



IASBABA'S

ALL INDIA PRELIMS
MOCK EXAM

FULL MOCK - 4

Q.1) Solution (d)

Solution Analysis:

Statement 1	Statement 2	Statement 3
Incorrect	Incorrect	Incorrect
Zero Hour is an Indian innovation of Parliamentary procedure which started from 1962. (It was much later after the adoption of Constitution)	Zero hour is not the first hour of a day. It starts at 12 pm after Question hour.	During zero hour, questions are asked about issues of public importance without prior permission of Speaker.

Q.2) Solution (d)

The three basic types of adaptations, based on how the genetic changes are expressed, are structural, physiological and behavioural adaptations. Most organisms have combinations of all these types.

Structural: An organism's environment shapes its appearance through structural adaptations. Desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat.

Physiological: Based on body chemistry and metabolism, physiological adaptations usually don't show from the outside. They consist of things like more efficient kidneys for desert animals like kangaroo rats, compounds that prevent blood coagulation in mosquito saliva, or the presence of toxins in plant leaves to repel herbivores.

Behavioural: Adaptations that affect how an organism acts are called behavioral adaptations. Bears hibernate to escape cold; birds and whales migrate to warmer winter climates. Desert animals are active at night during hot summer weather. Lizards seek a sunny spot in the morning to warm up to operating temperatures more quickly.

Q.3) Solution (d)

Statement Analysis:

Statement 1	Statement 2
Incorrect	Incorrect

The gender break-up shows that the percentage of elderly women living alone was much higher than men at 7.2% in rural and 5.5% in urban areas. The percentage of elderly men living alone was significantly lower at 1.6% in rural and 1.7% in urban areas.

The survey also highlights the status of economic independence of elderly people. In rural India, just about 28% (48% male and 10% female) aged persons and in urban India 33% (57% male and 11% female) aged persons were economically independent.

Q.4) Solution (a)

The National Green Tribunal's order prohibits the use of reverse osmosis (RO) purifiers where total dissolved solids (TDS) in water are below 500 mg per litre.

The ban has been imposed as RO purifiers unnecessarily rejects almost 80% of water which is a sheer waste of potable water.

The NGT in its order had directed the Ministry of Environment and Forests to frame rules for manufacturing and sale of RO filters, and banned use of RO in areas where the Total Dissolved Solids (TDS) in water was already low.

It had also directed that wherever RO is permitted, manufacturers should ensure that more than 60 per cent of water should be recovered. Current systems discard about 80 per cent of the water which is being treated, leading to huge wastage.

The NGT also directed that the Centre should lay down guidelines to ensure the use of RO reject water for purposes such as utensil washing, flushing, gardening, and cleaning of vehicles and floor mopping.

RO is generally not required for the places having piped water supplies) primarily supplied by Municipal Corporations/Municipalities) from surface water sources like rivers, lakes and ponds. These sources have TDS levels for low as compared to groundwater sources.

Q.5) Solution (a)

Statement Analysis:

Statement 1	Statement 2
Correct	Incorrect

104 th Amendment of Indian Constitution extended the reservation of seats for SCs and STs in the Lok Sabha and states assemblies from Seventy years to Eighty years.	It removed the reserved seats for the Anglo-Indian community in the Lok Sabha and state assemblies.
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Q.6) Solution (a)

The Business Reforms Action Plan helps to improve Ease of Doing Business. India jumped to 63rd position in 2019 out of 190 countries.

The plan was released by DPIIT-World Bank. It comprises of 80 reforms (187 reform action points) to be implemented by 19 state departments. Among them, Andhra Pradesh achieved 100% compliance to 187 reform action points.

The top ten ranks under the State Reform Action, 2019 are as follows:

- Rank 1: Andhra Pradesh
- Rank 2: Uttar Pradesh
- Rank 3: Telangana
- Rank 4: Jharkhand
- Rank 5: Madhya Pradesh
- Rank 6: Chhattisgarh
- Rank 7: Himachal Pradesh
- Rank 8: Rajasthan
- Rank 9: West Bengal
- Rank 10: Gujarat

Q.7) Solution (c)

**Statement Analysis:**

Statement 1	Statement 2	Statement 3
Correct	Incorrect	Correct
If India become a part of BRI than connectivity will increase with Afghanistan and Central Asia.	India's trade balance with China is too skewed in favour of China and even after India joins BRI there is no possibility that it can become positive.	China is providing loans and technological know how for improving the infrastructure of the countries which have agreed to be a part of BRI. In case India joins the initiative, Indian infrastructure will definitely improve.

Q.8) Solution (b)

Angel tax is a term used to refer to the income tax payable on capital raised by unlisted companies via issue of shares where the share price is seen in excess of the fair market value of the shares sold.

Statement Analysis:

Statement 1	Statement 2
Incorrect	Correct
The government issued a notification this year to give exemption to startups under Section 56 of the Income Tax Act in cases where the total investment including funding from angel investors did not exceed Rs 10 crore.	The exemption would apply only when the angel investor had a minimum net worth of Rs 2 crore or an average returned income of over Rs 25 lakh in the preceding three financial years.

Q.9) Solution (d)

VG Kannan committee

The RBI has set up a six-member committee, headed by VG Kannan, Chief Executive, Indian Banks' Association, to review the ATM interchange fee structure.

Objectives:

- The committee will review the existing structures and patterns of costs, charges and interchange fees for ATM transactions.
- It will also review the overall patterns of usage of ATMs by cardholders and assess the impact, if any, on charges and interchange fees.
- It will assess the entire gamut of costs in respect of the ATM ecosystem and make recommendations on the optimal charge/interchange fee structure and pattern.

Q.10) Solution (d)

Food Innovators Network (FINE)

In conjunction with Government's initiative on 'Start-Up India' and 'Digital India', FSSAI (Food Safety and Standards Authority of India) is bringing together innovators and start up entrepreneurs to provide innovative solutions and transform country's food safety and nutrition landscape.

It aims to solve the following Key Challenges –

- Cheaper, Rapid and Anywhere Food Testing
- Ensuring Availability of Healthy Foods
- Educating India and Rethinking Food Labelling: Eat Safe, Eat Right and Be a Smart Consumer
- Save Food, Feed Hungry: Waste Food Recovery

Q.11) Solution (d)

Subhash Chandra Bose was arrested for his connection with revolutionaries in India. He was released as he caught tuberculosis. For his treatment he went to Europe where he wrote 'The Indian Struggle, 1920 – 1934' and pleaded for India's cause with European Leaders.

Bose became increasingly critical of Gandhi's more conservative economics as well as his less confrontational approach toward independence. In 1938 he was elected president of the Indian National Congress and formed a national planning committee, which formulated a policy of broad industrialization. However, this did not harmonize with Gandhian economic thought, which clung to the notion of cottage industries and benefiting from the use of the country's own resources.

On January 26, 1941, though closely watched, he escaped from his Calcutta residence in disguise and, traveling via Kabul and Moscow, eventually reached Germany in April. With the help of Nazi Germany and Japan, he tried to invade India with an army of 40,000. The Army was made of Indian war prisoners, who were present in British Indian Army.

Q.12) Solution (a)

Real Mango Software

Real Mango software is an illegal notorious software developed for booking Tatkal ticket over the IRCTC website. This illegal and commonly banned software makes the complete process of Indian Rail ticket booking at a fly speed.

In News: In a nationwide investigation, the Railway Protection Force (RPF) of Indian Railways has disrupted the operation of illegal software called "Real Mango" used for cornering confirmed railway reservation.

Mechanism:

- Real mango software bypasses V3 and V2 captcha;
- It synchronises bank OTP with help of a mobile app and feeds it to the requisite form automatically;
- The software auto-fills the passenger details and payment details in the forms;
- The software logs in to the IRCTC website through multiple IRCTC Ids;
- The illegal software is sold through five-tiered structure: System Admin & his team, Mavens, Super sellers, Sellers and Agents
- System admin is receiving payment in bitcoins.

