Select the correct code

- a) 1, 3 and 4
- b) 1, 2, 3 and 4
- c) 1, 3, 4 and 5
- d) 1, 2, 3, 4 and 5

Q.23) Recently, India was awarded with CITES' certificate for efforts in combating illegal wildlife trade. Consider the following regarding CITES

- 1. CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international organization under United Nations (UN)
- 2. CITES is legally binding and once implemented overtakes national laws

Which of the given statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both

d) None

Q.24) Consider the following matches of tiger reserves with the state they are located in.

1. Corbett National Park : Uttarakhand
2. Bandhavgarh National Park : Odisha
3. Periyar Tiger Reserve : Kerala

Select the correct answer using the codes below.

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1 only

Q.25) Identify the crop having the following features:

1. It is a tropical as well as subtropical crop.
2. It grows well in a region with temperature of 21°C to 27°C and an annual rainfall between 75 – 100 cm.
3. Its cultivation is highly laborious.

Codes:

- a) Rice
- b) Sugarcane
- c) Barley
- d) Jute

Q.26) Which crop occupies the largest sown area in India?

- a) Wheat
- b) Rice
- c) Ragi
- d) Sugarcane

Q.27) Which of the following group of industry does not belong to the category of core industry?

- a) Sugar Industry
- b) Natural Gas
- c) Refinery Products
- d) Fertilizers

Q.28) Which of the following statements are correct with reference to the Article 20 of Constitution?

1. It grants protection to both citizens and foreigners.
2. A person can be compelled to be a witness against himself in case of a criminal offence, but not in case of civil offence.
3. A civil law can be imposed retrospectively, however a criminal law cannot be.

Select the correct answer using code below

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) 1,2 and 3

Q.29) Consider the following statements:

1. No person shall be prosecuted and punished for the same offence more than once.
2. Prevention from retrospective penalties is there only in case of criminal offence and not in civil cases.
3. No self incrimination extends only to criminal proceeding and not to civil proceedings.

Which of the above statements are correct?

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.30) Consider the following statements with reference to the Geosynchronous Satellite Launch Vehicle-Mark III (GSLV-MkIII)

1. It is the heaviest rocket ever made by India.
2. It can launch satellites in Geosynchronous Transfer Orbit (GTO) as well as Low Earth Orbit (LEO).
3. It uses an indigenous cryogenic engine.

Which of the statements given above are correct?

- a) 1 and 2
- b) 1 and 3
- c) 2 and 3
- d) 1, 2 and 3

Q.31) Which of the following is/are INCORRECTLY matched?

1. Navigation Satellites- INSAT Series and GSAT series
2. Earth Observation Satellites- CARTOSAT, RESOURCESAT, OCEANSAT
3. Geostationary Satellites- GAGAN and IRNSS

Select from the given code:

- a) 1 and 2
- b) 2 only

- c) 1 and 3
- d) 1, 2 and 3

Q.32) Which of the following temples of Odisha have Rekha Duela type of Shikhars?

1. Lingaraja Temple
2. Jagannath Temple
3. Sun Temple in Konark

Select the code from following:

- a) 1 and 2
- b) 2 and 3
- c) 3 only
- d) All of the above

Q.33) SIMBEX is a Maritime Bilateral Exercise between India and

- a) Sri Lanka
- b) Maldives
- c) Singapore
- d) South Korea

Q.34) Changi naval base is located in

- a) Sri Lanka
- b) Maldives
- c) Singapore
- d) South Korea

Q.35) Consider the following statements about India-based Neutrino Observatory (INO)

1. It is a weapons laboratory and will have strategic or defence applications
2. Ministry of Defence acts as the nodal agency of this project

Select the correct statements

- a) Only 1
- b) Only 2
- c) Both 1 and 2

- d) Neither 1 nor 2

Q.36) Consider the following statements

1. Neutrino is the smallest elementary particle present in an atom.
2. Neutrinos come from the sun or other stars and can also be produced in the lab.
3. The India-based Neutrino Observatory (INO) will study solar neutrinos only.

