

Q.1) Recently, the Centre notified a new set of rules under the head Wetlands (Conservation and Management) Rules, 2017. Consider the following statements

1. It replaces the Wetlands (Conservation and Management) Rules, 2010
2. It calls for setting up of a State Wetlands Authority in each State and union territories
3. Central Wetlands Regulatory Authority (CWRA) will be replaced by the National Wetlands Committee

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.1) Solution (d)

The union environment ministry notified the new Wetland (Conservation and Management) Rules 2017 which prohibit a range of activities in wetlands like setting up and expansion of industries, waste dumping and discharge of effluents. The new rules will replace the 2010 version of the rules.

The new rules stipulate setting up of a State Wetlands Authority in each State and union territories that will be headed by the State's environment minister and include a range of government officials. They will also include one expert each in the fields of wetland ecology, hydrology, fisheries, landscape planning and socioeconomics to be nominated by the state government.

The rules prohibit activities like conversion of wetland for non-wetland uses including encroachment of any kind, setting up of any industry and expansion of existing industries, manufacture or handling or storage or disposal of hazardous substances and construction and demolition waste, solid waste dumping, discharge of untreated wastes and effluents from industries, cities, towns, villages and other human settlements.

As per the 2010 version of the rules, there was a Central Wetlands Regulatory Authority (CWRA) which will now be replaced by a national committee.

According to the 2010 rules, anyone aggrieved with the CWRA's decisions could have filed an appeal with the National Green Tribunal, but the new 2017 rules are silent on the appeal process.

The identification process by the State Wetland Authority does not distinguish between existing wetlands and especially those past wetlands which have been encroached and can

be proved through legal documents. It also does not take into account the Jagpal Singh judgment of Justice Katju for restoration of encroached wetlands throughout the country.

Under the new rules, the powers have been given to the State governments so that protection and conservation work can be done at the local level. Central government has mainly retained powers regarding monitoring.

To oversee the work carried out by States, the rules stipulates for setting up of National Wetlands Committee, which will be headed by the MoEFCC Secretary, to monitor implementation of these rules.

The Committee will also advise the Central Government on appropriate policies and action programmes for conservation and wise use of wetlands, recommend designation of wetlands of international importance under Ramsar Convention, advise on collaboration with international agencies on issues related to wetlands etc.

Wetlands (Conservation and Management) Rules, 2017 -

[http://envfor.nic.in/sites/default/files/Wetlands%20\(C&M\)%20Rules,%202017.pdf](http://envfor.nic.in/sites/default/files/Wetlands%20(C&M)%20Rules,%202017.pdf)

Source: <http://www.thehindu.com/news/national/kerala/new-wetland-conservation-rules-notified/article19779100.ece>

Q.2) Consider the following statements about Kaziranga National Park

1. It is part of the middle Brahmaputra alluvial flood plains
2. Wild Water Buffalo is only found in Kaziranga National Park
3. It is a World Heritage Site

Select the correct statements

- a) Only 3
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.2) Solution (c)

It is a national park in the Golaghat and Nagaon districts of the state of Assam, India. The sanctuary, which hosts two-thirds of the world's great one-horned rhinoceroses, is a World Heritage Site.

Kaziranga is part of the highly fertile middle Brahmaputra alluvial flood plains with exposed sandbars, riverine flood-formed lakes and elevated flats.

Every year between May and September, the Kaziranga National Park – a 378.22 sq km wildlife sanctuary – is submerged in flood waters. Rainfall of about 222 mm contributes to the rising water level of the Brahmaputra which surrounds the park.

In India, Wild Water Buffalo is now largely restricted to Assam, Arunachal Pradesh, and Madhya Pradesh. In Assam, the species is found in and around Manas Sanctuary, Laokhowa Sanctuary, Kaziranga National Park, and Dibru Sanctuary. In Arunachal Pradesh, the species occurs in and around Namdapha Sanctuary. There are two populations in Madhya Pradesh (Bastar district), one in Indravati National Park, and another in Udanti Sanctuary, which might extend into adjacent parts of Orissa.

Source: <http://www.thehindu.com/news/national/other-states/when-is-the-safari-trail-at-kaziranga-national-park-opening/article19778686.ece>

Q.3) The National Regulatory Authority of India (NRAI) has been given the maximum ratings by global health body World Health Organisation for vaccine regulations. Which of the following comprises NRA in India?

1. State drugs regulatory authorities
2. Pharmaco-vigilance Programme of India
3. Central Drugs Standard Control Organisation

Choose the Correct code:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) All of the above

Q.3) Solution (d)

World Health Organisation has, based on a robust benchmarking tool developed over years of consultation with various experts drawn from across the globe, carried out assessment of the National Regulatory Authority (NRA) of India comprising the Central Drugs Standard Control Organisation (CDSCO), State Drug Regulatory Authorities, Pharmaco-vigilance Programme of India (PvPI) and Adverse Events Following Immunization (AEFI) structures at the Central and States levels.

Source: <http://www.thehindu.com/sci-tech/health/good-food-or-bad-drugs/article19778761.ece>

Q.4) Consider the following statements about India's nutraceutical industry

1. Nutraceutical is defined as a “food, or parts of a food, that provide medical or health benefits, including the prevention and treatment of disease
2. Nutraceuticals are exempted from GST

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.4) Solution (a)

The term “nutraceutical” was coined in 1989 by Stephen De Felice, founder and chairman of the Foundation for Innovation in Medicine, an American organization which encourages medical health research. He defined a nutraceutical as a “food, or parts of a food, that provide medical or health benefits, including the prevention and treatment of disease”.

GST on nutraceuticals – 18%

The industry in India lacks a dedicated law guiding the sector or rules that defines the composition of nutraceuticals.

Source: <http://www.thehindu.com/sci-tech/health/good-food-or-bad-drugs/article19778761.ece>

Q.5) Which of the following statements about Piperazine is/are correct?

- a) It is used for the treatment of worm infections
- b) The derivatives of piperazine are used as anti-depressants drugs
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.5) Solution (c)

Piperazine is used for the treatment of worm infections. The antiviral drug indinavir used for treating HIV positive people is a piperazine-based molecule. The derivatives of piperazine are used as anti-histamines and anti-depressants drugs too.

Source: <http://www.thehindu.com/sci-tech/health/iit-roorkee-repurposes-a-drug-for-chikungunya/article19778185.ece>

Q.6) Horn of Africa is home to which of the following countries?

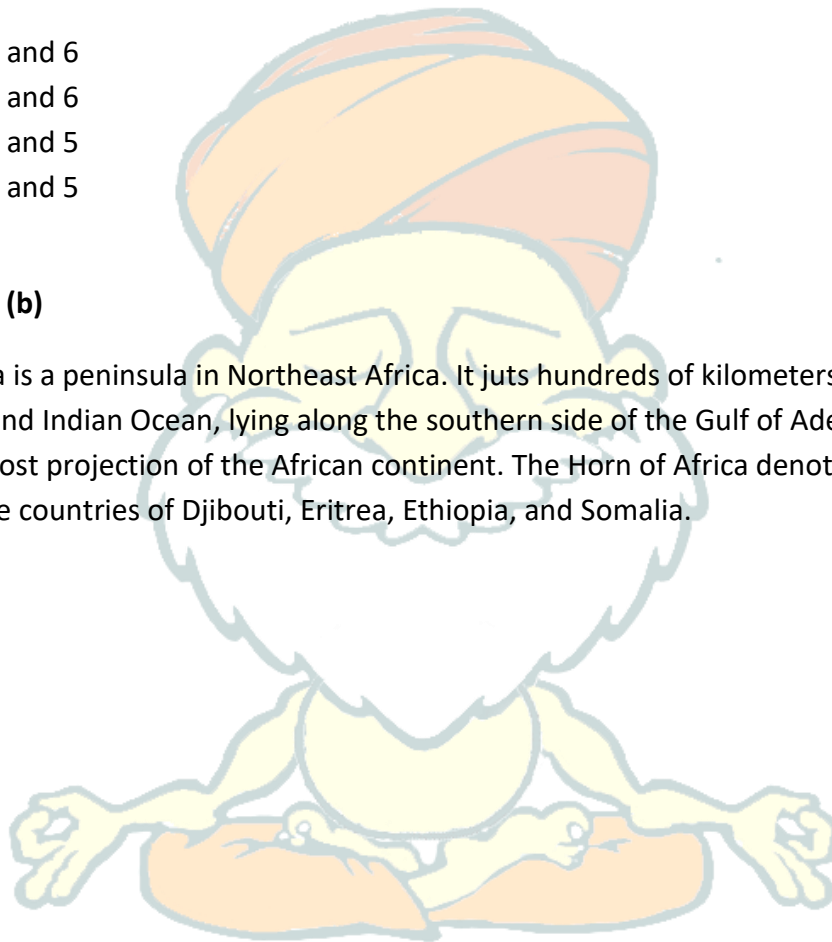
1. Djibouti
2. Eritrea
3. Kenya
4. Ethiopia
5. Rwanda
6. Somalia

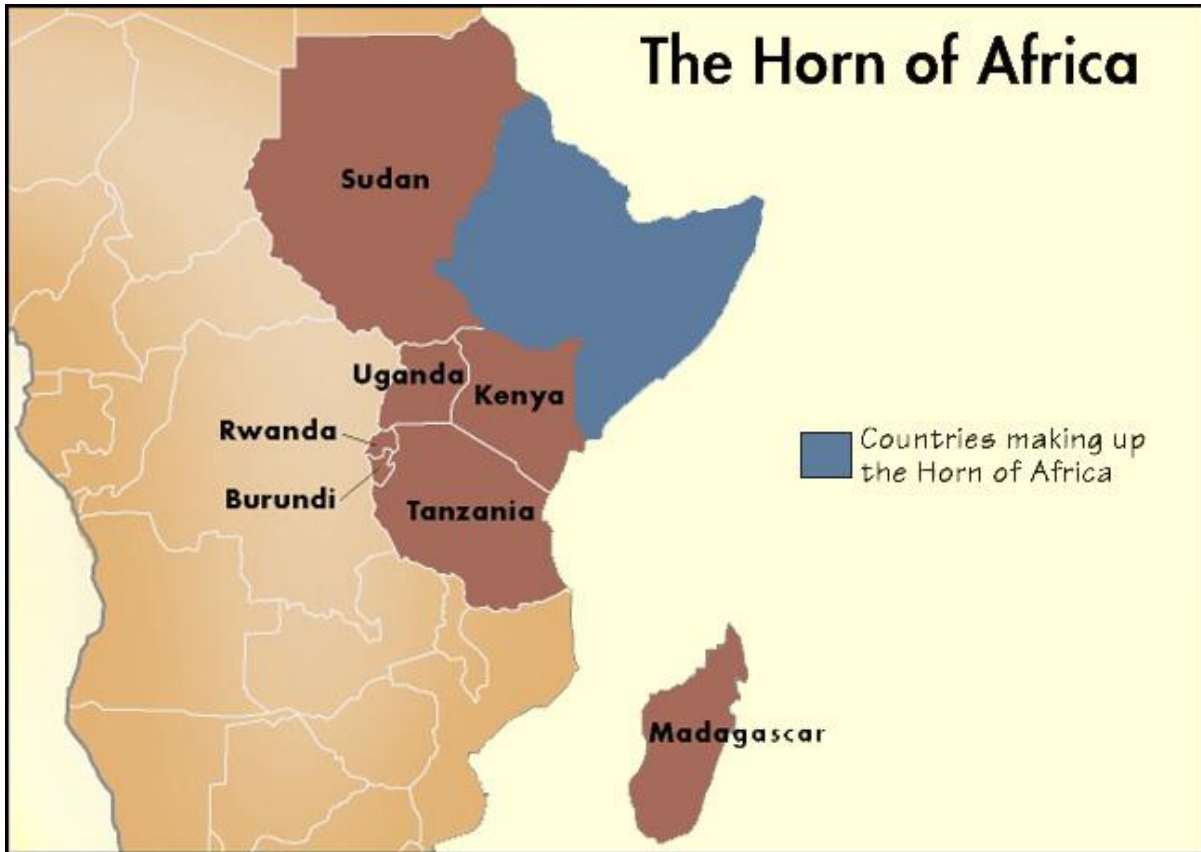
Select the correct code:

- a) 2, 4, 5 and 6
- b) 1, 2, 4 and 6
- c) 1, 3, 4 and 5
- d) 1, 2, 3 and 5

Q.6) Solution (b)

Horn of Africa is a peninsula in Northeast Africa. It juts hundreds of kilometers into the Arabian Sea and Indian Ocean, lying along the southern side of the Gulf of Aden. The area is the easternmost projection of the African continent. The Horn of Africa denotes the region containing the countries of Djibouti, Eritrea, Ethiopia, and Somalia.





Source: <http://indianexpress.com/article/opinion/columns/raja-mandala-india-and-djiboutis-geopolitical-scrum-ram-nath-kovind-abroad-visit-4871697/>

Q.7) Which of the following statement(s) is/are correct?