Q.13) Solution (a)

Ecofascism

Ecofascism is a theoretical political model in which an authoritarian government would require individuals to sacrifice their own interests to the "organic whole of nature". Some writers have used it to refer to the hypothetical danger of future dystopian governments, which might resort to fascist policies in order to deal with environmental issues. Other writers have used it to refer to segments of historical and modern fascist movements that focused on environmental issues.

Q.14) Solution (c)

The Global Slavery Index is a global study of modern slavery published by the Minderoo Foundation's Walk Free initiative. Four editions have been published: in 2013, 2014, 2016 and 2018.

The 2018 edition builds on the Global Estimates of Modern Slavery, which estimated that 40.3 million people were in some form of slavery on any given day in 2016.

The Index provides rankings across three dimensions:

- **Size of the problem:** estimated prevalence in terms of percentage of population and absolute numbers (by country)
- **Government response:** How governments are tackling the problem
- **Vulnerability:** Factors that explain or predict prevalence

The Index targets private citizens, non-governmental organisations, businesses and public officials so that they can work to end modern slavery.

Q.15) Solution (d)

HSTDV abbreviated form of Hypersonic Technology Demonstrator Vehicle is an unmanned scramjet demonstration aircraft. HSTDV is designed to voyage at Mach 6 speed with scramjet engine up to an altitude of 32.5 km in 20 seconds. These can be used for launching satellites at low cost and also for long-range cruise missiles in the future.

A Hypersonic cruise missile is the fastest running missile at the present time. These missiles run at a speed which is at least five times the speed of sound which is huge in terms of speed.

In scramjet technology enabled engines the process of fuel combustion takes place in a chamber in missile at supersonic speeds whereas in a ram jet enabled one, the engine collects air at subsonic speed from the atmosphere during the flight itself. While, the propellants burn in combustion chamber.

Q.16) Solution (d)

The Ministry of Consumer Affairs issued draft guidelines on advertisements. The guidelines have been prepared by the Central Consumer Protection Authority under Consumer Protection Act, 2019. It is aimed at curbing unfair trade practices such as misleading claims made by advertisers.

Important highlights:

- Celebrity endorsements through personal tweets, blogs, posts and other testimonials should be based on adequate information about or experience with the product or service being endorsed.
- Disclaimers in small font size in advertisements and comparative advertising that is not factual will be treated as misleading and can be penalised.
- The disclaimers used in advertisements should be in "same language" as the claim of the advertisement, the font should be in the "same font" as the claim and place disclaimers on packaging in a "prominent and visible space".
- If the claim is presented as voice over (VO), then the disclaimer should be displayed in sync with the VO.
- An advertisement should not describe a product or service as "free", "without charge" or other similar terms, if the consumer has to pay anything other than the cost while purchasing a product or service for delivery of the same.

Q.17) Solution (c)

Automated Facial Recognition System

The national Automated Facial Recognition System or the National Automated Facial Recognition System is a facial recognition system designed to identify, track, and capture criminals in India.

Automated Facial Recognition System can play a very vital role in crime prevention and criminal identification and verification (identifying criminals, missing people, and unidentified dead bodies) by facilitating easy recording, analysis, retrieval and sharing of information between different organizations.

The NCRB, state police forces, and the Ministry of Home Affairs would be the beneficiaries.

Q.18) Solution (a)

Recently, there was a Forest fire in California where according to an estimation 42000 acres of forest has been burned down.

Australian Bush fire ravaged Australia for months.

In Brazilian Amazon there were 72,843 forest fires last year.

Q.19) Solution (a)

Universities Act, 1904

Provisions

- The governing bodies of the universities were to be reconstituted and the size of the Senates was reduced. The number in the senate could be minimum 50 and maximum 100.
- Each of them would hold the office for 6 years.
- For the Universities of Bombay, Calcutta and Madras, the elected fellows were to be 50 and for rest of the universities, the number was fixed 15.
- This act allowed the Government to appoint a majority of the fellows in a university.
- The Governor General was now empowered to decide a University's territorial limits and also affiliation between the universities and colleges.

- The Indian Universities Act made the universities and colleges completely under the Government control.
- For better education and research, a grant of Rs. 5 Lakh per year for 5 years was also accepted. **This was the beginning of university grants in India which later became a permanent feature in the structure of India education.**

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	Incorrect	Incorrect
Governor-General in Council was authorized to define the territorial jurisdiction of the Universities.	Rules pertaining to affiliation of Colleges to a University were made stricter.	Government was empowered to modify the rules framed by the Senate.

Q.20) Solution (d)

A Minister is not eligible for election or nomination to the financial Committees, DRSCs and Committees on

- (1) Empowerment of Women
- (2) Government Assurances
- (3) Petitions
- (4) Subordinate Legislation
- (5) Welfare of Scheduled Castes and Scheduled Tribes.

Q.21) Solution (a)

The first ever cannabis medicine project will be set up with the collaboration of Canada at Indian Institute of Integrative Medicine (IIIM) in Jammu.

The United Nations Office on Drugs and Crime report, World Drug Report says that around 2.83% of Indians of age 10-75 years use Cannabis products. Also, the retail price of Cannabis in India is 0.10 USD per gram. This is the lowest of any country in the world.

Q.22) Solution (a)

Losar Festival

Losar is a major festival in **Arunachal Pradesh** as it marks the Tibetan New Year. Tribes like Monpa, Sherdukpens, Memba, Khamba and Nah following the Mahayana sect of Buddhism celebrate this festival with all pomp.

Saga Dawa

Saga Dawa is one of the major Buddhist festivals in **Sikkim** and is celebrated in the Tibetan lunar month. The full moon day that falls in the middle of the lunar month is known as Saga Dawa and it is considered as an auspicious day by the Buddhists.

Ambubachi Mela

Reckoned to be one of the major festivals in Northeast India, Ambubachi Mela is held in Guwahati, Assam. The festival is celebrated during the month of June in the Kamakhya Temple. It is known as Mahakumbh of the East.

Q.23) Solution (d)

The gems and jewellery sector plays a significant role in the Indian economy, **contributing around 7 per cent to country's GDP and 15 per cent to India's total merchandise export**. It employs over 4.64 million people, which is expected to reach 8.23 million by 2022. One of the fastest growing sectors, it is extremely export oriented and labour intensive.

India is the world's largest cutting and polishing centre for diamonds, with the cutting and polishing industry being well supported by Government policies. Moreover, **India exports 75 per cent of the world's polished diamonds** as per statistics from the Gem and Jewellery Export Promotion Council (GJEPC). India's Gems and Jewellery sector has been contributing in a big way to the country's foreign exchange earnings (FEEs). Government has viewed this sector as a thrust area for export promotion. The Indian Government presently allows 100 per cent Foreign Direct Investment (FDI) in the sector through the automatic route. The sector employs over 4.64 million employees, which is expected to touch 8.23 million by 2022.

Q.24) Solution (c)

Armed hostilities are ongoing throughout Yemen, particularly in **Al-Jawf, Marib, Al-Bayda, Al-Dhale, Sa'ada, Hajjah, Taizz, Abyan and Socotra governorates**, resulting in hundreds of civilian casualties each month.

Crimea is a bone of contention between Russia and Ukraine. It lies in Ukraine.

Basrah is a city under conflict in Iraq.

Q.25) Solution (a)

“State of Young Child in India” report has been prepared by the Mobile Creches, a policy advocacy organization. The report measured Health and Nutrition in the country.

The report framed in two indices namely:

- Young Child Outcome Index
- Young Child Environment Index

Young Child Outcome Index measures health, cognitive growth and nutrition. The index measures child outcomes based on stunting, infant mortality rate and net attendance in primary school.