Which of the statements given above is/are correct?

- a) 1 and 2
- b) Only 2
- c) 1 and 3
- d) 1,2 and 3

Q.37) Consider the following statements about Sangai

1. It is an endemic and endangered subspecies of brow-antlered deer
2. It is the state animal of Mizoram
3. Its original natural habitat is the floating marshy grasslands of the Keibul Lamjao National Park

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.38) Sangai Festival is an annual cultural extravaganza in

- a) Mizoram
- b) Arunachal Pradesh
- c) Manipur
- d) Tripura

Q.39) Consider the following regarding Loktak Lake

1. Loktak Lake is the largest freshwater lake in Northeast India, and is famous for the phumdis
2. The term phumdis refers to a collection of heterogeneous mass of vegetation, soil, and organic matter at various stages of decomposition.
3. It is located in Mizoram

Select the correct statement/s

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) Only 2

Q.40) Consider the following statements about 'Kigali amendment to the Montreal Protocol'

1. It is legally binding
2. According to the amendment, India will start to phase down Hydrofluorocarbons (HFCs) by 2019 and reduce it to 15% of 2012 levels by 2036

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.41) Consider the following statements with regard to Hydrofluorocarbons:

1. They are used as blowing agents in the production of polymer foams; as firefighting agents and cleaning certain electronic components.

2. HFC do not damage the ozone layer but still contribute to global warming.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.42) Consider the following statements and select the correct answer:

- a) Process for changing the name of a state can be initiated by state only.
- b) Formation of new states, altering boundary and name is considered as Constitutional Amendment under Art 368.
- c) Parliament can redraw the political map of India according to its will.
- d) Consent of States is necessary before changing their boundary or area.

Q.43) According to the Constitution of India, Article 3 authorises the Parliament to reorganise the States. With this authority, the Parliament can

1. Alter the name of any state
2. Diminish the area of any state
3. Alter the boundaries of any state
4. Increase the area of any state

Select the correct answer using the code given below:

- a) 1, 3 and 4
- b) 1 and 3
- c) 2, 3 and 4
- d) All the above

Q.44) Consider the following about Pradhan Mantri Fasal Bima Yojana:

1. PMFBY is the only flagship scheme for agricultural insurance in India.
2. The scheme was launched with the aim of bringing 50 per cent of the country's farmers under insurance cover in three years.
3. Under this scheme, farmers need to pay uniform premium of only 2% for all Kharif crops and 1.5% for all Rabi crops.

Which of the statements given above is/are correct?

- a) 2 and 3 only
- b) 3 only
- c) 2 only
- d) 1, 2 and 3

Q.45) Which of the following countries are part of 'QUAD'?

1. India
2. U.S.A.
3. Russia
4. Japan

Select the correct answer using code below

- a) 1 and 3
- b) 2 and 4
- c) 1,2 and 4
- d) 1,2,3 and 4

Q.46) Consider the following statements with respect to 'Kyaukpyu'

1. It is a major town in Rakhine State
2. India signed an agreement with Myanmar on building a deep-water port at Kyaukpyu

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.47) 'Rakhine State' of Myanmar is bordered which of the following states?

- a) Arunachal Pradesh
- b) Manipur
- c) Mizoram
- d) None of the above

Q.48) Point Calimere Wildlife and Bird Sanctuary is a protected area in –

- a) Tamil Nadu
- b) Andhra Pradesh
- c) Odisha
- d) Goa

Q.49) Why is a plant called Prosopis juliflora often mentioned in news?

- a) Its extract is widely used in cosmetics.
- b) It tends to reduce the biodiversity in the area in which it grows.
- c) Its extract is used in the synthesis of pesticides.
- d) None of the above

Q.50) Which of the following statements are correct comparisons between Geostationary and Geosynchronous satellite?