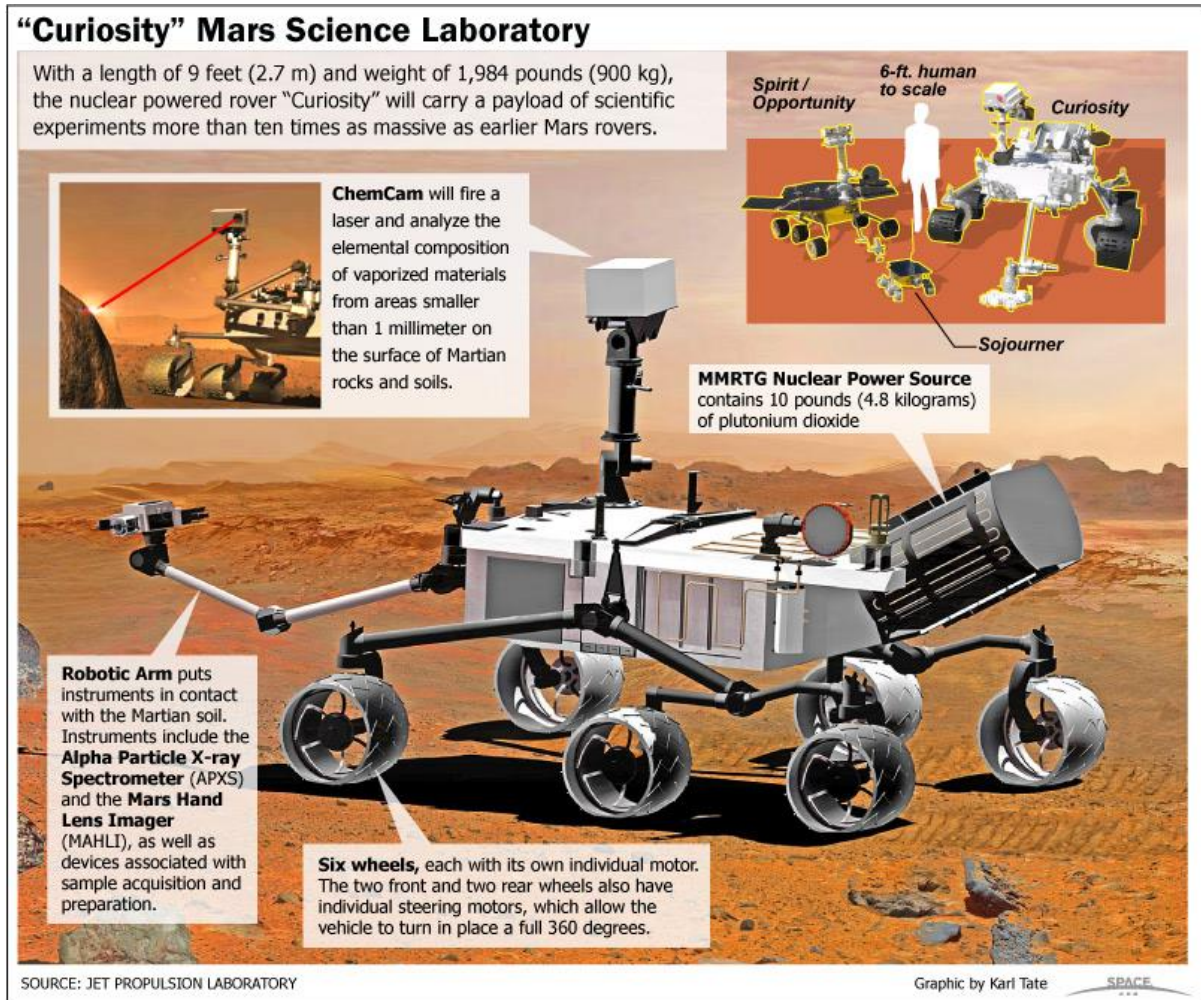
- a) MAVEN is a space probe developed by NASA designed to study the Martian atmosphere while orbiting Mars
- b) Curiosity Rover's primary mission is to find out if Mars is, or was, suitable for life
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.7) Solution (c)

Mars Atmosphere and Volatile Evolution Mission (MAVEN)[5] is a space probe developed by NASA designed to study the Martian atmosphere while orbiting Mars. Mission goals include determining how the planet's atmosphere and water, presumed to have once been substantial, were lost over time.

Curiosity is a car-sized rover designed to explore Gale Crater on Mars as part of NASA's Mars Science Laboratory mission (MSL).

The rover's goals include an investigation of the Martian climate and geology; assessment of whether the selected field site inside Gale Crater has ever offered environmental conditions favorable for microbial life, including investigation of the role of water; and planetary habitability studies in preparation for human exploration.



Source: <http://www.thehindu.com/sci-tech/science/large-solar-storm-sparks-global-aurora-on-mars/article19780721.ece>

Q.8) Consider the following statements about Northern Lights

1. It is also called as Aurora Australis
2. It is always pale green in colour

Select the correct statements

- a) 1 Only
- b) 2 Only

- c) Both 1 and 2
- d) Neither 1 nor 2

Q.8) Solution (d)

The bright dancing lights of the aurora are actually collisions between electrically charged particles from the sun that enter the earth's atmosphere. The lights are seen above the magnetic poles of the northern and southern hemispheres. They are known as 'Aurora borealis' in the north and 'Aurora australis' in the south.

The Northern Lights are actually the result of collisions between gaseous particles in the Earth's atmosphere with charged particles released from the sun's atmosphere. Variations in colour are due to the type of gas particles that are colliding.

The colors most often associated with the aurora borealis are pink, green, yellow, blue, violet, and occasionally orange and white. Typically, when the particles collide with oxygen, yellow and green are produced. Interactions with nitrogen produce red, violet, and occasionally blue colors.

Northern Lights can be seen in the northern or southern hemisphere, in an irregularly shaped oval centred over each magnetic pole. The lights are known as 'Aurora borealis' in the north and 'Aurora australis' in the south. Scientists have learned that in most instances northern and southern auroras are mirror-like images that occur at the same time, with similar shapes and colors.

'Aurora borealis', the lights of the northern hemisphere, means 'dawn of the north'. 'Aurora australis' means 'dawn of the south'. In Roman myths, Aurora was the goddess of the dawn. \par Many cultural groups have legends about the lights. In medieval times, the occurrences of auroral displays were seen as harbingers of war or famine. The Maori of New Zealand shared a belief with many northern people of Europe and North America that the lights were reflections from torches or campfires.

Source: <http://www.thehindu.com/sci-tech/science/large-solar-storm-sparks-global-aurora-on-mars/article19780721.ece>

Q.9) World Development Report is released by

- a) World Bank
- b) United Nations Development Programme (UNDP)
- c) World Economic Forum (WEF)
- d) World Trade Organisation (WTO)

Q.9) Solution (a)

World Development Report 2018: LEARNING to Realize Education's Promise

Source: http://www.huffingtonpost.com/entry/south-asias-human-capital-crisis_us_59d2c870e4b043b4fb095bd4

Q.10) Christmas Island is located in

- a) Pacific Ocean
- b) Indian Ocean
- c) Atlantic Ocean
- d) None of the above

Q.10) Solution (b)

The Territory of Christmas Island is an Australian external territory comprising the island of the same name. Christmas Island is located in the Indian Ocean, around 350 kilometres (220 mi) south of Java and Sumatra and around 1,550 kilometres (960 mi) north-west of the closest point on the Australian mainland.

Source: <http://www.hindustantimes.com/environment/over-15-of-species-found-in-india-are-threatened/story-Q8d5kenWiQB4K6DhmimRbK.html>

Q.11) Flexi fare scheme is concerned with

- a) Broadband Internet
- b) Railways
- c) Allocation of Coal Blocks
- d) None of the above

Q.11) Solution (b)

The railways rolled out a flexi-fare scheme in November 2016, by which ticket prices would increase in direct correlation to how many people made bookings in a particular train. The scheme yielded additional revenues of approximately Rs 500 crore but fewer people rode in the premier Rajdhani, Shatabdi and Duranto trains since its launch.

Source: <http://www.thehindu.com/news/national/premium-trains-run-with-empty-seats/article19786619.ece>

Q.12) Julio Ribeiro Committee is associated with

- a) Merger Of seven Associate Banks with State Bank of India
- b) Computerization of Banking Industry and Public Sector Disinvestment
- c) Small scale industries and Trade Policy Reform
- d) Police reforms

Q.12) Solution (d)

In 1995, Prakash Singh, former DGP of Uttar Pradesh filed a PIL regarding police reforms in India. This led to the government constituting a new committee under the chairmanship of Julio Ribeiro, and the Julio Ribeiro Committee was formed in 1998.

Source: <http://www.thehindu.com/todays-paper/tp-opinion/awaiting-police-reforms/article19793527.ece>

Q.13) Consider the following statements about Catalonia

1. It is a geographic area in Eastern and South-eastern Europe with various and disputed borders
2. It is bordered by the Adriatic Sea on the northwest, the Ionian Sea on the southwest

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.13) Solution (d)

Catalonia is an autonomous community of Spain located on the eastern extremity of the Iberian Peninsula. It is designated as a nationality by its Statute of Autonomy. Catalonia consists of four provinces: Barcelona, Girona, Lleida, and Tarragona. The capital and largest city is Barcelona, the second-most populated municipality in Spain and the core of the seventh most populous urban area in the European Union. Catalonia comprises most of the territory of the former Principality of Catalonia. It is bordered by France and Andorra to the north, the Mediterranean Sea to the east, and the Spanish autonomous communities of Aragon to the west and Valencia to the south. The official languages are Catalan, Spanish, and the Aranese dialect of Occitan.

Catalonia independence referendum - <http://www.independent.ie/world-news/europe/explainer-everything-you-need-to-know-about-the-catalan-referendum-36186243.html>

Source: <http://www.thehindu.com/opinion/editorial/the-day-after-catalonias-vote/article19786543.ece>

Q.14) India's first LIGO (Laser Interferometer Gravitational-Wave Observatory) laboratory will be set up in which of the following states?

- a) Maharashtra
- b) Gujarat
- c) Karnataka
- d) Madhya Pradesh

Q.14) Solution (a)

Maharashtra's Hingoli district has been chosen for carrying out experiments on the ambitious LIGO project that proved existence of gravitational waves, a major breakthrough in science. It would be third such laboratory in the world, first outside the United States. The existing laboratories are located in Hanford, Washington, and in Livingston, Louisiana.

LIGO India is a joint scientific collaboration between LIGO laboratories of MIT and Caltech and three leading Indian institutions - the Inter-University Centre for Astronomy and Astrophysics, Pune, Institute for Plasma Research, Gandhinagar, and the Raja Ramanna Centre for Advanced Technology, Indore.

Source: <https://timesofindia.indiatimes.com/city/pune/ligo-observatorys-work-to-begin-in-2018-land-acquisition-underway/articleshow/60882081.cms>

Q.15) Which of the following statements about H1N1 virus is/are correct?

- a) It was detected for the first time in India
- b) It does not spread from exposure to an infected person
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.15) Solution (d)

H1N1 virus or swine flu is a respiratory disorder. According to WHO, the virus is a strain of influenza. It is commonly known as swine flu because it was detected in patients who were directly in contact with pig. According to WHO, genetic analyses of the virus shows that it originated from animal influenza viruses. It was detected for the first time in North America in April 2009, after which it rapidly spread all around the world. In June 2009, the disease spread across 74 countries and territories.

As per WHO, the H1N1 virus spreads just like other seasonal influenza viruses. It spreads from exposure to an infected person. When an infected person coughs or sneezes, he/she leaves behind infected droplets. Exposure to these infected droplets can contaminate hands and surfaces.

The symptoms of H1N1 are similar to season flu. The symptoms included cough, fever, sore throat, runny nose, headache and bodyache. In extreme cases, the patient also feels chills and fatigue. The swine flu, like every other regular flu, can develop into serious problems such as pneumonia, lung infection and other breathing problems.

According to WHO, People are advised to seek medical care if they experience shortness of breath. They should also consult a doctor if the fever continues for more than three days. People should also wash their hands before consumption of food and avoid exposure to sick patient. Flu vaccine which are used to protect against seasonal flu disorders also protects against H1n1 virus strain.

Source: <http://www.thehindu.com/todays-paper/tp-opinion/the-cold-facts/article19793514.ece>

Q.16) Ministry of Water resources has approved setting up of a Turtle sanctuary in Allahabad. Consider the following statements

1. It will be set up under Namami Gange Programme
2. It would include development of River Biodiversity Park at confluence of Ganga, Yamuna and Mythical Saraswati

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.16) Solution (c)

In order to protect the rich aquatic biodiversity of river Ganga from escalating anthropogenic pressures, development of a Turtle sanctuary in Allahabad along with a River Biodiversity Park at Sangam have been approved under Namami Gange programme.

The project at an estimated cost of Rs 1.34 crore would include development of River Biodiversity Park at Sangam (confluence of Ganga, Yamuna and mythical Sarasvati), establishment of a Turtle Rearing Centre (Permanent nursery at Triveni Pushp and makeshift annual hatcheries) and awareness about the importance of river Ganga and imperativeness of its conservation has been approved.

The sustenance of more than 2000 aquatic species including threatened gharials, dolphins and turtles in river Ganga exemplifies the rich biodiversity of this lifeline to over 40 per cent of the country's population. Rivers Ganga and Yamuna at Allahabad are home to some of the most endangered fauna like turtles (Batagur kachuga, Batagur dhongoka, Nilssonia gangetica, Chitra indica, Hardella thurjii etc.), the National Aquatic Animal - Gangetic dolphin (Platanista gangetica), the Gharial (Gavialis gangeticus) and numerous migratory and resident birds.

Source: <http://www.thehindu.com/todays-paper/tp-national/ganga-mission-plans-turtle-sanctuary-in-allahabad/article19798932.ece>

Q.17) Which of the following statements about INS Chakra is/are correct?

1. It is a Shardul class amphibious warship
2. It is on a 10-year lease period from Russia

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.17) Solution (b)

Inducted in April 2012, INS Chakra is a modernised Russian Akula-II class submarine, known as one of the stealthiest in the world after American vessels of similar class. While the submarine is nuclear powered, it does not carry nuclear-tipped missiles on board and is designed to be a silent killer — it lurks underwater to sink enemy ships and take out land-based targets.

Originally named the Nerpa, the submarine was launched in 1991 but was mothballed after the collapse of the Soviet Union. India later took it on a 10-year lease for close to \$1 billion.

India is now moving ahead with its plans to lease another nuclear attack submarine from its old ally Russia for an estimated \$2.5 billion that will include the refit of the boat at a Cold War era shipyard, followed by a 10-year deployment with the Navy. The new ship is likely to be inducted after the completion of the lease period of Chakra.

Source: <http://www.thehindu.com/todays-paper/accident-on-board-ins-chakra/article19793626.ece>

Q.18) Project Monitoring Information System (PMIS) mobile app was launched by

- a) National Highway Authority of India (NHAI)
- b) Ministry of Coal
- c) Department of Public Enterprises
- d) Department of Industrial Policy & Promotion

Q.18) Solution (a)

A project monitoring information system (PMIS) mobile App that will facilitate close, in-house monitoring of NHAI projects on a mobile phone was launched.