The Young Child Environment Index helps to understand policy and environment enablers that influence a child wellbeing.

According to the report, there are 159 million children aged below 6 years in India. Of these, 21% are undernourished, 36% are underweight and 38% do not receive full immunization.

Q.26) Solution (c)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	Incorrect	Correct
The 17 rare-earth elements are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium	Uranium, Thorium, Plutonium etc., are the examples of radio-active metals/elements and not a part of rare-earth metals. However, rare-earth metals are often found in minerals with thorium (Th), and less commonly uranium (U).	It is true that at present, China refines approximately 80%-90% of the world's Rare Earths, thereby having substantial control over their supply.

(Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).		
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Basic Information:

A rare-earth element (REE) or rare-earth metal (REM), as defined by the International Union of Pure and Applied Chemistry, is one of a set of seventeen chemical elements in the periodic table, specifically the fifteen lanthanides, as well as scandium and yttrium.

Scandium and yttrium are considered rare-earth elements because they tend to occur in the same ore deposits as the lanthanides and exhibit similar chemical properties, but have different electronic and magnetic properties.

Q.27) Solution (a)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	Incorrect	Incorrect
Khangchendzonga National Park also Kanchenjunga Biosphere Reserve is a National Park and a Biosphere reserve located in Sikkim, India. It was inscribed to the UNESCO World Heritage Sites list in July 2016, becoming the first "Mixed Heritage" site of India. It was recently included in the UNESCO Man and the Biosphere Programme.	There are a few Lepcha tribal settlements inside the park (not Gond tribes). Lepchas are natives of Sikkim, and the Reserve is also located in Sikkim, hence can be easily guessed.	The park gets its name from the mountain Kangchenjunga (alternative spelling Khangchendzonga) which is 8,586 metres (28,169 ft) tall, the third-highest peak in the world.

Q.28) Solution (b)

Statement Analysis:




Statement 1	Statement 2	Statement 3
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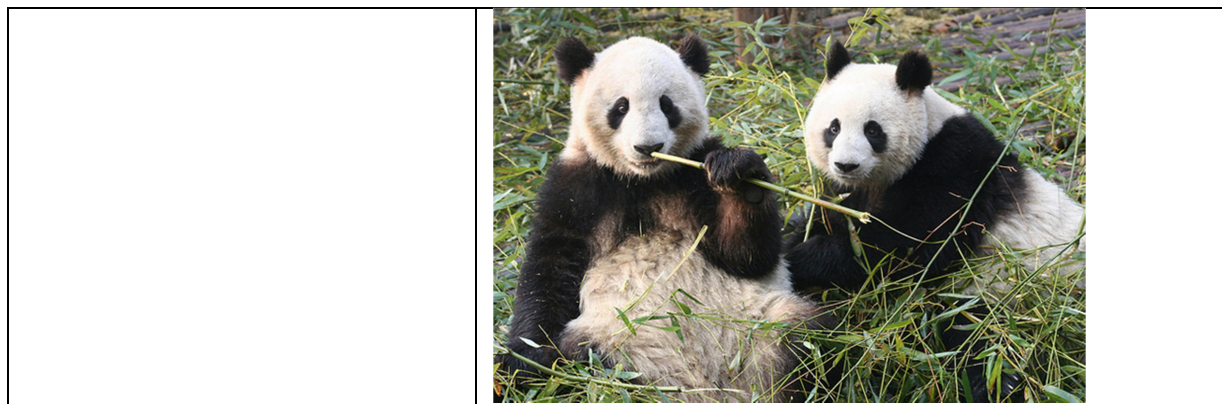
Incorrect	Incorrect	Correct
<ul style="list-style-type: none"> Animals that lay eggs are called oviparous. In oviparous animals, fertilization takes place internally but embryo development takes place externally. The eggs of birds such as hen and duck carry immature embryo in them. The hard shells of eggs protect them from damage. Once the fetus is matured, the egg hatches. Examples of Oviparous Animals: All birds lay eggs with a typical hard calcium shell. Frogs are egg-laying amphibians which have soft gelatinous eggs requiring constant hydration. Almost all fishes are oviparous. Except for some species of snakes, all other reptiles are oviparous. In mammals, Echidna and platypus are egg-laying. 	<ul style="list-style-type: none"> Animals that give birth to offspring are called viviparous. In viviparous animals, both fertilization, as well as the development of the embryo, takes place inside the female reproductive system. Once the foetus development is complete, the mother delivers the baby. Human beings, dogs, cats, elephants, etc are few examples of viviparous animals. 	<p>The eggs hatch inside the mother's body and are nourished by yolk and other fluids until the animal is born.</p> <p>Examples: Some species of snakes and sharks.</p>

Q.29) Solution (d)

The correct pairs are given below

Wildlife species	Naturally found in
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1. <i>Nepenthes khasiana</i>	Meghalaya, India (Clue: khasiana comes from the 'Khasi hills') 
2. Patagonian Mara	Argentina (Clue: Patagonia is in Argentina) 
3. Kiwi	New Zealand (Clue: People of NZ are commonly referred to as the kiwis) 
4. Giant Panda	China



Q.30) Solution (d)

Basic Information:

- Microbeads are smaller forms of plastic, no greater in size than 5 mm. Microbeads are added as an exfoliating agent to **cosmetics** and personal care products, such as **soap**, facial scrub and **toothpastes**.
- Microplastic sources also include breakdown of discarded bags and plastic packaging, particles from **vehicle tyres**, synthetic fibres from textiles, etc.

Q.31) Solution (d)

Basic Information:

- Local officials in **Florida (USA)** have approved the release of 750 million mosquitoes that have been genetically modified to reduce local populations. The aim is to reduce the number of mosquitoes that carry diseases like dengue or the Zika virus.
- Aedes aegypti mosquitoes are known to spread deadly diseases to humans such as dengue, Zika, chikungunya and yellow fever.
- The US Environmental Agency granted permission to the British-based, US-operated company Oxitec to produce the genetically engineered, male Aedes aegypti mosquitoes, which are known as OX5034.

Q.32) Solution (d)

Basic Information:

- Remote sensing has been used in a diverse range of forest ecology and management applications from **mapping invasive species** to **monitoring land-cover changes**, such as habitat fragmentation, to estimating biophysical and biochemical properties of forests.
- Remote sensing technique provides an advantage of having access to large coverage, even in inaccessible areas. It is a rapid and cost-effective tool in producing valuable data on geology, geomorphology, lineaments, slope, etc., that helps in **deciphering groundwater potential zone**.
- Remote sensing has opened up new horizons and possibilities for archaeology. ... At the micro-level scale, geophysical surveys and ground spectroscopy can provide **information about subsurface relics**, while at the macro-scale, aerial photographs and satellite remote sensing can identify traces of the human past.

Q.33) Solution (b)

Basic Information:

The Union Ministry for Environment, Forest and Climate Change, releases the **biennial** (once in two years) "India State of Forest Report (ISFR)". The report is published by the Forest Survey of India (FSI) which has been mandated to assess the forest and tree resources of the country including wall-to-wall forest cover mapping in a biennial cycle. Starting 1987, 16 assessments have been completed so far. ISFR 2019 is the 16th report in the series.