- 1. Geostationary orbit is one while geosynchronous orbits can be many.
- 2. Geostationary orbit is in equatorial plane while geosynchronous orbits are polar.

- 3. Both the satellites look stationary in the night sky.

Select the code from below:

- a) 1 only
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.51) Which of the following fuels are used in Cryogenic engines?

- a) Ammonium Nitrate
- b) Polybutadiene Acrylonitrile
- c) Kerosene
- d) Liquid Hydrogen

Q.52) Communication satellites need to be placed in geosynchronous orbits to be tracked by an Earth station from a fixed place. How high should the geosynchronous orbit be?

- a) About 360 km
- b) About 3,600 km
- c) About 36,000 km
- d) Anywhere between 360 km to 3,600 km

Q.53) Consider the following statements about East Asia Summit:

- 1. The East Asia Summit is the premier leaders-led forum in the Asia-Pacific.
- 2. India is a founding member of the East Asia Summit.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.54) Which of the following are the elements of 'Basic Structure' of Constitution

1. Judicial review
2. Freedom and dignity of the individual
3. Unity and integrity of the nation
4. Effective access to justice
5. Separation of powers between the three organs of the state

Select the correct code given below:

- a) 1, 3, and 4 only
- b) 1, 2, 3 and 4 only
- c) 1 and 3 only
- d) All of the above

Q.55) Separation of powers among the three branches of the government, this feature was borrowed from -

- a) British Constitution
- b) United States Constitution
- c) Canadian Constitution
- d) Government of India Act 1935

Q.56) India is a member of –

- a) ASEAN
- b) East Asia Summit
- c) Asia-Pacific Economic Cooperation (APEC)
- d) None of the above

Q.57) Light year is a unit to measure

- a) Time
- b) Distance
- c) Speed
- d) None

Q.58) Consider the following statements about 'Proxima Centauri'

1. It is the closest star to the Sun
2. It is orbited by the Earth-sized temperate world Proxima b, discovered in 2016 and the closest exoplanet to the solar system

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.59) Which of the following statements is/are correct?

1. Alpha Centauri is the closest star system to the Solar System
2. It consists of three stars: the pair Alpha Centauri A and Alpha Centauri B together with a small and faint red dwarf named Proxima Centauri

Select the correct code

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.60) Consider the following statements about Pradhan Mantri Matru Vandana Yojana (PMMVY)

1. It is a Maternity Benefit Programme
2. It is in accordance with the provision of the National Food Security Act, 2013
3. Pregnant Women and Lactating Mothers (PW& LM) who are in regular employment with the Central Government or the State Governments are excluded

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.61) What is the value of universal Planck constant?

- a) 6.626176×10^{-34} joule-seconds
- b) 6.67408×10^{-11} m³ kg⁻¹ s⁻²
- c) 8.314 J / mol. K.
- d) 4.184 joule-seconds

Q.62) Scientists have changed the way the kilogram is defined. Consider the following statements with regard to it:

1. For more than a century, the kilogram had been defined using 'Planck constant'.
2. But now, the kilogram will be defined in terms of a tiny but unchanging value called the 'Le Grand K'.

Select the correct statements

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.63) Budha Peacock or Budha Mayoore was recently declared as –

- a) State bird of Kerala
- b) State bird of Karnataka
- c) State butterfly of Kerala
- d) State butterfly of Karnataka

Q.64) Arrange the following Tiger Reserves of India from North to South direction:

1. Bandhavgarh Tiger Reserve

2. Parambikulam Tiger Reserve
3. Satkosia Tiger Reserve
4. Kanha Tiger Reserve

Select the correct answer using the code given below:

- a) 1,4,3,2
- b) 3,1,4,2
- c) 3,4,1,2
- d) 1,3,4,2

Q.65) Chinnar Wildlife Sanctuary is located in –

- a) Tamil Nadu
- b) Kerala
- c) Andhra Pradesh
- d) Madhya Pradesh

Q.66) Consider the following statements about National Cyclone Risk Mitigation Project (NCRMP)

1. The project is implemented by the Ministry of Home Affairs.
2. The project covers only coastal states on eastern side of the country which are prone to cyclones.