To ensure timely delivery of its projects, NHAI is digitally monitoring them through the PMIS, which has been developed in-house along with The Boston Consulting Group.

“For project directors, the App is a project monitoring tool. They can visit a site, check into the App from there — the App will capture their geo-location — then they can take three pictures and upload them. This will also ensure that the actual physical progress of a site can be seen. The kilometre completed also can be seen from the App.

PMIS has a comprehensive database with over 180 data fields being tracked for each project, and a further 500 fields specifically for complex PPP projects, covering all key progress metrics such as design, contracting, construction, land acquisition, compensation disbursement, toll and traffic information and concession, contract information.

An in-built algorithm automatically highlights focus projects with key pending issues so that focused interventions for these projects can be discussed during these reviews.

Source: <http://www.thehindubusinessline.com/economy/logistics/nhai-launches-app-to-track-projects/article9885650.ece>

Q.19) Which of the following statements about BIRAC is/are correct?

- a) It is under the aegis of Department of Biotechnology (DBT)
- b) The National Biopharma Mission will be implemented by BIRAC
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.19) Solution (c)

Biotechnology Industry Research Assistance Council (BIRAC) is a not-for-profit Section 8, Schedule B, Public Sector Enterprise, set up by Department of Biotechnology (DBT), Government of India as an Interface Agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

BIRAC is a new industry-academia interface and implements its mandate through a wide range of impact initiatives, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring innovation excellence to the biotech firms and make them globally competitive. In its three years of existence, BIRAC has initiated several schemes, networks and platforms that help to bridge the existing gaps in the industry-academia Innovation research and facilitate novel, high quality affordable products development through cutting edge technologies. BIRAC has initiated partnerships with several national and global partners to collaborate and deliver the salient features of its mandate.

Vision

- “To Stimulate, foster and enhance the strategic research and innovation capabilities of the Indian biotech industry, particularly start-ups and SME’s, for creation of affordable products addressing the needs of the largest section of society”

Key Strategies

- Foster innovation and entrepreneurship
- Promote affordable innovation in key social sectors
- Empowerment of start-ups & small and medium enterprises
- Contribute through partners for capability enhancement and diffusion of innovation
- Enable commercialization of discovery
- Ensure global competitiveness of Indian enterprises

BIRAC's aim is to play a transformative and catalytic role in building a US\$ 100 billion Indian bio economy. We believe that the agents of change for building the Indian bio economy would be biotech start-ups & SMEs & hence our focus is on raising their capabilities.

National Biopharma Mission

The National Biopharma Mission has been launched by the Department of Biotechnology, Ministry of Science & Technology on 30th June 2017 in New Delhi. This is an Industry-Academia mission to accelerate biopharmaceutical development in India that has been approved by the Cabinet Committee of Economic Affairs in its meeting held on 17th May, 2017. Further, as per the Cabinet approval, this Mission for Accelerating Discovery Research to Early Development for Biopharmaceuticals – “Innovate in India (i3)” Empowering biotech entrepreneurs & accelerating inclusive innovation will be implemented at a total cost of Rs. 1500 crore for a period of five years and 50% of the grant will be arranged through the World Bank loan.

The following are the objectives of the Mission:

- Development of products from leads that are at advanced stages in the product development lifecycle and relevant to the public health.
- Strengthening and establishing shared infrastructure facilities for both product discovery validation and manufacturing.
- Developing human capital by providing specific training to address the critical skills gaps in researchers, nascent biotech companies across the product development value chain, including in business plan development and market penetration.
- Creating and enhancing technology transfer and intellectual property management capacities and capabilities in public and private sector.

The Mission Programme of Department of Biotechnology will be implemented by Biotechnology Industry Research Assistance Council (BIRAC) a Public Sector Undertaking of the Department. BIRAC as an umbrella Product Development Partnership (PDP) would facilitate this program by bringing together partners through existing frameworks for specific program goals and would facilitate this program by involving established organizations with relevant expertise in product development.

Source: http://www.business-standard.com/article/news-ani/6th-birac-innovators-meet-inaugurated-by-dr-harsh-varadhan-in-new-delhi-117092300280_1.html

Q.20) India's Million Death Study' is associated with

- a) Bhopal gas tragedy
- b) Female foeticide
- c) Extrajudicial execution
- d) None of the above

Q.20) Solution (d)

India has avoided about 1 million (10 lakh) deaths of children under age five since 2005, owing to the significant reductions in mortality from pneumonia, diarrhoea, neonatal infections and birth asphyxia/trauma, measles and tetanus, according to study published in the latest issue of The Lancet. The 'India's Million Death Study', implemented by the Registrar General of India, is the first study to directly quantify changes in cause-specific child deaths in India, nationally and sub-nationally, from 2000-15 among randomly selected homes.

Source: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=171341>

Q.21) Consider the following statements

1. An Extradition Treaty is a mutually agreed text signed and ratified by two Governments.
2. An Extradition Arrangement is made in the absence of an Extradition Treaty on the assurance of reciprocity including under an International Convention.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.21) Solution (c)

An Extradition Treaty is a mutually agreed text signed and ratified by two Governments. An Extradition Arrangement is made in the absence of an Extradition Treaty on the assurance of reciprocity including under an International Convention.

India and Italy are both States Parties to the 1988 UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. According to the Convention, a State Party may, in the absence of any extradition treaty with another State Party, consider this Convention as the legal basis for extradition in respect of any offence to which the Convention applies. The Convention has been notified under the Extradition Act by the Government of India stating that, it will apply to Italy. This extradition arrangement does not cover all offences.

Read More - <http://www.livemint.com/Politics/Zji5A0RuJ9U8iXtIY7ByPI/The-strange-case-of-extradition-laws-in-India-in-the-absence.html>

Source: <http://economictimes.indiatimes.com/news/politics-and-nation/india-to-sign-extradition-treaty-with-lithuania/articleshow/60938183.cms>

Q.22) Choppiness index refers to

- a) Financial Markets
- b) IP Generation
- c) Agricultural Output of G20 nations
- d) Misuse of public power for private benefit

Q.22) Solution (a)

This refers to an index used by traders in financial markets to determine whether prices are trending in a particular direction, either upward or downward, or are moving sideways in a choppy manner. The choppiness index was created by Australian commodity trader E.W. Dreiss to determine the strength of a trend in any market. Traders generally prefer to trade in the direction of the trend, buying when prices trend up or selling short when prices trend down, and use the index to find the right entry and exit points for a profitable trade. The choppiness index is used in combination with other technical indicators to identify a change in the prevailing market direction.

Source: <http://www.thehindu.com/opinion/op-ed/what-is-choppiness-index-in-finance/article19797704.ece>

Q.23) Which of the following statements is/are correct?

- a) GSTR 1 contains details of all outward supplies
- b) GSTR 2 is a monthly return with the summarized details of sales, purchases, sales during the month along with the amount of GST liability
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.23) Solution (a)

GSTR 1 is a monthly return that should be filed by every registered dealer. It contains details of all outward supplies i.e sales.

GSTR 1 contains details of all the sales transactions of a registered dealer for a month.

The GSTR 1 filed by a registered dealer is used by the government to auto populate GSTR 3 for the dealer and GSTR 2A for dealers to whom supplies have been made.

GSTR-1 should be filed even if there is nil returns to be filed (no business activity) in the given taxable period.

Every registered taxable person is required to give details of Inward Supply, i.e., purchases for a tax period in GSTR-2.

GSTR-2 contains details of all the purchases transactions of a registered dealer for a month. It will also include purchases on which reverse charge applies.

The GSTR-2 filed by a registered dealer is used by the government to check with the sellers' GSTR-1 for buyer-seller reconciliation.

GSTR-3 is a monthly return with the summarized details of sales, purchases, sales during the month along with the amount of GST liability. This return is auto-generated pulling information from GSTR-1 and GSTR-2.

GSTR-3 will show the amount of GST liability for the month. The taxpayer must pay the tax and file the return.

Read More - <https://www.taxmann.com/blogpost/2000000100/what-is-the-purpose-of-filing-gstr-1-gstr-2-and-gstr-3.aspx>

Source: <http://indianexpress.com/article/business/why-cant-you-revise-returns-in-gstr-if-you-can-revise-returns-under-the-income-tax-act-4875350/>

Q.24) Which of the following organisations are associated with 'The State of Food Security and Nutrition in the World 2017'?

1. Food and Agriculture Organization of the United Nations (FAO)
2. International Fund for Agricultural Development (IFAD)
3. United Nations Children's Fund (UNICEF)
4. World Food Programme (WFP)
5. World Health Organization (WHO)

Select the correct code:

- a) 1, 3, 4 and 5
- b) 2, 3, 4 and 5
- c) 1, 3 and 5
- d) All of the above

Q.24) Solution (d)

UNICEF and the World Health Organization (WHO) have joined the traditional partnership of FAO, IFAD and WFP in preparing this annual report.

Read More - <http://www.fao.org/3/a-I7695e.pdf>

Source: <http://www.livemint.com/Politics/8BBA9K4GHvpSvXR0ps602O/India-home-to-234-of-worlds-hungry-51-women-are-anemic.html>

Q.25) Global Slavery Index is published by

- a) International Labour Organization (ILO)
- b) Walk Free Foundation
- c) Oxfam International
- d) World Trade Organisation (WTO)

Q.25) Solution (b)

The Global Slavery Index is an annual study of world-wide slavery conditions by country published by the Walk Free Foundation (founded by Andrew Forrest).

In 2016, the study estimated a total of 45.8 million people to be in some form of modern slavery in 167 countries.

The report includes three data points for each country: national estimates of the prevalence of modern slavery, vulnerability measures and an assessment of the strength of government responses.

Source: <http://indianexpress.com/article/explained/why-indian-intelligence-is-spooked-by-global-index-of-modern-slavery-4874701/>

Q.26) The Mathamma system is same as

- a) British perception of pre-colonial Indian castes
- b) Jati System
- c) Dowry System
- d) Devadasi system

Q.26) Solution (d)

The Mathamma system has its equivalent in other regions of Andhra Pradesh and Telangana.

The system is called 'Basivi' in Kurnool and Anantapur districts, 'Saani' in Krishna, East and West Godavari districts, and 'Parvathi' in Vizianagaram and Srikakulam districts. Women are unable to leave the exploitative system due to social pressures.

It's a practice that is widely believed to have been abandoned decades ago. But NGOs and activists have been bringing to light accounts of young women being initiated into the Devadasi system.

The practice of "offering" girl children to Goddess Mathamma thrives in the districts of Chittoor in Andhra Pradesh and Tiruvallur in Tamil Nadu.

Source: <http://www.thehindu.com/news/national/devadasi-an-exploitative-ritual-that-refuses-to-die/article19821606.ece>

Q.27) Consider the following statements about ICAN

1. It is an intergovernmental body which support negotiations for a treaty banning nuclear weapons
2. It was awarded the 2017 Nobel Peace Prize

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.27) Solution (b)

The International Campaign to Abolish Nuclear Weapons is a global civil society coalition working to promote adherence to and full implementation of the Treaty on the Prohibition of Nuclear Weapons. The campaign helped bring about this treaty. The ICAN was launched in 2007 and counts 468 partner organizations in 101 countries as of 2017.

The organization received the 2017 Nobel Peace Prize "for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons."

Source: <http://indianexpress.com/article/what-is/what-is-international-campaign-to-abolish-nuclear-weapons-ican-2017-nobel-peace-prize-4877371/>

Q.28) Which of the following are benefits of using Embryo transfer technology (ETT) in animals?

1. It greatly reduces the risk for transmission of infectious diseases
2. It will have a greater influence on the genetic advancement of a herd/flock
3. It will lead to increase in number of offspring

Select the correct code:

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.28) Solution (d)

Embryo transfer technology (ETT) has revolutionized the breeding strategies in Bovines as a tool to optimize the genetic improvement in cattle.

Department of Animal husbandry, Dairying and Fisheries in co-operation with 12 States has undertaken a Mass Embryo Transfer programme in Indigenous Breeds under the scheme, National Mission on Bovine Productivity. The programme is implemented with the objective of conservation and development of indigenous breeds under Rashtriya Gokul Mission.

Through the use of ETT, (i) a farmer can get a 5-6 fold increase in number of offsprings , (ii) the calves so born will be of high genetic merit and (iii) the offsprings born will be free from diseases.

Under this programme, embryos of higher genetic merit indigenous bovines are being transferred in to surrogate cows. Embryos of Indigenous breeds such as Sahiwal, Gir, Red Sindhi, Ongole, Deoni and Vechur have been proposed to be transferred under this programme.

The technology now being taken up to the doorstep of the farmers will result in rapid propagation of high genetic merit indigenous cattle.

Source: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=171403>

Q.29) Consider the following statements about Global Financial Centres Index 22 (GFCI)

1. It is produced bi-annually by Organisation for Economic Co-operation and Development (OECD)

2. Gujarat International Finance Tec-City International Financial Services Centre (GIFT IFSC) has been ranked tenth in the September 2017 edition of GFCI

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.29) Solution (b)

India's Gujarat International Finance Tec-City International Financial Services Centre (GIFT IFSC) has been ranked tenth in the latest edition of Global Financial Centres Index 22 (GFCI)-London.

Produced bi-annually by The China Development Institute (CDI) in Shenzhen and Z/Yen Partners in London, a leading commercial think-tank, the GFCI report covers around 92 centres and 16 associate centres globally.

GIFT IFSC has ranked tenth ahead of Luxembourg, Seoul, Abu Dhabi, Toronto and Beijing in the list of the GFCI report.

GIFT IFSC is operational with approximately 10 leading banks, 8 insurance companies and participating brokers, and 2 International Exchanges (India INX and NSE IFSC) along with around 100 capital market players have established their base at GIFT IFSC.

GIFT, a Gujarat government project in partnership with IL&FS is developing India's first global financial hub.

Gujarat International Finance Tec-City (GIFT) is India's first multi-service SEZ with International Financial Services Centre (IFSC) status which is catering to India's large financial services market by offering global firms, world-class infrastructure and facilities.