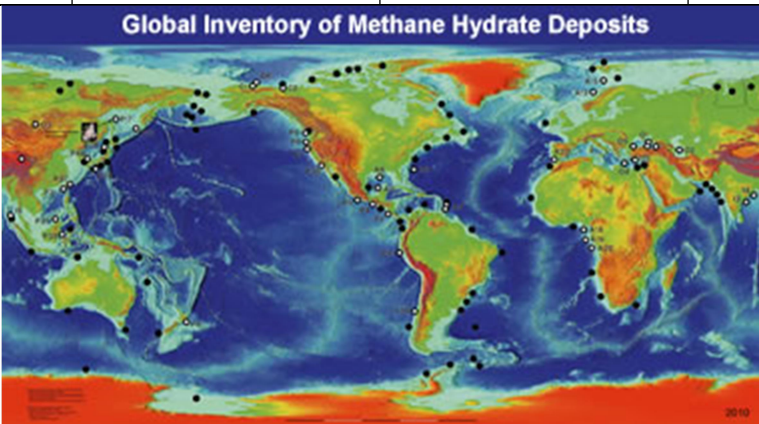


Q.34) Solution (c)

Note: question asks for incorrect statement/s.

Statement Analysis:

Statement 1	Statement 2	Statement 3	Statement 4
Correct	Correct	Incorrect	Correct
Methane hydrate is a crystalline solid that consists of a methane molecule surrounded by a cage of interlocking water molecules (see image at the top of this page). Methane hydrate is an "ice" that only occurs	Enormous amounts of methane hydrate have been found beneath Arctic permafrost, beneath Antarctic ice, and in sedimentary deposits along continental margins worldwide.	Potential locations in India for Methane Hydrates include: Cambay basin, Krishna-Godavari Basin, Assam-Arakan Basin, Cauvery Basin.	Several other names are commonly used for methane hydrate. These include: methane clathrate, hydromethane, methane ice, fire ice , natural gas hydrate, and gas hydrate.

naturally in subsurface deposits where temperature and pressure conditions are favorable for its formation.			
			

Q.35) Solution (a)


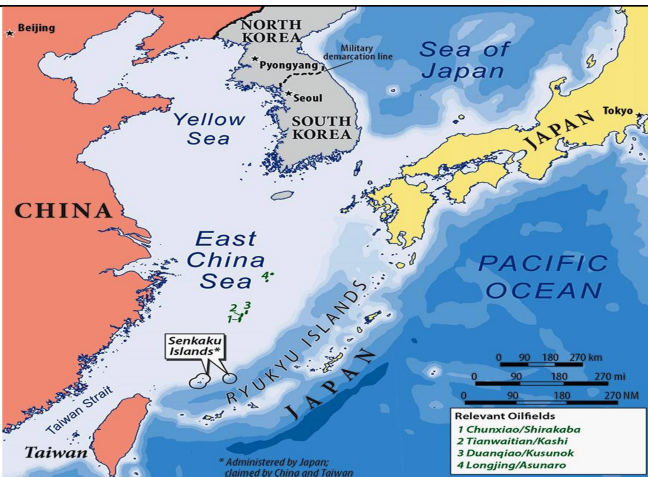
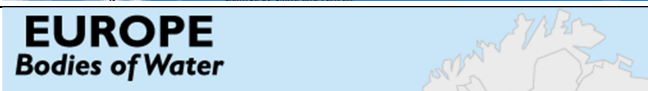
Note: question asks for incorrect statement/s.

Statement Analysis:

Statement 1	Statement 2
Incorrect	Correct
All vehicles will have to follow new standards (BS -VI) from 1st April, 2020. The standards cover four and two-wheelers and commercial vehicles .	With BS-VI fuel, for every one kilometre, a car will emit 80% less particulate matter and nearly 70% less nitrogen oxide . Air pollutants in BS-VI fuel are much less as compared to BS-IV fuel. BS-VI norms also seek to reduce the level of certain harmful hydrocarbons in the emissions that are produced due to incomplete combustion of fuel.

Q.36) Solution (b)

The correct pairs are given below:

Water Bodies	Bordering Country
1. Gulf of California - Mexico	
1. Yellow Sea - South Korea	
2. Bay of Biscay - Spain	

3. Sea of Azov - Ukraine	
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Q.37) Solution (c)

Basic Information:

Uttar Pradesh is the Largest Sugar Producing State in India. As many as 30 districts of Uttar Pradesh produce sugarcane with the western part of the state, comprising the upper Ganga-Yamuna Doab, Rohilkhand, and trans - Saryu areas, together accounting for ~70% share of the total sugarcane output of the State.

Q.38) Solution (c)

Seagrass plays a vital role in oxygen production and absorption of carbon dioxide. It acts as a purifier in aquatic ecology. The seagrass area increases only when the water is clean. Seagrass will rejuvenate fishing ground by providing nursery habitat to important fish species.

Q.39) Solution (a)

S. No.	Vitamin	Deficiency diseases
1)	Thiamine (B ₁)	Beriberi
2)	Riboflavin (B ₂)	Glossitis
3)	Niacin (B ₃)	Pellagra
4)	Pyridoxine (B ₆)	Anaemia
5)	Cyanocobalamine (B ₁₂)	Pernicious anaemia
6)	Folic acid (B ₉)	Anaemia
7)	Pantothenic acid	Burning feet
8)	Biotin	Nerves disorders
9)	Ascorbic acid (Vitamin C)	Scurvy
10)	Retinol (Vit. A)	Eye and Skin diseases – Night blindness, Xerophthalmia, Rupture of cornea, Scale formation on skin
11)	Calciferol (Vit. D)	Rickets, fragile bones
12)	Tocoferol (Vit. E)	Fertility disorders – Sterility in males, Abortions in females
13)	Phylloquinone (Vit. K)	Blood clotting

Q.40) Solution (d)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Incorrect	Incorrect	Incorrect
The countries with the most Sites are the United Kingdom with 170 and Mexico with 142. India has 37.	Bolivia has the largest area under Ramsar protection.	Maharashtra gets its first Ramsar site (Nandur Madhameshwar)

Q.41) Solution (b)

The correct pairs are given below

Environmental Conventions/Agreements	Associated Chemicals/elements
1. Vienna Convention	Ozone

2. Brundtland Report	Sustainable Development
3. Stockholm Convention	Persistent Organic Pollutants

Q.42) Solution (a)

Basic Information:

- India's strategic crude oil storages are currently located at Visakhapatnam (Andhra Pradesh), **Mangaluru** (Karnataka), and **Padur** (Karnataka).
- The government has also given approval for setting up of two additional facilities at **Chandikhol** (Odisha) and Padur (Karnataka).
- Strategic petroleum reserves are huge stockpiles of crude oil to deal with any crude oil-related crisis like the risk of supply disruption from natural disasters, war or other calamities.
- According to the agreement on an International Energy Programme (I.E.P.), each International Energy Agency (IEA) country has an obligation to hold emergency oil stocks equivalent to at least 90 days of net oil imports. India became an associate member of the International Energy Agency in 2017.

Q.43) Solution (c)

Statement Analysis:

Statement 1	Statement 2	Statement 3	Statement 4
Incorrect	Incorrect	Correct	Incorrect
Fuel cells emit only heat and water as a byproduct, hence are eco-friendly. It is an advantage of HFCEVs.	HFCEVs are far more energy-efficient than traditional combustion technologies. It is an advantage of the Hydrogen cells.	Handling of hydrogen is a safety concern because it is more explosive than petrol. Hence this aspect of Hydrogen cells act as a disadvantage.	HFCEVs do not need to be plugged in for charging, like battery-powered EVs. They are run on Hydrogen cells. Hence it is an advantage.

Q.44) Solution (c)

Note: question asks for incorrect statement/s.

Basic Information:

When two different air masses (having distinctly different properties) meet, the boundary zone between them is called a front. There are four types of fronts:

- **Stationary front:** When the front remains stationary, it is called a stationary front.
- **Cold front:** When the cold air moves towards the warm air mass, its contact zone is called the cold front,
- **Warm front:** If the warm air mass moves towards the cold air mass, the contact zone is a warm front.
- **Occluded front:** If an air mass is fully lifted above the land surface, it is called the occluded front.