Select the correct statements

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.67) Consider the following statements:

1. Composite Water Management Index (CWMI) is developed by NITI Aayog.
2. Mihir Shah Committee deals with restructuring the Central Water

Commission (CWC) and the Central Ground Water Board (CGWB).

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.68) Consider the following statements

- 1. As per 2011 census, the literacy rate among Indians is 74%
- 2. During 2001-2011, more number of women obtained education than males

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.69) Consider the following statements regarding the census of India 2011

- 1. Lakshadweep has the highest literacy rate among the Union Territories
- 2. Bihar has the lowest literacy rates among the states

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.70) Which of the following is considered while measuring 'Literacy rate' in India?

- 1. Age
- 2. Ability to do arithmetic calculations
- 3. Ability to read and write

Choose the appropriate option from code given below

- a) 1 only
- b) 3 only
- c) 1 and 3
- d) 1, 2 and 3

Q.71) Neelam Katara vs. Union of India case and Himanshu Singh Sabharwal vs. State of Madhya Pradesh & Ors. 2008 case are two famous cases associated with which of the following?

- a) India's Acceptance of "third gender"
- b) Prevention of SC/ST Atrocities Act
- c) Witness Protection Law in India
- d) Provisions of the Places of Worship (Special Provisions) Act

Q.72) Consider the following statements Eco-Sensitive Zones (ESZs)

- 1. Eco-Sensitive Zones (ESZs) are declared under the Wild Life (Protection) Act, 1972
- 2. The government can prohibit industrial operations such as mining, sand quarrying and building thermal power plants in these areas

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.73) Which of the following statements are correct regarding Eco – Sensitive Zones in India?

1. Eco-Sensitive Zones (ESZs) are notified by the Ministry of Environment, Forests and Climate Change (MoEFCC).
2. They act as a transition zone from areas of high protection to areas involving lesser protection.
3. The Environment (Protection) Act, 1986 does not mention the word “Eco-Sensitive Zones”.

Select the code from following:

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.74) Dongria Kondh tribe are indigenous community located in -

- a) Odisha
- b) Andhra Pradesh
- c) West Bengal
- d) Telangana

Q.75) ‘Saubhagya Web Portal’ has been launched by government of India to track

- a) Gas connections in rural and urban households
- b) Electrification of rural and urban households
- c) Domestic violence in urban areas
- d) Swachh Bharat Abhiyan

Q.76) Consider the following statement about VINBAX

1. VINBAX is joint military exercise between India and Vietnam.

2. VINBAX will be the first Bilateral Maritime Security Dialogue.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.77) Consider the following statements about Pradhan Mantri Sahaj Bijli Har Ghar Yojana –“Saubhagya”

1. Rural Electrification Corporation Limited (REC) is the nodal agency for the operationalisation of the scheme.
2. Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Integrated Power Development Scheme (IPDS) have been subsumed under the ‘Saubhagya’ scheme.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.78) China is bordered with which of the following countries?

1. South Korea
2. Afghanistan
3. Vietnam

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.79) Consider the following statements about Polavaram Project

1. It implements Godavari-Krishna link under National River Linking Project
2. It has been accorded national project status by the central government
3. The dam is across the Krishna River

Which of the following statements are correct?

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.80) Consider the following about Rubab:

1. It is a flute-like musical instrument originating from central Afghanistan.
2. It is a traditional dance form of eastern Indian states of Jharkhand, West Bengal and Odisha.
3. It is a bowed, short-necked string instrument from India as well as Nepal which is used in Hindustani classical music.

Which of the following statements is/are correct?