Source: <http://www.thehindubusinessline.com/markets/giftifsc-ranks-at-10th-place-in-global-financial-centres-index/article9883732.ece>

Q.30) Uday Kotak Committee is associated with

- a) Corporate Governance
- b) Digital Inclusion
- c) Contract Labour Reforms
- d) Extradition Laws

Q.30) Solution (a)

Source: <http://www.livemint.com/Money/Qw7w8ATYBR7pDTAXSJRMML/Corporate-governance-reforms-Sebi-may-find-it-tough-to-impl.html>

Q.31) Consider the following statements about 'GST Composition Scheme'

1. This scheme can be opted by any taxpayer whose turnover is less than Rs. 75 lakh.
2. The taxpayer pays a flat rate of tax regardless of what they manufacture, provide as a service or trade they carry on, under the scheme

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.31) Solution (b)

To bring simplicity and to reduce the compliance cost for the small taxpayers, the GST Council in its 22nd meeting has decided to allow taxpayers with Rs 1.5 crore to file quarterly returns and at the same time increased the threshold for composition scheme to Rs. 1 crore from the present Rs. 75 lakh.

The composition levy is an alternative method of levy of tax designed for small taxpayers whose turnover is up to Rs. 1 crore and pays a flat rate of tax regardless of what they manufacture, provide as a service or trade they carry on. Moreover, it is optional and the eligible person opting to pay tax under this scheme can pay tax at a prescribed percentage of his turnover every quarter, instead of paying tax at normal rate.

Manufacturers under this scheme pay 2% (1% Central tax plus 1% State tax) of the turnover, Restaurant Services pay 5% (2.5% Central tax plus 2.5% SGST) of the turnover and Traders or any other supplier eligible for composition levy pays 1% (0.5% Central tax plus 0.5% State tax) of the turnover.

Source: <http://economictimes.indiatimes.com/news/economy/policy/group-of-ministers-set-up-to-make-gst-composition-scheme-more-attractive/articleshow/60997767.cms>

Q.32) Sovereign Gold Bond (SGB) was launched to

- a) Reduce the demand for physical gold
- b) Shift a part of the domestic savings, used for purchase of gold, into financial savings
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.32) Solution (c)

SGBs are government securities denominated in grams of gold. They are substitutes for holding physical gold. Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity. The Bond is issued by Reserve Bank on behalf of Government of India.

The quantity of gold for which the investor pays is protected, since he receives the ongoing market price at the time of redemption/ premature redemption. The SGB offers a superior alternative to holding gold in physical form. The risks and costs of storage are eliminated. Investors are assured of the market value of gold at the time of maturity and periodical interest. SGB is free from issues like making charges and purity in the case of gold in jewellery form. The bonds are held in the books of the RBI or in demat form eliminating risk of loss of scrip etc.

News: 3rd tranche of sovereign gold bond (SGB) scheme

- Government of India, in consultation with the Reserve Bank of India, has decided to issue sovereign gold bonds 2017-18—Series-III
- The bonds will be sold through banks, Stock Holding Corp. of India Ltd (SHCIL), designated post offices and recognised stock exchanges namely the NSE and BSE
- Minimum investment in the bonds is one gram with a maximum limit of subscription of 500 grams per person per fiscal year (April–March). The maximum limit of subscribed would be 4kg for individual and HUF and 20kg for trusts and similar entities per fiscal (April–March)

Source: <http://economictimes.indiatimes.com/markets/commodities/news/third-tranche-of-sovereign-gold-bond-scheme-on-oct-9/articleshow/60981235.cms>

Q.33) Consider the following statements about VAJRA Faculty Scheme

1. It is meant to attract top international talent to the country's research and development ecosystem
2. Scientists visiting Indian institutions under the VAJRA Faculty scheme would be provided with a lump-sum amount of US \$15,000 in the first month of residency in a year and US \$10,000 per month afterwards

3. It also provides participation of foreign faculty as Distinguished / Adjunct / Visiting faculty / Professors of Practice, etc. in delivering Short or Semester-long Courses in IITs, IIMs, Central Universities, IISc Bangalore, IISERs, NITs and IIITs and subsequently cover good State Universities

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.33) Solution (a)

Visiting Advanced Joint Research (VAJRA) Faculty Scheme

- VAJRA Faculty Scheme is instituted to bring a strong international connect to the R&D ecosystem of India.
- The scheme offers adjunct / visiting faculty positions to overseas scientist / faculty / R&D professional including Non-resident Indians (NRI) and Overseas Citizen of India (OCI) to undertake high quality collaborative research in public-funded academic and research institutions of India.
- VAJRA Faculty will engage in collaborative research in cutting edge areas of science and technology with one or more Indian Collaborators.
- VAJRA Faculty may also be involved in technology development, start-ups, etc.

Eligibility

- The scheme is open to overseas scientist / faculty / R&D professional including NRI and OCI.
- The overseas scientist/faculty should be an active researcher working in a leading academic / research / industrial organization with proven track record of research and development.
- Indian Collaborator(s) should be a regular faculty/researcher in public-funded academic/research institutions.

Nature and Duration of Support

- The residency period of VAJRA Faculty in India would be for a minimum of 1 month and a maximum of 3 months.
- VAJRA Faculty will be provided US\$ 15000 in the first month of engagement and US\$ 10000 p.m. in subsequent two months. While no separate support is provided for travel, accommodation, medical / personal insurance etc. the host institute may consider providing additional support.

Source: <http://indianexpress.com/article/education/vajra-faculty-scheme-260-applicants-for-governments-visiting-researcher-programme-4881275/>

Q.34) 'Project Loon', sometimes seen in the news, is related to

- a) waste management technology
- b) wireless communication technology
- c) solar power production technology
- d) water conservation technology

Q.34) Solution (b)

Project Loon is a research and development project being developed by X (formerly Google X) with the mission of providing Internet access to rural and remote areas. The project uses high-altitude balloons placed in the stratosphere at an altitude of about 18 km (11 mi) to create an aerial wireless network with up to 4G-LTE speeds.

Q.35) Snow Leopard is found in which of the following countries?

- 1. Afghanistan
- 2. Pakistan
- 3. Kazakhstan
- 4. Mongolia

Select the correct code:

- a) 1, 2 and 3
- b) 2, 3 and 4
- c) 1, 3 and 4
- d) All of the above

Q.35) Solution (d)

Native:

Afghanistan; Bhutan; China (Gansu, Nei Mongol, Qinghai, Sichuan, Tibet [or Xizang], Xinjiang, Yunnan); India (Arunachal Pradesh, Himachal Pradesh, Jammu-Kashmir, Sikkim, Uttaranchal); Kazakhstan; Kyrgyzstan; Mongolia; Nepal; Pakistan; Russian Federation; Tajikistan; Uzbekistan

Read More - <http://www.globalsnowleopard.org/>

Source: <http://indiatoday.intoday.in/education/story/snow-leopard-in-arunachal-pradesh/1/1063619.html>

Q.36) Rajiv Kumar Committee is associated with

- a) Water management in north-east
- b) Inter linking of rivers
- c) Foreign Direct Investment
- d) Urban Flooding

Q.36) Solution (a)

The government has set up a high-level committee to evolve a strategy for management of NER's water resources.

The committee will facilitate optimising benefits of appropriate water management in the form of hydro-electric power, agriculture, bio-diversity conservation, reduced flood damage erosion, inland water transport, forestry, fishery and eco-tourism.

With the ministry of development of north-eastern region (DoNER) serving as the coordinating point, the committee will submit its report as well as a plan of action by June next year. This will involve dovetailing central and state government schemes across departments and autonomous bodies.

The committee's formation comes against the backdrop of floods that have brought life to a standstill in Assam, Arunachal Pradesh and Manipur.

The committee will be headed by Rajiv Kumar, vice-chairman of NITI Aayog, the federal policy think tank, and will include secretaries from the ministries of DoNER, power, water resources, river development and Ganga rejuvenation, National Disaster Management Authority, departments of border management and space and the chief secretaries of all the eight states of the region.

Q.37) Which of the following rivers flows through Myanmar

- 1. Brahmaputra
- 2. Irrawaddy
- 3. Mekong

Select the correct code:

- a) 1 and 2

- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.37) Solution (b)

From the Tibetan Plateau the Mekong river runs through China's Yunnan Province, Myanmar, Laos, Thailand, Cambodia, and Vietnam.



Irrawady river is a river that flows from north to south through Myanmar. It is the country's largest river and most important commercial waterway. Originating from the confluence of the N'mai and Mali rivers, it flows relatively straight North-South before emptying through the Irrawaddy Delta into the Andaman Sea.



Q.38) Consider the following statements about MIBOR and MIBID

1. They are interest rate benchmarks
2. MIBID is the rate at which banks would like to borrow from other banks
3. MIBOR is the rate at which banks are willing to lend to other banks

Select the correct statements

- a) 1 Only
- b) 1 and 2
- c) 1 and 3
- d) All of the above

Q.38) Solution (d)

Mumbai Inter-Bank Offer Rate (MIBOR) and Mumbai Inter-Bank Bid Rate (MIBID) are the benchmark rates at which Indian banks lend and borrow money to each other. The bid is the price at which the market would buy and the offer (or ask) is the price at which the market would sell. These rates reflect the short term funding costs of major banks. In other words, MIBOR reflects the price at which short term funds are made available to participating banks.

MIBID is the rate at which banks would like to borrow from other banks and MIBOR is the rate at which banks are willing to lend to other banks. Contrary to general perception, MIBID is not the rate at which banks attract deposits from other banks.

Source: <http://indianexpress.com/article/business/banking-and-finance/loan-pricing-systems-for-better-transmission-rbi-in-search-of-yet-another-benchmark-4786872/>

Q.39) Consider the following statements about SECURE Himalaya Project

1. It is launched by Union Ministry of Environment, Forests and Climate Change (MoEFCC) in association with the United Nations Development Programme (UNDP).
2. It aims to ensure conservation of locally and globally significant biodiversity, land and forest resources in high Himalayan ecosystem
3. It also focuses on protection of snow leopard and other endangered species and their habitats

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.39) Solution (d)

Project aims to ensure conservation of locally and globally significant biodiversity, land and forest resources in high Himalayan ecosystem spread over four states viz. Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Sikkim.

It was launched by Union Ministry of Environment, Forests and Climate Change (MoEFCC) in association with the United Nations Development Programme (UNDP).

The SECURE project aims at securing livelihoods, conservation, sustainable use and restoration of high range Himalayan ecosystems.

The key focus areas of the project is protection of snow leopard and other endangered species and their habitats and also securing livelihoods of people in region and enhancing enforcement to reduce wildlife crime.

Source: <https://timesofindia.indiatimes.com/india/centre-launches-six-year-secure-himalaya-project/articleshow/60914913.cms>

Q.40) Bhagoria Haat Festival is celebrated by which of the tribes of India?

- a) Bhils
- b) Munda
- c) Khasi
- d) Angami

Q.40) Solution (a)

Bhagoria Fest is a festival celebrated by the tribal people of the Indian state Madhya Pradesh (originally known as 'Malwa'). Also known as Bhagoria Haat Festival, during this festival, young boys and girls are allowed to elope after choosing their partners. The Bhagoria Haat Festival belongs to the local tribes called Bhils and Bhilalas.

Bhagoria Haat Festival is organized in Khargone district and Jhabua. The haat is organized in the form of a 'swayamvar' or a marriage market where young girls and boys are allowed to choose their partners. Bhagoria Haat Festival has an agricultural significance attached to it, that is, it coincides with the end of harvesting. So some people also celebrate it to mark the completion of harvesting.

But the star attraction of Bhagoria Haat Festival of Madhya Pradesh is the running away of young boys and girls with their partner who are later accepted as husband and wife by the society. During the Bhagoria Haat Festival in Madhya Pradesh, the boys put red powder on

the face of the girl to whom he wants to get married, if the girl too wishes to marry the same boy, she has to put the same red powder on the boy's face after which both of them run away from that place. But if the girl does not agree in the first chance, the boy can go behind her to persuade her and may win her heart.

Bhagoria Haat Festival at Madhya Pradesh is celebrated in the month of March before the Holi festival.

Q.41) Consider the following statements about the recently discovered compound called BTSA1

1. It directly drives cancer cells to commit suicide while sparing healthy cells.
2. It combats cancer by triggering Necrosis

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.41) Solution (a)

The compound called BTSA1 combats cancer by triggering apoptosis – an important process that rids the body of unwanted or malfunctioning cells. Apoptosis trims excess tissue during embryonic development, for example, and some chemotherapy drugs indirectly induce apoptosis by damaging DNA in cancer cells. Apoptosis occurs when BAX – the “executioner protein” in cells – is activated by “pro-apoptotic” proteins in the cell.

Once activated, BAX molecules home in on and punch lethal holes in mitochondria, the parts of cells that produce energy, they said. However, often cancer cells manage to prevent BAX from killing them. They ensure their survival by producing copious amounts of “anti-apoptotic” proteins that suppress BAX and the proteins that activate it, researchers said. “Our novel compound revives suppressed BAX molecules in cancer cells by binding with high affinity to BAX’s activation site.

BAX can then swing into action, killing cancer cells while leaving healthy cells unscathed, researchers said. “A compound dubbed BTSA1 (short for BAX Trigger Site Activator 1) proved to be the most potent BAX activator, causing rapid and extensive apoptosis when added to several different human AML cell lines.

The researchers next tested BTSA1 in blood samples from patients with high-risk AML. Strikingly, BTSA1 induced apoptosis in the patients' AML cells but did not affect patients' healthy blood-forming stem cells.

Source: <http://indianexpress.com/article/technology/science/novel-compound-causes-cancer-to-self-destruct-4883880/>

Q.42) Quasi-Zenith is a regional terrestrial positioning network system launched by

- a) Russia
- b) Japan
- c) US
- d) Israel

Q.42) Solution (b)

Source: <http://www.thehindu.com/todays-paper/tp-in-school/japan-launches-latest-satellite-of-positioning-system/article19835949.ece>

Q.43) Which of the following statements is/are correct?