Q.45) Solution (d)

Basic Information:

A constitutional challenge to the **Tenth Schedule** was settled by the apex court in Kihoto Hollohan case. In Kihoto Hollohan vs Zachillhu and Others (1992) case, the apex court upheld the sweeping discretion available to the Speaker in deciding cases of disqualification of MLAs.

Q.46) Solution (b)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	Correct	Incorrect
There is no specifically any provision in the Constitution that deals with the impeachment of the CJI. "Proved misbehaviour or incapacity" is mentioned in Article 124(4) of the Constitution. It is the ground for impeachment of a Supreme Court judge. As CJI is also a judge, same	It is true that, even if the charges are proved, the Parliament is not bound to remove the judge.	The Judges (Inquiry) Act, 1968 contains details of the process. The motion is to be signed by 50 members of Rajya Sabha or 100 members of Lok Sabha. If it is admitted, an inquiry committee will probe the charges.

provisions are applicable to his/her removal.		
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Q.47) Solution (a)

Consumer Protection Act - 1986

Nationalisation of Coal Mines - 1971

National Telecom Policy - 1994

Foreign Exchange Management Act - 1999

Q.48) Solution (d)

Basic Information:

Article- 3

It states that the Parliament may by law form a new State by separation of a territory from any State or by uniting two or more States completely or in parts or by uniting any territory to a part of any State. It deals with the following:

- Formation of new States
- Alteration of areas of States
- Boundaries or names of existing States

Thus Parliament can increase or diminish the area of any State or can alter the boundaries or names of any State.

Q.49) Solution (d)

Mayurjharna Elephant Reserve – West Bengal

Singhbhum Elephant Reserve – Jharkhand

Dehing Patkai Elephant Reserve – Assam

Q.50) Solution (b)

Statement Analysis:

Constitutional Amendment Act (CAA)	Provisions added
42 nd CAA, 1976	It kept the Constitutional amendments outside the purview of judicial review.
44 th CAA, 1978	Made the President to declare a national emergency only on the written recommendation of the cabinet.
61 st CAA, 1989	Reduced the voting age from 21 years to 18 years for the Lok Sabha and state legislative assembly elections.

Q.51) Solution (c)

Munda Ulgulan (1899 – 1900)

- The Mundas inhabited the Chotanagpur area.
- The Khuntkatti system, which was a joint holding of land, prevailed among the Mundas. But the advent of the British and the outsider-Zamindars replaced the Khuntkatti with the Zamindari system. This caused indebtedness and forced labour among the tribals.
- The Mundas were able to get an able and charismatic leader in Birsa Munda who proclaimed a rebellion in 1894.
- He organised his people to revolt openly against the government. He urged people to stop paying debts and taxes.
- He was arrested and spent 2 years in jail before being released in 1897.
- In December 1899, he launched an armed struggle on the landlords and the government.
- The Mundas torched police stations, houses of the landlords, churches and British property.
- In 1900 Birsa Munda was caught. He died in jail due to cholera aged just 25.

Effects of the revolt

- Government enacted Chotanagpur Tenancy Act 1908
- Government recognized Khuntkatti rights
- Government banned Beth Bageri (forced labour)

- Birsa Munda become a legend to the tribals of chota Nagpur and a symbol of anti-feudal, anti-colonial struggle of that time.

Q.52) Solution (a)

Explanation:

- Initially, the East India Company did not think that it was its duty to impart education to Indians. It allowed the old system of education to continue. Pathshalas, which imparted a special type of education geared towards meeting the requirements of a rural society, were open to all. Sanskrit education was imparted in tols. Muslims attended Madrasas.
- Higher education was confined primarily to upper castes. This system of education was eventually changed by the British.
- In 1844, English became the official language and it was declared that people having knowledge of English would be preferred for public employment. This helped the spread of English education in India.
- In 1854, Charles Wood, the President of the Company's Board of Control, worked out a plan for educational reorganisation. Through the Wood's Despatch the Government declared its intention of "creating a properly articulated system of education from the primary school to the university".

Q.53) Solution (a)

Article 72 of the Constitution empowers the President to grant pardons to persons who have been tried and convicted of any offence in all cases where the:

- Punishment or sentence for an offence against a Union Law,
- Punishment or sentence is by a court-martial (military court), and
- Punishment is a Death sentence.

The pardoning power of the President includes the following:

- **Pardon:** It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments, and disqualifications.
- **Commutation:** It denotes the substitution of one form of punishment with a lighter form of punishment. For example, a death sentence may be commuted to rigorous imprisonment.

- **Remission:** It implies reducing the period of the sentence without changing its character. For example, a sentence of rigorous imprisonment for five years may be remitted to rigorous imprisonment for one year.
- **Respite:** It denotes awarding a lesser sentence in place of one originally awarded due to some special fact, such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve:** It implies a stay of the execution of a sentence (especially that of death) for a temporary period. Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

Difference between Pardoning Powers of President and Governor

The scope of the pardoning power of the President under Article 72 is wider than the pardoning power of the Governor under Article 161 which differs in the following two ways:

- The power of the President to grant pardon extends in cases where the punishment or sentence is by a Court Martial but Article 161 does not provide any such power to the Governor.
- The President can grant pardon in all cases where the sentence given is the sentence of death but the pardoning power of the Governor does not extend to death sentence cases.

Q.54) Solution (d)

- A GI tag is a sign used on products that have a specific geographical origin and possess origin-based qualities and reputation in the region.
- Keep in mind that the characteristics, qualities, and popularity of the product should be essentially due to the place of origin.
- Geographical indications tags are given to foodstuffs, handicrafts, industrial products, wine and spirit drinks, and agricultural products.

List of Geographical Indications (GI) Tags in India

Geographical indication	Type	State/UT
Darjeeling Tea (word and logo)	Agricultural	West Bengal
Aranmula Kannadi	Handicraft	Kerala
Pochampalli Ikat	Handicraft	Telangana
Salem Fabric	Handicraft	Tamil Nadu
Chanderi Sarees	Handicraft	Madhya Pradesh
Solapur Chaddar	Handicraft	Maharashtra
Pochampally Ikat	Textile	Telangana
Salem Fabric	Handicraft	Tamil Nadu
Payyannur Pavithra Ring	Handicraft	Kerala
Chanderi Sarees	Handicraft	Madhya Pradesh
Kotpad Handloom fabric	Handicraft	Odisha
Mysore Silk	Handicraft	Karnataka
Kota Doria	Handicraft	Rajasthan
Mysore Agarbathi	Manufactured	Karnataka
Navara Rice	Agricultural	Kerala

Q.55) Solution (a)

Modi and Abe agreed to upgrade the bilateral relationship to “Special Strategic and Global Partnership”.

Q.56) Solution (d)

Credit control is most important function of Reserve Bank of India. Credit control in the economy is required for the smooth functioning of the economy. By using credit control methods RBI tries to maintain monetary stability. There are two types of methods:

1. Quantitative control to regulates the volume of total credit.
2. Qualitative Control to regulates the flow of credit

Quantitative Measures

The quantitative measures of credit control are as follows:

- Bank Rate Policy
- Open Market Operations
- Cash Reserve Ratio

- Statutory Liquidity Ratio

Qualitative Measures

Qualitative measures are used by the RBI for selective purposes. Some of them are

- Margin requirements
- Consumer Credit Regulation
- RBI Guidelines
- Rationing of credit
- Moral Suasion
- Direct Action

Q.57) Solution (a)

Tarns:

- A glacier on its way down the valley leaves behind circular hollows in the heads of the valley up in the mountains such hollows are the arm-chair shaped cirque or corries or tarns.
- There over deepened floors may be filled with water to become cirque lakes eg: Red tarn in English lake district
- Those that occupy glacial troughs are long and deep and are termed ribbon lakes e.g. Lake Ullswater

Q.58) Solution (b)

Explanation:

- The first block chain-based crypto currency was Bit coin, which still remains the most popular and most valuable.
- Libra is a permissioned blockchain digital currency proposed by the American social media company Facebook, Inc, Petro cryptocurrency issued by the government of Venezuela, Ripple is a real-time gross settlement system, currency exchange and remittance network created by Ripple Labs Inc., a US-based technology company

Q.59) Solution (d)

Subsistence farming

Majority of farmers in the country practise subsistence farming. It is characterised by small and scattered land holdings and use of primitive tools. As the farmers are poor, they do not use fertilisers and high yielding variety of seeds in their fields to the extent they should do. Facilities like electricity and irrigation are generally not available to them.