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) None of the above

Q.81) Consider the below statements about the dissolution of Lok Sabha:

1. When Lok Sabha is dissolved, all business including bills, motions, resolutions, notices, petitions and so

on pending before it or its committees lapse.

2. A bill passed by the Lok Sabha but pending in the Rajya Sabha does not lapses.
3. A bill pending in the Rajya Sabha but not passed by the Lok Sabha does not lapse.

Which of the above statements are correct?

- a) 1 and 2
- b) 1 and 3
- c) 2 and 3
- d) All of the above

Q.82) Which of the following tribes is not found in Andaman and Nicobar Islands?

- a) Jarawas
- b) Onges
- c) Sentinelese
- d) Cholanaikayan

Q.83) Consider the following statements regarding Kartarpur Sahib Gurudwara:

1. This corridor was firstly proposed by Pakistan in 2015.
2. Pilgrimages between India and Pakistan are governed by the 1974 Protocol on Visits to Religious Shrines.

Which of the above statement(s) is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.84) Consider the below statements about Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS) scheme:

1. The scheme will provide improved weather, climate and ocean forecast and services.
2. It will be implemented by the National Disaster Management Authority (NDMA) under Ministry of Home Affairs.

Which of the above statement(s) is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.85) First Past the post system (FPPS) of election system is currently in use in India. Which of the following statements are correct regarding FPPS?

1. A candidate who first crosses more than 50% of votes wins the election.
2. This process is used in Lok Sabha, Legislative Assembly and Presidential elections in India.

Select the code from following:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.86) Consider the following statements with reference to the systems of election

1. Every constituency elects one representative
2. Voters Vote for a Party

3. Voters vote for a Candidate
4. Every party gets seats in the legislature in proportion to the percentage of votes it secures
5. Candidate who wins the election may not secure majority of the votes cast

Which of the above statement/s is/are not a feature of Proportional System of election?

- a) 1 and 2 only
- b) 1, 2 and 4 only
- c) 1, 3 and 5 only
- d) 1, 2 and 5 only

Q.87) Which among the following is not true in regard to First Past the Post (FPTP) system and Proportional Representation (PR) system?

- a) In India all key representatives, except President and Vice President are elected via FPTP system.
- b) FPTP allows voters to choose between people rather than between parties.
- c) PR ensures that smaller parties get representation in the legislature
- d) PR encourages new parties to emerge and more women and minorities to contest for political power.

Q.88) Consider the following statements about 'Chandrayaan-1'

1. It is a remote sensing lunar satellite
2. It had a mass of 1,380 kg at launch
3. Presence of frozen water deposits on the Moon's Polar Regions was

confirmed by NASA using data collected from 'Chandrayaan -1'

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.89) U.R. Rao Satellite Centre is located in

- a) Bangalore
- b) Thiruvananthapuram
- c) Sriharikota
- d) Pune

Q.90) 'Asian Premium' is associated with which of the following organisations?

- a) OPEC
- b) SCO
- c) ASEAN
- d) APEC

Q.91) Consider the following about APEC:

1. India is a permanent member of APEC
2. APEC includes three official observers namely ASEAN, the Pacific Islands Forum and the Pacific Economic Cooperation Council.
3. APEC currently has 21 members, including most countries with a coastline on the Pacific Ocean

Which of the given statements is/are correct?

- a) 1 and 3
- b) 2 and 3
- c) 1 and 3
- d) 1, 2 and 3

Q.92) 'Kudumbashree' is the women empowerment and poverty eradication program conceived by which of the following states?