- a) India has the fourth largest installed wind power capacity in the world.
- b) Maharashtra is the leader in Wind Power in India
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.43) Solution (a)

During an auction conducted last week by the state-run Solar Energy Corporation of India (SECI) for 1,000 megawatts (MW) of wind power installations, tariffs fell to a new low of Rs2.64 per unit, down 24% from even the previous low of Rs3.46. The prices are now competitive with the solar energy segment which hit a record-low of Rs2.44 per unit in May, also during auctions conducted by SECI. Renewable energy in India is now cheaper than coal-based power, which costs around Rs3.20 per unit.

Tamil Nadu is 1st and Maharashtra is 2nd.

The top 4 wind power countries are China, US, Germany and India.

Q.44) Mitra Shakti is a joint military exercise between India and

- a) Sri Lanka
- b) Nepal
- c) France
- d) Russia

Q.44) Solution (a)

Mitra Shakti is a joint exercise between India and Sri Lanka for military co-operation and interoperability.

Source: <http://indianexpress.com/article/india/to-counter-china-india-sri-lanka-joint-military-exercise-in-pune-from-oct-13-4884495/>

Q.45) Consider the following statements

1. SANKALP is a centrally sponsored scheme, including loan support from World Bank to provide market relevant training to 3.5 crore youth.
2. STRIVE is a Rs 2,200-crore central sector scheme focused on improving the quality and market relevance of vocational training provided in ITIs and strengthen the apprenticeship programmes through industry cluster approach.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.45) Solution (c)

The Cabinet Committee on Economic Affairs, chaired by Prime Minister Narendra Modi, approved two World Bank supported schemes of Rs 6,655 crore aimed at skill development in the country.

Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) is a Rs 4,455-crore centrally sponsored scheme, including Rs 3,300 crore loan support from World Bank, while Skill Strengthening for Industrial Value Enhancement (STRIVE) is a Rs 2,200-crore central sector scheme, with half of the scheme outlay as World bank loan assistance. SANKALP and STRIVE are outcome-focused schemes marking shift in the government's implementation strategy in vocational education and training from inputs to results.

SANKALP will provide market relevant training to 3.5 crore youth, which has been felt necessary in the fast-changing economic scenario.

STRIVE will focus on improving the quality and market relevance of vocational training provided in ITIs and strengthen the apprenticeship programmes through industry cluster approach.

Read More - <http://pib.nic.in/newsite/printrelease.aspx?relid=158674>

Source: <http://indianexpress.com/article/business/economy/skill-development-ccca-approves-two-world-bank-backed-schemes-4885951/>

Q.46) Consider the following statements about 'Treaty on the Prohibition of Nuclear Weapons'.

1. It bans the use, threatened use, and production, development, stationing, and testing of nuclear weapons
2. India has signed the treaty but not ratified
3. It requires the provision of assistance to victims and remediation of polluted land from nuclear weapon use and testing

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All off the above

Q.46) Solution (c)

The Treaty on the Prohibition of Nuclear Weapons, or the Nuclear Weapon Ban Treaty, is the first legally binding international agreement to comprehensively prohibit nuclear weapons, with the goal of leading towards their total elimination. It was passed on 7 July 2017. In order to come into effect, signature and ratification by at least 50 countries is required. For those nations that are party to it, the treaty prohibits the development, testing, production, stockpiling, stationing, transfer, use and threat of use of nuclear weapons, as well as assistance and encouragement to the prohibited activities. For nuclear armed states joining the treaty, it provides for a time-bound framework for negotiations leading to the verified and irreversible elimination of its nuclear weapons programme.

According to a mandate adopted by the United Nations General Assembly in December 2016, negotiations on the treaty began in the United Nations in March 2017 and continued from 15 June to 7 July 2017. In the vote on the treaty text, 122 were in favour, 1 voted

against (Netherlands), and 1 abstained (Singapore). 69 nations did not vote, among them all of the nuclear weapon states and all NATO members except the Netherlands.

The treaty bans the use, threatened use, production, development, stationing, and testing of nuclear weapons; forbids assistance will all prohibited activities, and requires the provision of assistance to victims and remediation of polluted land from nuclear weapon use and testing.

Text of the Treaty on the Prohibition of Nuclear Weapons - as adopted on 7 July 2017 –

<http://undocs.org/A/CONF.229/2017/8>

Source: <http://indianexpress.com/article/opinion/editorials/nobel-prize-2017-nuclear-disarmament-ican-india-less-perilous-world/>

Q.47) Consider the following statements about Global Hunger Index (GHI)

1. It is jointly published by the International Food Policy Research Institute (IFPRI) and World Health Organisation (WHO).
2. According to the recent index, India has a child-wasting prevalence over 20%.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.47) Solution (b)

With a global hunger index (GHI) score of 31.4, India is at the high end of the “serious” category.

India's poor performance brings to the fore the disturbing reality of the country's stubbornly high proportions of malnourished children—more than one-fifth of Indian children under five weigh too little for their height and over a third are too short for their age.

Data from the report showed that India's rank (100) was lower than all its neighbours—Nepal (72), Myanmar (77), Bangladesh (88), Sri Lanka (84) and China (29)—except Pakistan (106). Even North Korea (93) and Iraq (78) fared better in hunger parameters and GHI rankings.

The GHI score is a multidimensional index composed of four indicators—proportion of undernourished in the population, prevalence of child mortality, child stunting, and child

wasting. On the severity scale, a GHI score of less than 10 means “low” prevalence of hunger while a score of more than 50 implies an “extremely alarming” situation.

On India, the report said that the country's top 1% own more than 50% of its wealth, India is the world's second largest food producer, yet it is also home to the second highest population of under-nourished in the world.

The 2017 GHI has been jointly published by the International Food Policy Research Institute (IFPRI), Concern Worldwide, and Welthungerhilfe.

Source: <http://www.livemint.com/Politics/JS3kPSIqoUSRt9QC5JbpTI/Indias-hunger-problem-is-worse-than-North-Koreas-global-h.html>

Q.48) Recently, SC has put in place a new system by introducing a permanent committee and secretariat for evaluation of lawyers, who will also have to face interviews now. Consider the following statements

1. This will be implemented in the apex court as well as in 24 High Courts in the country
2. The permanent committee will be headed by the Chief Justice of India

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.48) Solution (c)

SC laid down guidelines for itself and 24 High Courts to govern the exercise of designating lawyers as seniors and ordered setting up of a permanent committee headed by the Chief Justice of India assisted by a secretariat.

Source: <http://indianexpress.com/article/india/supreme-court-senior-lawyers-appointment-designation-sc-frames-rules-for-itself-hcs-4887665/>

Q.49) Rafah Crossing Point is the crossing point between

- a) Egypt and Gaza Strip
- b) Jordan and Syria
- c) Kuwait and Iraq
- d) Lebanon and Israel

Q.49) Solution (a)

The Rafah Border Crossing or Rafah Crossing Point is the sole crossing point between Egypt and Gaza Strip. It is located on the Gaza–Egypt border, which was recognized by the 1979 Israel–Egypt Peace Treaty. The original crossing point was named Rafah land port. Only passage of persons takes place through the Rafah Border Crossing. All traffic of goods is diverted to the Kerem Shalom border crossing.

Source: <http://www.thehindu.com/news/international/fatah-hamas-sign-reconciliation-accord/article19846720.ece>

Q.50) This dance form has characters named Satvika, Rajasika and Tamasika. Identify the dance form:

- a) Bharatanatyam
- b) Kathakali
- c) Lai Haraoba
- d) Chhau

Q.50) Solution (b)

Kerala is the home of several traditional dance and dance - drama forms, the most notable being Kathakali. Kathakali, as a dance form popular today, is considered to be of comparatively recent origin. However, it is an art which has evolved from many social and religious theatrical forms which existed in the southern region in ancient times.

Chakiarkoothu, Koodiyattam, Krishnattam and Ramanattam are few of the ritual performing arts of Kerala which have had a direct influence on Kathakali in its form and technique. Legend has it that the refusal of the Zamorin of Calicut to send his Krishnattam troupe to Travancore, so enraged the Raja of Kottarakkara, that he was inspired to compose the Ramattam.

Kathakali is a visual art where a haryam, costume and make-up are suited to the characters, as per the tenets laid down in the Natyashastra. The characters are grouped under certain clearly defined types like the pacha, kathi, thadi, kari or minukku. The face of the artist is painted over to appear as though a mask is worn. The lips, the eyelashes and the eyebrows are made to look prominent. A mixture of rice paste and lime is applied to make the chutti on the face which highlights the facial make-up.

Kathakali dance is chiefly interpretative. The characters in a Kathakali performance are broadly divided into satvika, rajasika and tamasika types. Satvika characters are noble,

heroic, generous and refined. In pa cha, green colour dominates and kirita (headgear) is worn by all. Krishna and Rama wear special crowns decorated with peacock feathers. The noble characters like Indra, Arjun and the Devas are some of the pa cha characters.

Q.51) Consider the following statements about Amrabad Tiger Reserve

1. It was part of 'Nagarjunasagar-Srisaillam Tiger reserve'
2. It is located in Telangana

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.51) Solution (c)

Amrabad Tiger Reserve spreads over 2,800 sq.kms in the districts of Mahabubnagar and Nalgonda, is the largest tiger reserve in the country. Earlier, it was part of 'Nagarjunasagar-Srisaillam Tiger reserve' but post-bifurcation, the northern part of the reserve is vested with Telangana state and renamed as 'Amrabad Tiger Reserve'. The southern portion continues to be 'NSTR' is with Andhra Pradesh. There are an estimated 23 Tigers in the reserve.

Source: <http://www.thehindubusinessline.com/news/national/amrabad-tiger-reserve-octopus-view-point-to-be-one-more-tourist-attraction/article9904646.ece>

Q.52) Mahanadi river basin extends over

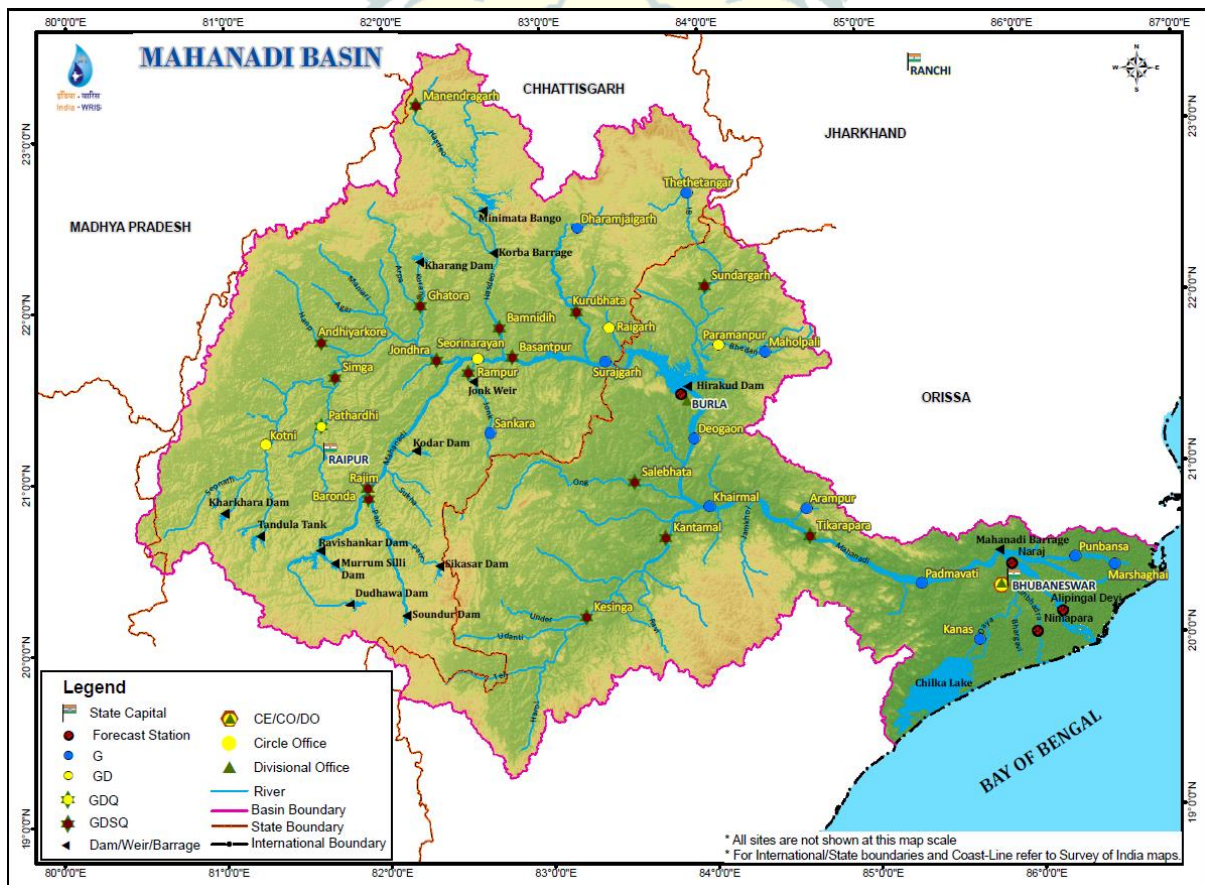
1. Odisha
2. Chhattisgarh
3. Jharkhand
4. Madhya Pradesh

Select the correct statements

- a) 1, 2 and 3
- b) 1, 2 and 4
- c) 2, 3 and 4
- d) All of the above

Q.52) Solution (d)

The Mahanadi basin extends over states of Chhattisgarh and Odisha and comparatively smaller portions of Jharkhand, Maharashtra and Madhya Pradesh, draining an area of 1,41,589 Sq.km which is nearly 4.3% of the total geographical area of the country. The geographical extent of the basin lies between 80°28' and 86°43' east longitudes and 19°8' and 23°32' north latitudes. The basin has maximum length and width of 587 km and 400 km. It is bounded by the Central India hills on the north, by the Eastern Ghats on the south and east and by the Maikala range on the west. The Mahanadi is one of the major rivers of the country and among the peninsular rivers, in water potential and flood producing capacity, it ranks second to the Godavari. It originates from a pool, 6 km from Farsiya village of Dhamtari district of Chhattisgarh. The total length of the river from origin to its outfall into the Bay of Bengal is 851 km. The Seonath, the Hasdeo, the Mand and the Ib joins Mahanadi from left whereas the Ong, the Tel and the Jonk joins it from right. Six other small streams between the Mahanadi and the Rushikulya draining directly into the Chilka Lake also forms the part of the basin. The major part of basin is covered with agricultural land accounting to 54.27% of the total area and 4.45% of the basin is covered by water bodies. The basin spreads over 27 parliamentary constituencies (2009) comprising 13 of Odisha, 11 of Chhattisgarh, and 1 each of Maharashtra, Jharkhand and Madhya Pradesh.