Features of Subsistence Farming:

- The whole family works on the farm
- Most of the work is done manually
- The farms are small
- Tradition methods of farming are followed
- Yield is not very high
- Most of the yield is consumed by the family with very little surplus for the family

Q.60) Solution (d)

Rongkhli or Tiger Festival is a religious festival celebrated in Meghalaya.

The Chakhesangs are a major Naga ethnic group found in the state of Nagaland

Zadipatti is practised in the rice cultivating region/Eastern region of Maharashtra, which includes Chandrapur Bhandara and Gadchiroli district of Vidarbha.

Q.61) Solution (d)

GSLV Mk III is designed to carry 4-ton class of satellites into Geosynchronous Transfer Orbit (GTO) or about 10 tons to Low Earth Orbit (LEO), which is about twice the capability of the GSLV Mk II.

The Scramjet engine designed by ISRO uses Hydrogen as fuel and the Oxygen from the atmospheric air as the oxidiser.

Q.62) Solution (c)

Explanation:

- Infrared radiation (IR), sometimes known as infrared light, is electromagnetic radiation (EMR) with wavelengths longer than those of visible light. Hence, it is undetectable by the human eye.
- Infrared radiations are also referred to as heat or thermal waves or electromagnetic waves. This is because they have a heat-inducing property. Sometimes infrared rays are used in applications where heat production is required like in infrared heaters or for therapeutic purposes where a patient requires physical therapy.
- The wavelength of the infrared radiation is between 700 nm to 1 mm, which is between the red limit of the visible spectrum. Whereas the wavelength of visible light is 380 to 700 nanometers.

Q.63) Solution (a)

Explanation:

- Bt cotton remains the only GM crop allowed to be cultivated in the country.
- BT refers to 'Bacillus thuringiensis'.
- Developed by US giant Bayer-Monsanto, it involves insertion of two genes viz 'Cry1Ab' and 'Cry2Bc' from the soil bacterium Bacillus thuringiensis into cotton seeds.
- This modification codes the plant to produce protein toxic to Heliothis bollworm (pink bollworm) thus making it resistant to their attack.
- The commercial release of this hybrid was sanctioned by the government in 2002.
- The Environment Ministry of India is responsible for evaluating the safety of a plant that is genetically modified and determining its suitability for culture by means of the Genetic Engineering Appraisal Committee (GEAC).

Q.64) Solution (b)

Luhman 16

- Recently, a group of astrophysicists have found that the closest known brown dwarf, Luhman 16A. It also shows signs of cloud bands similar to those seen on Jupiter and Saturn.
- They used polarimetry technique to determine the properties of atmospheric clouds.

- Luhman 16A is part of a binary system (Luhman 16) containing a second brown dwarf, Luhman 16B.
- This pair orbits each other.
- It is situated at a distance of about 6.5 light years from the Sun and
- It is the third closest system to the Sun after Alpha Centauri and Barnard's star.

Tianwen-1

- On July 22, China launched its Mars mission known as Tianwen-1, the mission name is loosely translated to "questions to Heaven."
- China's first Mars probe is called Tianwen-1 (formerly Huoxing 1). The spacecraft consists of an orbiter, a lander and a rover.
- Landing site: Somewhere in Utopia Planitia, a vast plain in Mars' northern latitudes and the same place NASA's Viking 2 mission landed in the 1970s.
- Tianwen-1 will reach the Red Planet's orbit in February 2021. The rover will land on Mars in May.
- If the mission is successful, China will become the third country to achieve a Mars landing after the USSR and the United States.

COVSACK

- Defence Research & Development Laboratory (DRDL), Hyderabad under DRDO has developed COVID Sample Collection Kiosk (COVSACK) to combat Coronavirus (COVID-19).
- It is a kiosk for use by healthcare workers for taking COVID-19 samples from suspected infected patients.
- Patient under test walks into the Kiosk and a nasal or oral swab is taken by health care professional from outside through the built in gloves.
- The Kiosk is automatically disinfected without the need for human involvement.

Q.65) Solution (c)

Explanation:

- A locust is a large, mainly tropical grasshopper with strong powers of flight. They differ from ordinary grasshoppers in their ability to change behaviour and form swarms that can migrate over large distances.

- Locusts are generally seen during the months of June and July as the insects are active from summer to the rainy season.
- Locusts have a high capacity to multiply, form groups, migrate over relatively large distances they can fly up to 150 km per day and, if good rains fall and ecological conditions become favourable, rapidly reproduce and increase some 20-fold in three months.
- Four species viz. Desert locust (*Schistocerca gregaria*), Migratory locust (*Locusta migratoria*), Bombay Locust (*Nomadacris succincta*) and Tree locust (*Anacridium* sp.) are found in India.
- Locust Warning Organisation (LWO), Ministry of Agriculture & Farmers Welfare, is responsible for monitoring, survey and control of Desert Locust in Scheduled Desert Areas mainly in the States of Rajasthan and Gujarat.
- The Food and Agriculture Organisation (FAO) provides information on the general locust situation to the global community and gives timely warnings and forecasts to those countries in danger of invasion.

Q.66) Solution (a)

- Internet of Things refers to the rapidly growing network of connected objects that are able to collect and exchange data using embedded sensors. Thermostats, cars, lights, refrigerators, and more appliances can all be connected to the IoT.

Applications of the Internet of Things

- Smart Home: The smart home is likely the most popular IoT application at the moment because it is the one that is most affordable and readily available to consumers. From the Amazon Echo to the Nest Thermostat, there are hundreds of products on the market that users can control with their voices to make their lives more connected than ever.
- Wearables: Watches are no longer just for telling time. The Apple Watch and other smart watches on the market have turned our wrists into Smartphone holsters by enabling text messaging, phone calls, and more. And devices such as Fitbit and Jawbone have helped revolutionize the fitness world by giving people more data about their workouts.
- Smart Cities: The IoT has the potential to transform entire cities by solving real problems citizens face each day. With the proper connections and data, the Internet of Things can solve traffic congestion issues and reduce noise, crime, and pollution.

- Connected Car: These vehicles are equipped with Internet access and can share that access with others, just like connecting to a wireless network in a home or office. More vehicles are starting to come equipped with this functionality, so prepare to see more apps included in future cars.

Q.67) Solution (a)

India's wind and solar share rose from three per cent of the total generation in 2015 to 10 per cent in the first half of 2020 and at the same time coal's share fell from 77 to 68 per cent.

Q.68) Solution (b)

- Charter Act of 1813 allowing one-way free trade for British citizen made the cheap and machine made imports flood into Indian market.
- On the other hand India products found it more and more difficult to penetrate the European market. After 1820 European markets were virtually closed to Indian exports. The newly introduced rail network helped the European products to reach the remotest corners of the country
- Industry that had experienced the onslaught of de-industrialisation most was the cotton textile industry. It was the largest provider of employment after agriculture. India's cotton goods were the best in the world before 1800.
- Other affected industries were jute handloom weaving of Bengal, woolen manufacturers of Kashmir, silk manufacture of Bengal, hand-paper industry, glass industry, lac, bangles, etc.
- India's share of manufacturing output in the world was as high as 19.7 % in 1800. But in a span of 60 years, it plummeted to 8.6 % in 1860 and to 1.4% in 1913.