- a) Kerala
- b) Tamil Nadu
- c) Karnataka
- d) Telangana

Q.93) Consider the following statements about Bhitarkanika National Park

1. It is included in the list of UNESCO World Heritage Sites
2. It is unique in being a swamp with floating vegetation

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.94) The salt-water crocodile is found along the:

- a) Eastern coast and the Andaman and Nicobar Islands
- b) Western coast and Lakshadweep islands
- c) Gulf of Kutch and Gulf of Khambhat along with some areas near Gulf of Mannar
- d) All the Above

Q.95) Consider the following statements regarding Bhitarkanika National Park

1. It is surrounded by Gahirmatha Beach
2. It is known for salt water crocodiles
3. It is located in the mouth of Mahanadi Delta

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

Q.96) Dudhwa National Park, Kishanpur Wildlife Sanctuary and Katarniaghat Wildlife Sanctuary are located in –

- a) Odisha
- b) Uttar Pradesh
- c) Madhya Pradesh
- d) West Bengal

Q.97) Amur falcons has one of the longest and most fascinating migratory paths in the avian kingdom. Consider the following statements regarding Amur falcons:

1. It is one of the largest raptor species.
2. It migrates from Mongolia to South Africa via India.
3. It is amongst the critically endangered species and very few left in wild.
4. It considered a delicacy in Nagaland and widely hunted during their short stay in India.

Select the correct statements from above:

- a) 1 and 3
- b) 2 and 4
- c) 3 only
- d) All of the above

Q.98) Doyang Lake, famous as a roosting site for longest travelling raptors Amur Falcons is located in which state?

- a) Nagaland

- b) Manipur
- c) Meghalaya
- d) Arunachal Pradesh

Q.99) Consider the following statements about RIMES (Regional Integrated Multi-hazard Early Warning System for Asia and Africa)

1. It is an international and intergovernmental institution, owned and managed by its Member States, for the generation and application of early warning information
2. It provides regional tsunami watch within the framework of Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO)

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.100) Which of the following mammals is also known as the 'Sea Cow'?

- a) Walrus
- b) Hippopotamus
- c) Dugong
- d) Seal

Q.101) Dugongs are found predominantly in

- a) Sundarbans
- b) Bay of Bengal
- c) Gulf of Mannar
- d) Gulf of Khambhath

Q.102) Which of the following state governments launched a Public Bicycle Sharing system,

- a) Maharashtra
- b) Karnataka
- c) Odisha
- d) Tamil Nadu

Q.103) In the context of the Kartarpur Corridor, consider the following statements.

1. The gurdwara in Kartarpur stands on the bank of the Ravi.
2. It was here that Guru Gobind assembled a Sikh community and lived for 18 years until his death in 1539.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.104) Which of the following statements are correct about International Telecommunication Union (ITU),

1. ITU is the United Nations specialized agency for information and communication technologies
2. It allocates global radio spectrum and satellite orbits.
3. It is an organization based on public-private partnership, headquartered in Geneva, Switzerland.

Select the correct statements

- a) 1 and 2 Only
- b) 1 and 3 Only

- c) 2 and 3 Only
- d) All of the above

Q.105) Tawang Monastery is located in which of the following states,

- a) Sikkim
- b) Himachal Pradesh
- c) Arunachal Pradesh
- d) None of these

Q.106) Consider the following statements about External commercial borrowing (ECBs),

1. External commercial borrowings (ECBs) are loans made by non-resident lenders in Indian currency to Indian borrowers.
2. Public sector undertakings cannot raise loans through ECBs.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.107) The R.D. Pradhan Expert Committee is related to which of the following,

- a) Pathan Kot terror Attack 2016
- b) Mumbai Terror Attack 2008
- c) Gujarat Riots 2002
- d) Indian Parliament Attack 2001

Q.108) HySIS (Hyperspectral Imaging Satellite) is being developed by

- a) NASA
- b) European Space Agency
- c) The China National Space Administration
- d) ISRO

Q.109) Which of the following statements are correct about Hypspx?

1. Hyperspectral Imaging combines digital imaging as well as spectroscopy.
2. It enables distinct identification of objects and processes by reading individual pixels.
3. The Hypspx camera will work only in infrared spectrum.