Read More - <http://www.india-wris.nrsr.gov.in/wrpinfo/index.php?title=Mahanadi>

Source: <https://economictimes.indiatimes.com/news/politics-and-nation/row-over-mahanadi-would-decide-on-notification-centre-to-sc/articleshow/61024546.cms>

Q.53) Consider the following statements about Sampoorna Bima Gram (SBG) Yojana

1. Under the scheme, at least one village (having a minimum of 100 households) will be identified in each districts and provide with a minimum of one RPLI (Rural Postal Life Insurance) policy for each households.
2. All villages under the SaansadAdarsh Gram Yojana will be brought under its ambit.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.53) Solution (c)

Ministry of Communications has recently launched SampoornaBima Gram Yojana to give rural people affordable life insurances services.

Under the scheme, at least one village (having a minimum of 100 households) will be identified in each districts and provide with a minimum of one RPLI (Rural Postal Life Insurance) policy for each households.

Coverage of all households in the identified SampoornaBima Gram village is the primary objective of this scheme.

All villages under the SaansadAdarsh Gram Yojana will be brought under its ambit.

Source: <http://www.financialexpress.com/money/sampoorna-bima-gram-yojana-pm-modi-government-expands-postal-life-insurance-here-is-how-you-can-benefit/893236/>

Q.54) Consider the following

1. Mudaliar Committee
2. Kartar Singh Committee

The above committees are concerned with

- a) Health
- b) Railways

- c) Sino-India Border Security
- d) Economic Reforms

Q.54) Solution (a)**Kartar Singh Committee, 1973**

This committee, headed by the Additional Secretary of Health and titled the "Committee on multipurpose workers under Health and Family Planning" was constituted to form a framework for integration of health and medical services at peripheral and supervisory levels. Its main recommendations were:

- a) Various categories of peripheral workers should be amalgamated into a single cadre of multipurpose workers (male and female). The erstwhile auxiliary nurse midwives were to be converted into MPW(F) and the basic health workers, malaria surveillance workers etc. were to be converted to MPW(M). The work of 3-4 male and female MPWs was to be supervised by one health supervisor (male or female respectively). The existing lady health visitors were to be converted into female health supervisor.
- b) One Primary Health Centre should cover a population of 50,000. It should be divided into 16 subcentres (one for 3000 to 3500 population) each to be staffed by a male and a female health worker.

Mudaliar Committee, 1962

This committee known as the "Health Survey and Planning Committee", headed by Dr. A.L. Mudaliar, was appointed to assess the performance in health sector since the submission of Bhole Committee report. This committee found the conditions in PHCs to be unsatisfactory and suggested that the PHC, already established should be strengthened before new ones are opened. Strengthening of sub divisional and district hospitals was also advised. It was emphasised that a PHC should not be made to cater to more than 40,000 population and that the curative, preventive and promotive services should be all provided at the PHC. The Mudaliar Committee also recommended that an All India Health service should be created to replace the erstwhile Indian Medical service.

Source: <http://www.thehindu.com/opinion/op-ed/the-case-for-a-public-health-cadre/article19866350.ece>

Q.55) Which of the following statements is/are correct?

1. Rural Postal Life Insurance (RPLI) was introduced on recommendations of Malhotra Committee

2. Postal Life Insurance (PLI) covers employees of Central and state governments only

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Nether 1 nor 2

Q.55) Solution (a)

PLI, introduced in 1884, is one of the oldest life insurance schemes for benefit of government and semi-government employees. On the other hand, Rural Postal Life Insurance (RPLI), introduced on March 24, 1995 on the recommendations of the Malhotra Committee, provides insurance cover to people residing in rural areas, especially weaker sections and women living in rural areas. Low premium and high bonus is the unique feature of PLI and RPLI schemes. As on March 31, 2017, there were 46.8 lakh PLI and 146.8 lakh RPLI policies across the country.

Postal Life Insurance (PLI) was introduced on 1st February 1884. In the beginning, the upper limit of life insurance was only Rs 4000, which has now increased to Rs 50 lakh. It covers employees of Central and state governments, Central and state public sector undertakings, universities, government-aided educational institutions, nationalized banks, local bodies, autonomous bodies, joint ventures having a minimum of 10% Govt./PSU stake, credit co-operative societies etc. PLI also extends the facility of insurance to the officers and staff of the Defence services and para-military forces. Apart from single insurance policies, Postal Life Insurance also manages a group insurance scheme for the extra departmental employees (Gramin Dak Sevaks) of the Department of Posts.

Source: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=171677>

Q.56) Consider the following statements about National e-Governance Services Ltd. (NeSL)

- 1. It is India's first information utility (IU) for bankruptcy cases under the Insolvency and Bankruptcy Code 2016.
- 2. It is owned and promoted by leading public institutions like State Bank of India, Life Insurance Corporation among others

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2

d) Neither 1 nor 2

Q.56) Solution (c)

National e-Governance Services Ltd (NeSL) became India's first information utility (IU) for bankruptcy cases under the Insolvency and Bankruptcy Code 2016. NeSL is owned by State Bank of India and Life Insurance Corporation Ltd., among others. Recently, the Insolvency and Bankruptcy Board of India (IBBI) eased ownership norms for setting up such utilities.

Source: <http://www.thehindu.com/todays-paper/tp-business/information-utility-under-the-ibc/article19867924.ece>

Q.57) Consider the following statements about Trap Crops

1. Trap crops are the plant stands that are grown to attract insects or other organisms to protect target crops from pest attack
2. It is economical but not an environmental friendly technique

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.57) Solution (a)

Trap crops are the plant stands that are grown to attract insects or other organisms to protect target crops from pest attack. Protection may be achieved either by preventing the pests from reaching the crop or by concentrating them in certain part of the field where they can economically be destroyed.

The principle of trap cropping rests on the fact that virtually all pests show a distinct preference to certain crop stage. Manipulation of stand in time and space so that attractive host plants are offered at critical time in pests and the crop phenology leads to the concentration of the pests at the desired site, the crop.

Farmers are being motivated to utilize trap cropping because of the difficulties in cropping with the pest situations in other ways. Some times the cost of chemical pesticides and the number of treatments required is so high that more economical ways have to be developed, additionally; the pests have often evolved resistance to commonly used pesticides, which requires some alternative control strategies.

Further, motivations to use trap cropping are economical and environmental benefits are often associated with this strategy. Besides, its potential role in improving the environmental soundness, trap cropping techniques may have special preference of conventional agriculture to sustainable farming in developing countries.

Additionally, the increasing sector of organic farming also could exploit this strategy of pest control. Yet another function of trap crop is their use of attracting natural enemies of pest insects to the fields and concentrating them there to enhance naturally occurring biological control`.

The essential features of the trap cropping are that the trap crop must be attractive to the pest then the main crop, it should occupy small area as far as possible and it should be established an early or later or along with the main crop.

Trap cropping has indicated a great benefit interms of economic returns on an average of 10-30 per cent increase in net profits mainly resulting from reduced insecticide use and pest attack. Trap cropping is a useful strategy in the management of several pests in various cropping systems. It offers significant economic and environmental benefits and it can successfully integrated with cultural, biological and chemical control methods.

Q.58) Consider the following statements about fluorescence resonance energy transfer (FRET)

1. It is a mechanism describing energy transfer between two chromophores
2. It is known as a radiation less mechanism

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.58) Solution (c)

Förster resonance energy transfer (FRET), fluorescence resonance energy transfer (FRET), resonance energy transfer (RET) or electronic energy transfer (EET) is a mechanism describing energy transfer between two light-sensitive molecules (chromophores). A donor chromophore, initially in its electronic excited state, may transfer energy to an acceptor chromophore through nonradiative dipole–dipole coupling. The efficiency of this energy transfer is inversely proportional to the sixth power of the distance between donor and acceptor, making FRET extremely sensitive to small changes in distance.

Measurements of FRET efficiency can be used to determine if two fluorophores are within a certain distance of each other. Such measurements are used as a research tool in fields including biology and chemistry.

FRET is analogous to near-field communication, in that the radius of interaction is much smaller than the wavelength of light emitted. In the near-field region, the excited chromophore emits a virtual photon that is instantly absorbed by a receiving chromophore. These virtual photons are undetectable, since their existence violates the conservation of energy and momentum, and hence FRET is known as a radiationless mechanism. Quantum electrodynamic calculations have been used to determine that radiationless (FRET) and radiative energy transfer are the short- and long-range asymptotes of a single unified mechanism.

In News:

- Researchers have utilised the overexpression of biotin receptors on cancer cells and enhanced production of thioredoxin reductase (TrxR) enzyme in cancer cells for cancer diagnosis.
- Breast and cervical cancer cell line studies shows encouraging results.
- The researchers developed a hybrid assembly by binding naphthalimide moiety to carbon dots using disulphide covalent bond.
- Naphthalimide analogues are used as anticancer agents.
- In the presence of normal amount of TrxR enzyme seen inside normal cells, the carbon dots behave as an energy donor and the naphthalimide moiety as an acceptor, thus establishing fluorescence resonance energy transfer (FRET).
- There is a typical yellow emission when irradiated with visible light.
- But in the presence of elevated levels of TrxR enzyme, which is seen in cancer cells, the disulphide covalent bond gets disrupted freeing the naphthalimide moiety from the surface of carbon dots.
- As a result, the FRET gets disrupted and there is blue emission when the cells are irradiated with visible light.
- In normal cells, the amount of TrxR enzyme is very little and hence the FRET mechanism is not eliminated, resulting in yellow emission.

Source: <http://www.thehindu.com/sci-tech/science/elevated-enzyme-for-cancer-diagnosis/article19861648.ece>

Q.59) Which of the following statements is/are correct?

- a) 'Tele Law' is a web based platform, through which interested lawyers can register themselves to volunteer pro bono services for the underprivileged litigants, who are unable to afford it.

- b) Nyaya Mitra scheme is aimed at reducing pendency of cases across selected districts, with special focus on those pending for more than 10 years.
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.59) Solution (b)**Nyaya Mitra**

- Nyaya Mitra Scheme, is aimed at reducing pendency of cases across selected districts, with special focus on those pending for more than 10 year.
- A retired judicial officer, or an executive officer with judicial experience, will be put in charge of assisting those suffering due to judicial delays.

TELE LAW

- Tele Law', is aimed at facilitating delivery of legal advice through an expert panel of lawyers – stationed at the State Legal Services Authorities (SLSA).
- The project would connect lawyers with clients through video conferencing facilities at CSCs, operated by para legal volunteers. The project would be launched across 1800 panchayats in Uttar Pradesh, Bihar, North Eastern States and Jammu & Kashmir.

Pro bono legal Services

The 'Pro bono legal services' initiative is a web based platform, through which interested lawyers can register themselves to volunteer pro bono services for the underprivileged litigants, who are unable to afford it. The Department of Justice has launched the online application for this initiative on its website doj.gov.in. Through this online portal, litigants from marginalised communities (including members of scheduled castes and scheduled tribes, women, children, senior citizens, persons with low income and persons with disabilities) can also apply for legal aid and advice from the pro bono lawyers.

Source: <https://economictimes.indiatimes.com/news/politics-and-nation/free-legal-aid-to-needy-may-become-a-key-criterion-for-lawyers-entry-into-judiciary/articleshow/61094772.cms>

Q.60) Consider the following statements about Fjord

1. A fjord is formed when a glacier cuts a U-shaped valley by ice segregation and abrasion of the surrounding bedrock.
2. The longest fjord in the world is Scoresby Sund in Greenland

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.60) Solution (c)

It is a long, narrow inlet with steep sides or cliffs, created by glacial erosion.[clarification needed] There are many fjords on the coasts of Alaska, British Columbia, Chile, Greenland, Iceland, the Kerguelen Islands, New Zealand, Norway, Novaya Zemlya, Labrador, Nunavut, Newfoundland, Scotland, and Washington state.

The opening toward the sea is called the mouth of the fjord, and is often shallow. The fjord's inner part is called the sea bottom. If the geological formation is wider than it is long, it is not a fjord. Then it is a bay or cove.

The longest fjord in the world is Scoresby Sund in Greenland (350 km), but the Western Norway region (Fjord Norway) boasts the next two spots on the list, with the Sognefjord (203 km), and the Hardanger Fjord (179 km).

A fjord is formed when a glacier cuts a U-shaped valley by ice segregation and abrasion of the surrounding bedrock. Glacial melting is accompanied by the rebounding of Earth's crust as the ice load and eroded sediment is removed (also called isostasy or glacial rebound). In some cases this rebound is faster than sea level rise. Most fjords are deeper than the adjacent sea; Sognefjord, Norway, reaches as much as 1,300 m (4,265 ft) below sea level. Fjords generally have a sill or shoal (bedrock) at their mouth caused by the previous glacier's reduced erosion rate and terminal moraine. In many cases this sill causes extreme currents and large saltwater rapids (see skookumchuck). Saltstraumen in Norway is often described as the world's strongest tidal current. These characteristics distinguish fjords from rias (e.g. the Bay of Kotor), which are drowned valleys flooded by the rising sea. Drammensfjorden is cut almost in two by the Svelvik "ridge", a sandy moraine that during the ice cover was under sea level but after the post-glacial rebound reaches 60 meters above the fjord.

Source: <http://indianexpress.com/article/technology/science/melting-ice-affecting-marine-life-around-greenland-global-ocean-currents-study-4893345/>

Q.61) Patola, a double ikat woven sari is from which of the following states?

- a) Gujarat
- b) Rajasthan
- c) Maharashtra

d) Madhya Pradesh

Q.61) Solution (a)

Patola is a double ikat woven sari, usually made from silk, made in Patan, Gujarat. It can take six months to one year to make one sari due to the long process of dyeing each strand separately before weaving them together. Patola was woven in Surat, Ahmedabad and Patan. Highly valued in Indonesia, became part of the local weaving tradition there.