Q.69) Solution (a)

- In Kheda, Gujarat, the peasants were frequently plagued by poverty, famines, scant resource, untouchability, alcoholism and British discrimination.
- The famine of Chhappania Akal and some subsequent famines had destroyed the agrarian economy of the region and the peasants were still dying out of starvation.
- The Bombay Presidency increased the taxes in 1917-18 by 23%. In 1918, Gujarat as a whole suffered a severe epidemic of Plague and in Kheda alone around 17000 people

lost their lives. Further, cholera also broke out locally. This was the immediate reason of the revolt.

- The revolt was against the taxes. The government said that if the taxes are not paid, the property would be seized.
- This revolt gave India a robust leader in Sardar Vallabhbhai Patel. Sardar Vallabhbhai Patel and his colleagues such as Narhari Parikh, Mohanlal Pandya and Ravi Shankar Vyas organized this major tax revolt.
- The peasants of Kheda signed a petition in leadership of Sardar Patel and called for tax to be scrapped.
- When the tax was not paid, the government sent agents to seize the property. The farmers did not resist but they simply donated their cash and invaluable to the Gujarat Sabha. It was a united protest, outstandingly disciplined.
- The result was that the Government reached an agreement for both the parties. Tax for the current year and next year was suspended and all confiscated property was returned.

Q.70) Solution (a)

Indian National Association

- It was the first avowed nationalist organization founded in British India by Surendranath Banerjee and Ananda Mohan Bose in 1876. It was originally established as Bharat Sabha and held its first annual conference in Calcutta.
- The objectives of this Association were "promoting by every legitimate means the political, intellectual and material advancement of the people".
- The Association attracted educated Indians and civic leaders from all parts of the country, and became an important forum for India's aspirations for independence.
- It later merged with the Indian National Congress.

Q.71) Solution (d)

Theravada is the most commonly accepted name of Buddhism's oldest existing school. The school's adherents, termed Theravadins, have preserved their version of Gautama Buddha's teaching in the Pali.

For over a millennium, theravadins have endeavored to preserve the dhamma as recorded in their school's texts. In contrast to Mahayana and Vajrayana, Theravada tends to be conservative in matters of doctrine and monastic discipline.

Q.72) Solution (a)

Basic Information:

- Jogimara Cave Paintings is an artificially carved out cave located in Surguja district of Chattisgarh. It is dated back around 1000-300 BC and has few paintings and inscriptions of a love story in Brahmi script.
- The cave is said to be an attachment to amphitheatre and paintings were made to decorate the room. Paintings are of dancing couples, animals like elephant and fish.
- The paintings have a distinct red outline. Other colours like white, yellow and black are also used. Rock-cut theatre of Sitabenga is also located nearby.

Q.73) Solution (b)

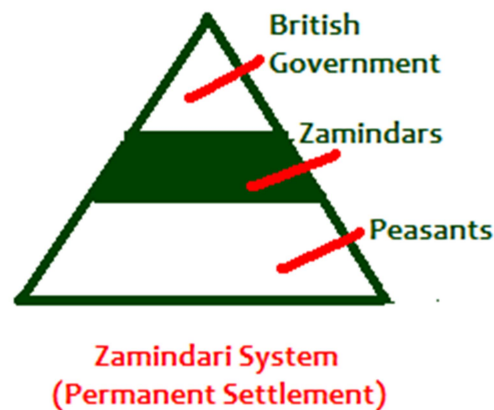
- Afanasy Nikitin was a Russian merchant from Tver and one of the first Europeans (after Niccolò de' Conti) to travel to and document his visit to India. He described his trip in a narrative known as The Journey beyond Three Seas.
- When he reached the sultanate of Bahmani, where he would live for three years. From what he tells us, he appears to have made his living by horse-dealing. During that time he visited the Hindu sanctuary of Perwattum, which he called "the Jerusalem of the Hindus".
- During his trip, Nikitin studied the population of India, its social system, government, military (he witnessed war-games featuring war elephants), its economy, religion, lifestyles, and natural resources. The abundance and trustworthiness of Nikitin's factual material provide a valuable source of information about India at that time, and his remarks on the trade of Hormuz, Cambay, Calicut, Dabhol, Ceylon, Pegu and China; on royal progresses and other functions, both ecclesiastical and civil, at Bahmani, and on the wonders of the great fair at Perwattum

Q.74) Solution (a)

- Jainism made the first serious attempt to alleviate the evils of the varna older and the ritualistic Vedic religion. The early Jainas discarded the Sanskrit language mainly patronised by the Brahmanas. They adopted Prakrit language of the common people to preach their doctrines.
- The adoption of Prakrit by the Jainas helped the growth of this language and its literature.
- Though religious literature was written in Ardhamagadhi, and the texts were finally compiled in the sixth century A.D in Gujarat at a place called Valabhi, a great centre of education.

Q.75) Solution (d)

Zamindari System



Zamindari System was introduced by Cornwallis in 1793 through Permanent Settlement Act. Also known as Permanent Settlement System.

- It was introduced in provinces of Bengal, Bihar, Orissa and Varanasi.
- Zamindars were recognized as owner of the lands. Zamindars were given the rights to collect the rent from the peasants.
- The realized amount would be divided into 11 parts. 1/11 of the share belongs to Zamindars and 10/11 of the share belongs to East India Company.

Q.76) Solution (a)

The educational despatch of Sir Charles Wood (1854) was considered the “Intellectual Charter of India”. It provided an outline for the comprehensive scheme of education at primary, secondary and collegiate levels.

Q.77) Solution (d)

Wetlands are a unique ecosystem flooded with water — permanently or seasonally — and serve as seasonal habitats for migratory birds. Apart from biological support, they also perform water purification functions, store nutrients and stabilise shorelines.

Most prominently, wetlands enable groundwater recharge and typically have the most diverse biological ecosystems, supporting a wide variety of plants, animals, fish, and various species of birds, especially local waterfowls. They also provide livelihood options for those engaged in fisheries.

Q.78) Solution (b)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Incorrect	Correct	Correct
The scheme is being implemented by the Ministry of Labour and Employment.	This Scheme has a dual benefit, where, on the one hand, the employer is incentivised for increasing the employment base of workers in the establishment, and on the other hand, a large number of workers will find jobs in such establishments. A direct benefit is that these workers will have access to social security benefits of the organized	All establishments registered with Employees' Provident Fund Organisation (EPFO) can apply for availing benefits under the scheme subject to the following conditions - https://pmrpy.gov.in/no-auth/password/establishments? HDIV STATE =16-2-2A8399F024B97543602983531F78CA22

	sector.	
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Q.79) Solution (a)

Nirankari is a sect of Sikhism. It was a reform movement founded by Baba Dayal Das in Rawalpindi Punjab now in Pakistan in 1851.