Select the code from following:

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.110) Consider the following statements about 'Measles'

1. It is caused by a virus
2. It is non-contagious

Select the correct code:

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.111) Which of the following statements about Rubella is correct?

- a) It is a bacterial infection
- b) It is mostly prevalent in pregnant women
- c) It often leads to serious complications that include blindness, encephalitis, severe diarrhoea and severe respiratory infections such as pneumonia
- d) It can be prevented by vaccination

Q.112) Consider the following statement about 'InSight'

1. It is a NASA Discovery Programme
2. It will place a single geophysical lander on Mars to study its deep interior
3. It will seek to understand the evolutionary formation of rocky planets, including Earth

Select the correct statements

- a) 1 and 2 Only
- b) 1 Only
- c) 1, 2 and 3
- d) 1 and 3 Only

Q.113) Money supply in the economy is controlled by

- a) Finance Ministry
- b) Finance commission
- c) NITI Aayog
- d) RBI

Q.114) Through Open Market Operations, the RBI purchases and sells

1. Government securities
2. Gold
3. Forex
4. Shares of PSUs

Select the code from following:

- a) 1 only
- b) 2 and 3
- c) 1, 2 and 3
- d) All of the above

Q.115) If the RBI implements an expansionist open market operations policy, this means that it will?

- a) Buy securities from non-government holders
- b) Offer commercial banks more credit in open market
- c) Sells G-securities (government securities) in open market
- d) Openly announces to the market that it intends to expand its credit

Q.116) Which of the following steps can be taken by RBI to check inflation?

- 1. Increasing Bank rates
- 2. Buying securities in open market operations
- 3. Raising Bank Reserve Ratio
- 4. Rationing of credit

Select the code from below:

- a) 1, 2 and 3
- b) 2, 3 and 4
- c) 1, 3 and 4
- d) All of the above

Q.117) Consider the following statements about 'Global Climate Risk Index'

- 1. It is published annually by UNEP
- 2. It is based on an analysis of the number of deaths (due to climatic conditions) per 100,000 inhabitants, extent of financial losses and loss per unit of GDP of countries

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.118) The Kerch Strait is a strait connecting the –

- a) Black Sea and the Sea of Azov
- b) Sea of Marmara and Aegean Sea
- c) Black Sea and the Sea of Marmara
- d) Black Sea and Mediterranean Sea

Q.119) Consider the following statements with regard to the Sea of Azov

- 1. It is the shallowest sea in the world.
- 2. It is a sea in Eastern Europe.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Q.120) Which of the following was termed as the 'Green Gold' in the Budget 2018-19?

- a) Bamboo
- b) Electric Vehicles
- c) Tendu tree
- d) Bonds issued to mobilize funds for Green energy projects

Q.121) Consider the following statements

- 1. These have a parkland landscape.
- 2. These are found in the rainier areas of peninsula.
- 3. Transition to thorn forests towards the drier margins.
- 4. Tendu, palas, amaltas, bel, khair, axlewood, etc. are the common trees of these forests.

Which of the following forests is best described by the above given statements?

- a) Semi Evergreen forests
- b) Moist Deciduous forests
- c) Littoral and swamp forests

d) Dry Deciduous forests

Q.122) Consider the following statements:

1. Forests Rights Act (FRA) includes timber in Minor Forest Produce (MFP).
2. TRIFED fixes Minimum Support Price (MSP) for Minor Forest Produce.

communities, partially correcting the injustice caused by the forest laws

2. It gives the community the right to protect and manage the forest
3. It provides for rights to use and/or collect the following 'Minor forest produce'

Which of the statements given above is/are correct?