The fame, charm, and the popularity of the Patola sarees have been woven by centuries of rich history. From a mention in the Kalpsutra, a 2000-year-old Jain holy book, to carvings in the Ajanta caves, and numerous folk tales in different languages – from Gujarati to Telugu, the Patola sarees make for a fascinating subject. In fact, it took 34 years of constant research for two Swiss writers, Alfred Buhler and Eberhard Fischer, to pen a book The Patola of Gujarat. The book was published in 1979.

The art of Ikat which is integral to Patola has been popular in many countries across the world, especially in South East Asia and Central Asia. Thus there have been many variations in the technique of Ikat, but Patola is counted among the most exquisite.

Source: <http://pib.nic.in/newsite/printrelease.aspx?relid=171707>

Q.62) Consider the following statements about Hathkargha Samvardan Sahayata (HSS)

1. It aims to provide financial assistance for technological upgradation to improve quality of the fabric and productivity.
2. Weavers' Service Centre (WSC) shall act as lead agency in purchase of technological up-gradation (looms/accessories) by the weavers from Empanelled Suppliers.
3. Under HSS, financial assistance to the extent of 90% of cost of technological up-gradation item shall be borne by the Govt. of India while remaining 10% shall be borne by the beneficiary.

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.62) Solution (d)

On the occasion of second National Handloom Day celebrated in Varanasi on 7th August 2016, Hon'ble Minister of Textiles announced "Hathkargha Samvardhan Sahayata" to meet the needs of handloom weavers for assistance on larger scale for looms and accessories.

It aims to provide financial assistance for technological up-gradation to improve quality of the fabric and productivity.

Under HSS, financial assistance to the extent of 90% of cost of technological up-gradation item shall be borne by the Govt. of India while remaining 10% shall be borne by the beneficiary.

Read More - <http://handlooms.nic.in/writereaddata/2554.pdf>

Q.63) Exercise INDRA is between India and

- a) Russia
- b) France
- c) US
- d) Japan

Q.63) Solution (a)

Source: <http://www.hindustantimes.com/india-news/india-russia-to-take-part-in-joint-military-exercise/story-nVdigAsNUPwK7ZOiuhoWIO.html>

Q.64) Which of the following statements about ISI Mark is/are correct?

- a) It conveys that the product carrying the Mark conforms to the relevant Indian Standard certified by Bureau of Indian Standards (BIS)
- b) The license number given along with the ISI Mark helps in identifying the unit which has manufactured the product at a specific location
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.64) Solution (c)

Read More - <http://www.bis.org.in/other/enforcement.asp>

Source: <https://economictimes.indiatimes.com/news/economy/policy/bureau-of-indian-standards-act-comes-into-force-from-october-12-government/articleshow/61079794.cms>

Q.65) Price Stabilization Fund (PSF) is under the aegis of

- a) Department of Consumer Affairs (DoCA)
- b) Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW)
- c) Department of Food and Public Distribution (DoFPD)
- d) None of the above

Q.65) Solution (a)

The Price Stabilization Fund (PSF) was set up under the Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW), Ministry of Agriculture. The PSF scheme was transferred from DAC&FW to the Department of Consumer Affairs (DOCA) w.e.f. 1st April, 2016.

Source: <http://www.livemint.com/Opinion/or29YiBB0t7rF1irF81HaN/Four-steps-to-stabilize-the-price-of-pulses.html>

Q.66) Consider the following statements about Tawny lark

1. They are found in the arid grasslands and scrub lands of central and west-central India
2. They imitate the calls of other bird species

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.66) Solution (c)

The diminutive crested Tawny lark – found only in the arid grasslands and scrub lands of central and west-central India including Gujarat, Uttar Pradesh and Maharashtra – belongs to a family of larks well-known for their mimicking abilities.

A team of scientists from Cornell University and the Bombay Natural History Society studied the flight songs of these birds in Gujarat and analysed the acoustics of their calls.

- The male Tawny larks imitate the calls of 34 other bird species, including babblers and lapwings, with varied accuracy.

- They even mimicked a squirrel and whistles of local shepherds – indicating that the birds learn from their surroundings.
- Not only are the males listening to other species [in their environment] but if it is a signal of male quality then it means that the females know all the calls well too and are choosing males that can either mimic the most number of species or can mimic the most species really accurately or both.
- Birds often learn to mimic other birds and sounds they hear, like Australia's Superb lyrebird which can imitate chainsaws and car alarms.
- Also a songbird, the Tawny lark is one of India's 22 lark species. It is endemic to the Deccan region, locally common in its range and not yet threatened. However, the habitat it lives in – grasslands and scrub lands – are one of the fastest disappearing in the country.

Source: <http://www.thehindu.com/sci-tech/science/for-a-lark-this-bird-imitates-34-others/article19897541.ece>

Q.67) _____ is the first state to formulate an Organic Farming Policy.

- a) Sikkim
- b) Karnataka
- c) Maharashtra
- d) Tamil Nadu

Q.67) Solution (b)

Karnataka is the first State to formulate an organic farming policy way back in 2004.

Karnataka announced an organic policy (Karnataka Organic Policy, 2017) that seeks to cater to the entire organic value chain and signals the shift in emphasis from traditional agriculture, which is increasingly becoming unsustainable. The state is the first in the country to do so.

Source: <http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/state-takes-the-lead-in-lobbying-with-fao-for-an-international-year-of-millet/article19899680.ece>

Q.68) Which of the following is a Russian Ice Shelf?

- a) Ward Hunt Ice Shelf
- b) Milne Ice Shelf
- c) Alfred Ernest Ice Shelf
- d) None of the above

Q.68) Solution (d)

All Canadian ice shelves are attached to Ellesmere Island and lie north of 82°N. Ice shelves that are still in existence are the Alfred Ernest Ice Shelf, Milne Ice Shelf, Ward Hunt Ice Shelf and Smith Ice Shelf. The M'Clintock Ice Shelf broke up from 1963 to 1966; the Ayles Ice Shelf broke up in 2005; and the Markham Ice Shelf broke up in 2008.

Q.69) 'Thermohaline Circulation' controls large-scale movement of oceanic flow.

Thermohaline circulation is driven by which of the following gradients?

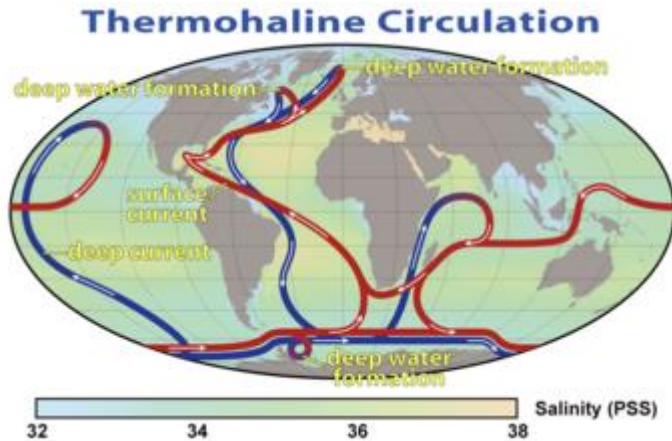
- a) Temperature
- b) Salinity
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.69) Solution (c)

Winds drive ocean currents in the upper 100 meters of the ocean's surface. However, ocean currents also flow thousands of meters below the surface. These deep-ocean currents are driven by differences in the water's density, which is controlled by temperature (thermo) and salinity (haline). This process is known as thermohaline circulation.

In the Earth's polar regions ocean water gets very cold, forming sea ice. As a consequence the surrounding seawater gets saltier, because when sea ice forms, the salt is left behind. As the seawater gets saltier, its density increases, and it starts to sink. Surface water is pulled in to replace the sinking water, which in turn eventually becomes cold and salty enough to sink. This initiates the deep-ocean currents driving the global conveyor belt.

The thermohaline circulation is sometimes called the ocean conveyor belt, the great ocean conveyor, or the global conveyor belt. On occasion, it is used to refer to the meridional overturning circulation (often abbreviated as MOC). The term MOC is more accurate and well defined, as it is difficult to separate the part of the circulation which is driven by temperature and salinity alone as opposed to other factors such as the wind and tidal forces. Moreover, temperature and salinity gradients can also lead to circulation effects that are not included in the MOC itself.



Q.70) Hydraulic conductivity is primarily controlled by?

- a) Porosity
- b) Hydraulic gradient
- c) Potentiometric surface
- d) Permeability

Q.70) Solution (d)

Hydraulic conductivity, symbolically represented as K , is a property of vascular plants, soils and rocks, that describes the ease with which a fluid (usually water) can move through pore spaces or fractures. It depends on the intrinsic permeability of the material, the degree of saturation, and on the density and viscosity of the fluid. Saturated hydraulic conductivity, K_{sat} , describes water movement through saturated media.

By definition, hydraulic conductivity is the ratio of velocity to hydraulic gradient indicating permeability of porous media.

Source: <https://timesofindia.indiatimes.com/city/kochi/vedanta-in-talks-with-kerala-govt-to-use-copper-slag-in-road-works/articleshow/61146991.cms>

Q.71) Recently, a molecule E2D was in news. Consider the following statements

1. It is found in mammalian blood
2. It gives blood its characteristic metallic odour
3. It is used by predators to locate blood or prey

Select the correct statements

- a) 1 and 2

- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.71) Solution (d)

trans-4,5-Epoxy-(E)-2-decenal is an oxygenated α,β -unsaturated aldehyde found in mammalian blood that gives blood its characteristic metallic odor. It is used by predators to locate blood or prey. Humans can smell it at a concentration of 1.5 pg/l in air, at 15 ng/L in water and 1.3 μ g/L in oil. It was permitted as a food flavouring in the EU until it was prohibited on 11 July 2017.

The chemical is released when lipids in blood break down after being exposed to air.

Source: <https://phys.org/news/2017-10-scientists-blood-molecule-wolves-repels.html>

Q.72) Consider the following statements about 'Paika Rebellion'

1. It was led by Bakshi Jagabandhu Bidyadhar
2. It took place when the British East India company wrested the rent-free land that had been given to the Paiks for their military service to the Kingdom of Khurda

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.72) Solution (c)

A valiant uprising of soldiers led by Buxi Jagabandhu (Bidyadhar Mohapatra) took place in Khurda of Odisha.

It was the Paika Revolution of 1817, headed by their redoubtable leader Jagabandhu Bidyadhar Mohapatra Bhramarbar Rai, more popularly known as Bakshi Jagabandhu of Khurda. Jagabandhu was a jagirdar under the King of Khurda and Killa Rorang was his familial estate. "Bakshi" was a title given to military leaders, who functioned much like the mansabdars under the Mughals.

The Paikas were the traditional landed militia of Odisha. They functioned as soldiers during war and had policing duties in peacetime. There were three types of Paiks - the Pahari who

were basically swordsmen, the Banuas or gunmen (matchlock men rater) and the archers classified as the Dhenkiyas.

When armies of the East India Company overran most of Odisha in 1803, the Raja of Khurda lost his primacy and the power and prestige of the Paikas went on a decline. The British were not comfortable with these aggressive, warlike new subjects and set up a commission under Walter Ewer to look into the issue.

The last lines of Ewer's report succinctly sum up what was coming for the Paikas - he concluded his report by saying "... unless the Paik community is ruined completely, British rule cannot run smoothly".

The commission recommended that the hereditary rent-free lands granted to the Paikas be taken over by the British administration and this recommendation was zealously adhered to. However, the rebellion had several other underlying causes - like the rise in the price of salt, abolition of the cowrie currency for payment of taxes and an overtly extortionist land revenue policy.

The immediate trigger for the rebellion probably came in March 1817, when a body of around 400 swordsmen from Gumsur came to Khurda and revolted openly against the Company's rule. The Paiks under Jagabandhu joined them and proceeded to Khurda.

Although initially the Company struggled to respond they managed to put down the rebellion by May 1817. Many of the Paik leaders were hung or deported. Jagabandhu would surrender in 1825 and was still a prisoner when he passed away in 1829. Peace never really returned to Odisha as local insurgencies kept flaring up, like the one in Tapanga in 1827 and Banapur in 1835.

Source: <http://www.thehindu.com/todays-paper/tp-national/paika-bidroha-to-be-named-as-1st-war-of-independence/article19909264.ece>

Q.73) Consider the following statements about Water fluoridation

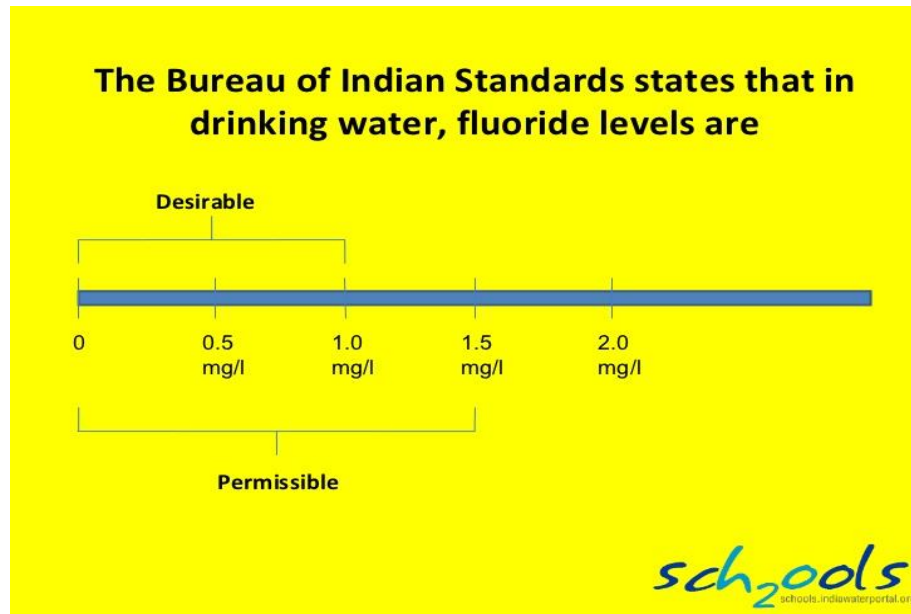
1. Low levels of fluoride in drinking water (0.5 to 1 mg/l) protect against dental caries
2. High levels of fluoride in drinking water (above 1.5 mg/l) lead to dental and skeletal fluorosis

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.73) Solution (c)

Water fluoridation is the controlled addition of fluoride to a public water supply to reduce tooth decay. Fluoridated water contains fluoride at a level that is effective for preventing cavities; this can occur naturally or by adding fluoride. Fluoridated water operates on tooth surfaces: in the mouth, it creates low levels of fluoride in saliva, which reduces the rate at which tooth enamel demineralizes and increases the rate at which it remineralizes in the early stages of cavities.