Q.80) Solution (b)

Establishment of Vedanta College – 1825

Establishment of Hindu College in Calcutta – 1817

Foundation of Tattvabodhini Sabha – 1839

Savitribai And Jyotiba Phule started school for girls in Pune - 1851

Q.81) Solution (d)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Correct	Correct	Correct
Global dimming is defined as the decrease in the amounts of solar radiation reaching the surface of the Earth.	<p>Aerosols have been found to be the major cause of global dimming. The burning of fossil fuels by industry and internal combustion engines emits by-products such as sulfur dioxide, soot, and ash. These together form particulate pollution—primarily called aerosols. Aerosols act as a precursor to global dimming in the following two ways:</p> <ul style="list-style-type: none"> • These particle matters enter the atmosphere and 	<p>Both global dimming and global warming have been happening all over the world and together they have caused severe changes in the rainfall patterns. If global dimming wouldn't have happened, the temperature of this planet would be much higher and could have posed a serious effect on the lives of humans, plants, and animals.</p>

	<p>directly absorb solar energy and reflect radiation back into space before it reaches the planet's surface.</p> <ul style="list-style-type: none"> Water droplets containing these air-borne particles form polluted clouds. These polluted clouds have a heavier and larger number of droplets. These changed properties of the cloud – such clouds are called 'brown clouds' – makes them more reflective. 	
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Q.82) Solution (c)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Incorrect	Correct	Correct
It is the efficiency of fertilizer use, especially of N and phosphorus (P), which determines if this aspect of soil management is a boon for crops, or a negative for the environment.	The diversity of soil biota is greater in the tropics than in temperate zones ²⁴ . Because the rate of agricultural intensification in the future will generally be greater in the tropics, agro-ecosystems there are under particular threat of soil degradation. Any losses of biodiversity and, ultimately, ecosystem functioning, will affect subsistence farmers in the tropics more than in other regions, because they rely to	A healthy soil does not pollute the environment; rather, it contributes to mitigating climate change by maintaining or increasing its carbon content.

	a larger extent on these processes and their services.	
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Q.83) Solution (c)

The Special Climate Change Fund was established in November 2001 under the United Nations Framework Convention on Climate Change to finance activities, programs and measures relating to climate change that are complementary to those funded by the resources allocated to the climate change focal area of the Global Environment Facility Trust Fund.

Q.84) Solution (d)

When a medical record is generated and signed, it can be written into the blockchain, which provides patients with the proof and confidence that the record cannot be changed.

Blockchain has the potential to eliminate the need for scanning documents and tracking down physical files in a local recording office. If property ownership is stored and verified on the blockchain, owners can trust that their deed is accurate and permanent.

The blockchain technology enables the traceability of information in the food supply chain and thus helps improve food safety. It provides a secure way of storing and managing data, which facilitates the development and use of data-driven innovations for smart farming and smart index-based agriculture insurance.

Voting with blockchain carries the potential to eliminate election fraud and boost voter turnout.

Each vote would be stored as a block on the blockchain, making them nearly impossible to tamper with. The blockchain protocol would also maintain transparency in the electoral process, reducing the personnel needed to conduct an election and provide officials with instant results.

Q.85) Solution (a)

Statement Analysis:

Statement 1	Statement 2
Correct	Incorrect
Volcanoes generally lie near the boundaries	Volcanoes are to be found in both the oceans

of tectonic plates but can be found in the middle of the tectonic plates as well.

and land.

Q.86) Solution (c)

Also known as Peacock Parachute Spider or Gooty Tarantula is a spider belonging to the genus Poecilotheria.

Known habitat - Eastern Ghats. Endemic to India.

Source: <https://www.thehindu.com/news/national/tamil-nadu/rare-tarantula-sighted-in-villupuram-district/article29272058.ece>

Q.87) Solution (b)

Statement Analysis:

Statement 1	Statement 2	Statement 3
Incorrect	Correct	Correct
Although corals exist both in temperate and tropical waters, shallow-water reefs form only in a zone extending from approximately 30° N to 30° S of the equator. Deep-water coral inhabits greater depths and colder temperatures at much higher latitudes, as far north as Norway. Although deep water corals can form reefs, little is known about them.	Corals reproduce both sexually and asexually. An individual polyp uses both reproductive modes within its lifetime. Corals reproduce sexually by either internal or external fertilization.	Corals also absorb nutrients, including inorganic nitrogen and phosphorus, directly from water. Many corals extend their tentacles at night to catch zooplankton that pass near. Zooplankton provide the polyp with nitrogen, and the polyp shares some of the nitrogen with the zooxanthellae, which also require this element

Q.88) Solution (b)

The Carbon Pricing Leadership Coalition (CPLC) is a voluntary initiative that catalyzes action towards the successful implementation of carbon pricing around the world. The CPLC brings together leaders from government, business, civil society and academia to support carbon pricing, share experiences and enhance the global, regional, national and sub-national understanding of carbon pricing implementation. The CPLC Secretariat is administered by The World Bank Group.

Q.89) Solution (b)

Disorders Inquiry Committee - Jallianwala Bagh massacre

Chhatra Sangha - Santi Ghose

Liberator of Press in India - Lord Metcalfe

Q.90) Solution (c)

Lambahraun lava field – Iceland

Taal Volcano – Philippines

Norilsk – Russia

Q.91) Solution (a)

Sikkim became the 22nd state of the Indian Union – 1975

Foundation of Maruti Udyog Limited – 1981

Bhopal Gas Tragedy – 1984

Bangladesh Liberation War – 1971

Q.92) Solution (d)

Supreme Court ruled that to forcibly dispossess citizens of their private property, without following the due process of law, would be to violate a human right, as also the constitutional right under Article 300A of the Constitution.

Q.93) Solution (d)

Statement Analysis:

Statement 1	Statement 2
Incorrect	Incorrect
MSPs are currently announced for 24 commodities including seven cereals,	MSP is announced by the Government of India at the beginning of the

five pulses, eight oilseeds.	sowing season for certain crops on the basis of the recommendations
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Q.94) Solution (c)

It is located in Madhya Pradesh.

Q.95) Solution (b)

Statement Analysis:

Statement 1	Statement 2
Incorrect	Correct
The Magnetospheric Multiscale Mission (MMS) is a NASA robotic space mission to study the Earth's magnetosphere, using four identical spacecraft flying in a tetrahedral formation.	Magnetic reconnection is a process where oppositely polarity magnetic field lines connect and some of the magnetic energy is converted to heat energy and also kinetic energy which leads to the generation of heating, solar flares, solar jets, etc. The mechanisms of eruptions of the Sun, such as solar flares and coronal mass ejections are driven by magnetic reconnections happening in the sun's corona.

Q.96) Solution (a)

Statement Analysis:

Statement 1	Statement 2
Correct	Incorrect
Additional Tier 1 bonds, also called AT1 in market parlance, are a kind of perpetual bonds without any expiry date that banks are allowed to issue to meet their long-term capital requirement.	These bonds are treated as quasi-equity instruments under the law. RBI is the regulator for these bonds. RBI can write down these bonds in case of a restructuring of the bank as per the rules.

Q.97) Solution (c)

Statement Analysis:

Statement 1	Statement 2
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Correct	Correct
The Sixth Schedule consists of provisions for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram, according to Article 244 of the Indian Constitution.	Along with ADCs, the Sixth Schedule also provides for separate Regional Councils for each area constituted as an autonomous region.

Q.98) Solution (a)

Statement Analysis:

Statement 1	Statement 2
Correct	Incorrect
The Chief Wildlife Warden (CWLW) is the statutory authority, under the Wildlife Protection Act, who heads the Wildlife Wing of the department and exercises complete administrative control over Protected Areas (PAs) within a state.	The National Board for Wildlife (NBWL) (formerly known as the Indian Board for Wildlife) is constituted under the Wildlife Protection Act, 1972, and chaired by the Prime Minister with the Minister of Environment and Forests as the vice-chair.

Q.99) Solution (c)

Statement Analysis:

Statement 1	Statement 2
Correct	Correct
PGS is a process of certifying organic products, which ensures that their production takes place in accordance with laid-down quality standards.	India ranks first in number of organic farmers and ninth in terms of area under organic farming.

Q.100) Solution (a)

Next generation sequencing (NGS), massively parallel or deep sequencing are related terms that describe a DNA sequencing technology which has revolutionised genomic research. Using NGS an entire human genome can be sequenced within a single day. In contrast, the previous Sanger sequencing technology, used to decipher the human genome, required over a decade to deliver the final draft.

NGS Technology includes

- Illumina (Solexa) sequencing
- Roche 454 sequencing

- Ion Torrent: Proton / PGM sequencing