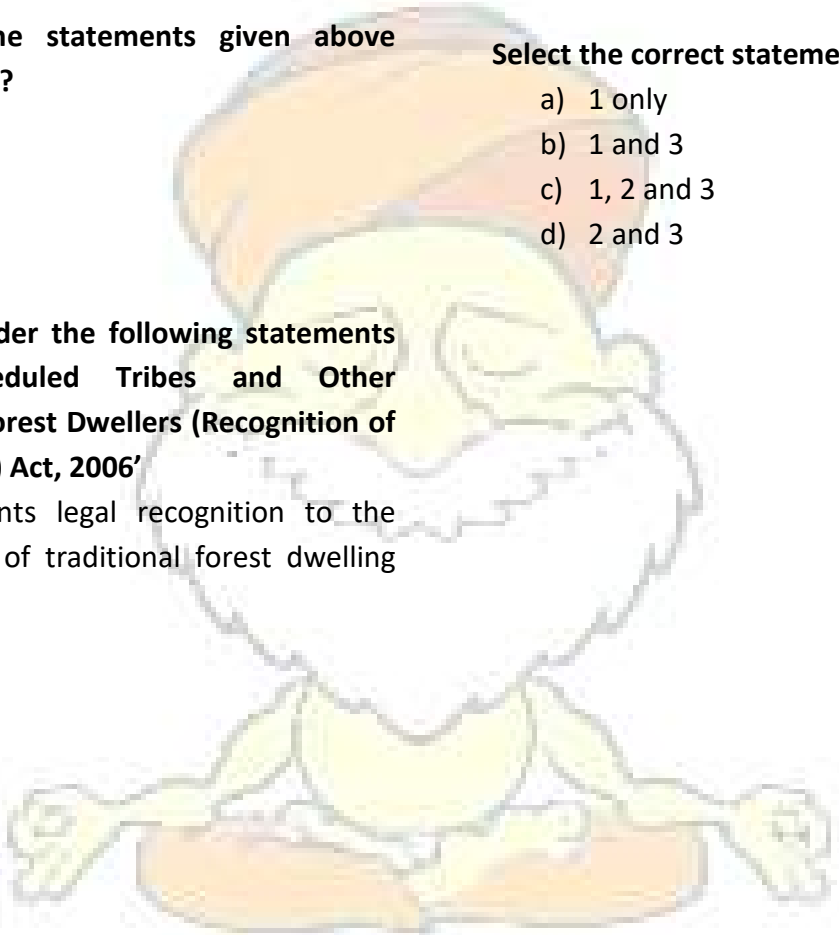
- a) 1 only
- b) 2 only
- c) Both
- d) None

Select the correct statements

- a) 1 only
- b) 1 and 3
- c) 1, 2 and 3
- d) 2 and 3

Q.123) Consider the following statements about 'Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006'

1. It grants legal recognition to the rights of traditional forest dwelling



2018 NOVEMBER MONTH CURRENT AFFAIRS MCQs SOLUTIONS

1 c	32 a	63 c	94 a
2 c	33 c	64 a	95 d
3 a	34 c	65 b	96 b
4 d	35 d	66 a	97 b
5 d	36 b	67 c	98 a
6 d	37 c	68 c	99 c
7 a	38 c	69 c	100 c
8 d	39 a	70 c	101 c
9 d	40 a	71 c	102 c
10 c	41 c	72 b	103 a
11 a	42 c	73 d	104 d
12 a	43 d	74 a	105 c
13 c	44 d	75 b	106 d
14 c	45 c	76 a	107 b
15 c	46 a	77 a	108 d
16 b	47 d	78 b	109 a
17 a	48 a	79 a	110 a
18 c	49 b	80 d	111 d
19 c	50 a	81 b	112 c
20 d	51 d	82 d	113 d
21 d	52 c	83 b	114 a
22 d	53 c	84 a	115 b
23 d	54 d	85 d	116 c
24 c	55 b	86 c	117 b
25 b	56 b	87 a	118 a
26 b	57 b	88 d	119 c
27 a	58 c	89 a	120 a
28 c	59 c	90 a	121 d
29 d	60 d	91 b	122 d
30 d	61 a	92 a	123 c
31 c	62 d	93 d	