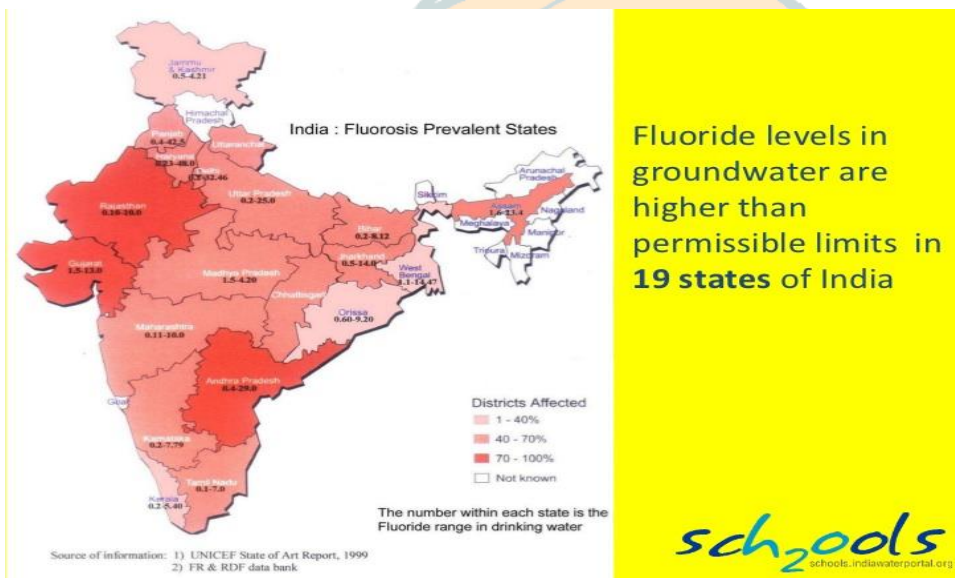
Fluoride

- Low levels of fluoride in drinking water (0.5 to 1 mg/l) protect against dental caries
- High levels of fluoride in drinking water (above 1.5 mg/l) will lead to adverse health impacts ranging from dental fluorosis to skeletal fluorosis
- Fluoride levels in water beyond desirable / permissible limits is typically found in groundwater and not surface water

Other symptoms

- Fatigue
- Low hemoglobin count
- Irritation
- Loss of appetite
- Excessive thirst and urination
- Miscarriage
- Inability to conceive due to defective sperm
- Depression

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News:

- Researchers at the Indian Institute of Technology (IIT) Hyderabad have used activated jamun seed powder to bring the fluoride content in drinking water to less than the WHO limit of 1.5 mg per litre.
- The activated jamun seed acquires a positive charge at low pH and the positive charge attracts the fluoride ions while the negative charge in an alkaline medium repulses the fluoride ions.
- The fluoride ion removal increases with a decrease in pH, with maximum adsorption found at pH 3.
- They tested it using groundwater taken from Nalgonda village, which is one of the worst fluoride-affected villages in India.
- The fluoride content was successfully reduced to 1.5 mg per litre in the groundwater.

Source: <http://www.thehindu.com/sci-tech/science/iit-hyderabad-uses-activated-jamun-to-remove-fluoride-from-water/article19896298.ece>

Q.74) Singur, a rural block in West Bengal's Hooghly district was in news recently due to

- a) Butterfly and Frogs Diversity
- b) New butterfly species 'Banded Tit'
- c) New species of Zingiber with medicinal properties
- d) None of the above

Q.74) Solution (a)

According to the recent study by Zoological Survey of India, Singur in West Bengal's Hooghly district is home to atleast 69 species of Butterflies. Five of the species found in Singur are rare and to be protected under the Wildlife (Protection) Act, 1972. They include species like the Tree Flitter, Striped Albatross, Pea Blue, Common Indian Crow and Danaid Eggfly.

Singur is not only rich in butterfly diversity but also in the diversity of frogs and birds.

It has no forested land and the area is known for rice, potato and vegetable cultivation.

Source: <http://www.thehindu.com/todays-paper/tp-national/butterflies-are-more-than-a-nano-attraction-in-singur/article19899383.ece>

Q.75) Which of the following statements about Particulate Matter is INCORRECT?

- a) It is the sum of all solid and liquid particles suspended in air including both organic and inorganic particles
- b) Particulate matter present in air is divided into different categories depending on the size of the particles.
- c) PM 2.5 is an atmospheric particulate matter of diameter of fewer than 2.5 micrometres, which is around 3 per cent the diameter of a human hair
- d) None of the above

Q.75) Solution (d)

Particulate matter is the sum of all solid and liquid particles suspended in air many of which are hazardous. This complex mixture includes both organic and inorganic particles, such as dust, pollen, soot, smoke, and liquid droplets. These particles vary greatly in size, composition, and origin.

Particulate matter present in air is divided into different categories depending on the size of the particles (aerodynamic diameter).

Fine particles are airborne particles which are smaller than coarse particles. They have an aerodynamic diameter of $2.5\ \mu\text{m}$ or less ($\text{PM}_{2.5}$). The fine particles which are smaller than $0.1\ \mu\text{m}$ are referred to as ultrafine particles ($\text{PM}_{0.1}$).

Fine particles are largely formed from gases.

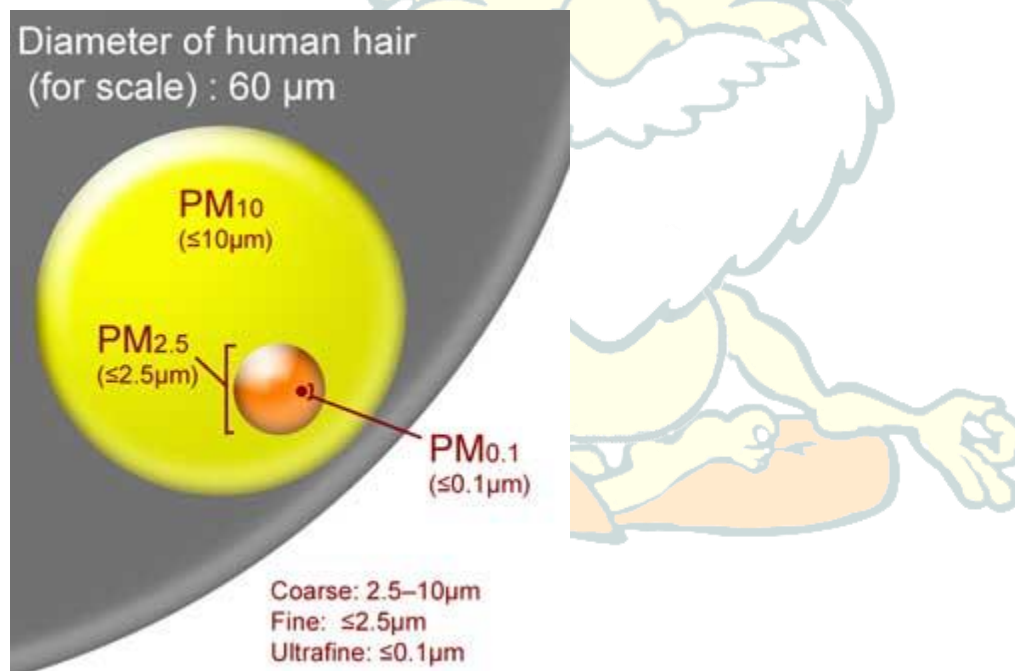
Ultrafine particles are formed by nucleation, which is the initial stage in which gas becomes a particle. These particles can grow up to a size of $1\ \mu\text{m}$ either through condensation, when additional gas condensates on the particles, or through coagulation, when two or more particles combine to form a larger particle.

Please note that ultrafine particles ($\text{PM}_{0.1}$) are part of the fine fraction ($\text{PM}_{2.5}$).

$\text{PM}_{0.1}$ is particulate matter with an aerodynamic diameter of up to $0.1\ \mu\text{m}$, referred to as the ultrafine particle fraction.

$\text{PM}_{2.5}$ is particulate matter with an aerodynamic diameter of up to $2.5\ \mu\text{m}$, referred to as the fine particle fraction (which per definition includes the ultrafine particles).

PM_{10} is particulate matter with an aerodynamic diameter of up to $10\ \mu\text{m}$, i.e. the fine and coarse particle fractions combined.



Source: <http://indianexpress.com/article/what-is/post-diwali-pm-2-5-gets-into-delhi-air-badly-what-are-pm2-5-and-the-effect-4899768/>

Q.76) The Supreme Court judgement in 'Bijoe Emmanuel & Ors vs State of Kerala & Ors' is concerned with

- a) Basic structure of the constitution
- b) Right to healthy and pollution-free environment
- c) Provided basic definitions of sexual harassment at the workplace
- d) None of the above

Q.76) Solution (d)

The 1986 Supreme Court judgment in Bijoe Emmanuel vs. State of Kerala dealing with the expulsion of three children who belonged to the Jehovah's Witnesses sect, for refusing to sing the national anthem in school, said this was contrary to fundamental rights of free speech and freedom to practise their religion.

Source: <http://www.thehindu.com/todays-paper/tp-national/why-make-a-show-of-patriotism-sc-judge/article19908827.ece>

Q.77) Consider the following statements

1. Governor of an Indian state draws ordinance making power from Article 213 of the constitution.
2. Article 123 of Constitution gives legislative power to President

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.77) Solution (c)

Article 123 of Constitution

- It gives legislative power to President. He can issue ordinances when Parliament is in recess i.e. not in session if there is urgent need to have a law on some urgent public matter.



- The ordinance has similar effect to an act of parliament. However, every ordinance must be laid and approved by both houses of the parliament within 6 weeks from the reassembling
- If not placed and approved by both houses of the parliament after reassembling it becomes invalid or lapses.

Governor of an Indian state draws ordinance making power from Article 213 of the constitution. This article empowers the governor to promulgate ordinance on urgent matter during recess of legislature. To issue an ordinance, the governor must be satisfied with the circumstances that make it necessary for him / her to take immediate action.

Governor cannot promulgate an ordinance in any of the three situations give below:

- If the ordinance has the provisions which of embodied in a bill would require president's sanction.
- If the ordinance has the provisions which the governor would reserve as a bill containing them for the president's sanction.
- If an act of the state legislature has the same provisions that would be invalid without the assent of the president.

Source: <http://indianexpress.com/article/opinion/columns/colonial-rajasthan-ordinance-vasundhara-raje-criminal-laws-govt-officials-investigation-4903373/>

Q.78) Consider the following statements about '123 Agreement'

1. It is Civil Nuclear agreement signed between India and Japan
2. India agreed to separate its civil and military nuclear facilities and to place all its civil nuclear facilities under International Atomic Energy Agency (IAEA) safeguards

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.78) Solution (b)

The bilateral "Agreement for Co-operation between the Government of India and the Government of the United States of America concerning Peaceful Uses of Nuclear Energy" has been done in view of the requirement for the US side under Section 123 of its Atomic Energy Act 1954. Hence it is also popularly known as the 123 Agreement.

The framework for this agreement was a July 18, 2005, joint statement by then Indian Prime Minister Manmohan Singh and then U.S. President George W. Bush, under which India agreed to separate its civil and military nuclear facilities and to place all its civil nuclear facilities under International Atomic Energy Agency (IAEA) safeguards and, in exchange, the United States agreed to work toward full civil nuclear cooperation with India. This U.S.-India deal took more than three years to come to fruition as it had to go through several complex stages, including amendment of U.S. domestic law, especially the Atomic Energy Act of 1954, a civil-military nuclear Separation Plan in India, an India-IAEA safeguards (inspections) agreement and the grant of an exemption for India by the Nuclear Suppliers Group, an export-control cartel that had been formed mainly in response to India's first nuclear test in 1974. In its final shape, the deal places under permanent safeguards those nuclear facilities that India has identified as "civil" and permits broad civil nuclear cooperation, while excluding the transfer of "sensitive" equipment and technologies, including civil enrichment and reprocessing items even under IAEA safeguards. On August 18, 2008 the IAEA Board of Governors approved, and on February 2, 2009, India signed an India-specific safeguards agreement with the IAEA. After India brought this agreement into force, inspections began in a phased manner on the 35 civilian nuclear installations India has identified in its Separation Plan. The deal is seen as a watershed in U.S.-India relations and introduces a new aspect to international nonproliferation efforts. On August 1, 2008, the IAEA approved the safeguards agreement with India, after which the United States approached the Nuclear Suppliers Group] (NSG) to grant a waiver to India to commence civilian nuclear trade. The 48-nation NSG granted the waiver to India on September 6, 2008 allowing it to access civilian nuclear technology and fuel from other countries. The implementation of this waiver made India the only known country with nuclear weapons which is not a party to the Non-Proliferation Treaty (NPT) but is still allowed to carry out nuclear commerce with the rest of the world.

Read More -

https://mea.gov.in/Uploads/PublicationDocs/19149_Frequently_Asked_Questions_01-11-2008.pdf

Source: <http://www.livemint.com/Opinion/9ndp8r03MpQBIDG9h7IK1K/Rex-Tillerson-goes-long-on-IndiaUS-relationship.html>

Q.79) Consider the following statements about 'Environmental Kuznets curve'

1. It describes that as countries develop initially, pollution increases, but later, as the economy achieves further development, pollution decreases.
2. According to 'Kuznets Curve' Pollution follows an inverted "U" shape as it rises and then falls again with the increase of income per-capita.

Select the correct statements

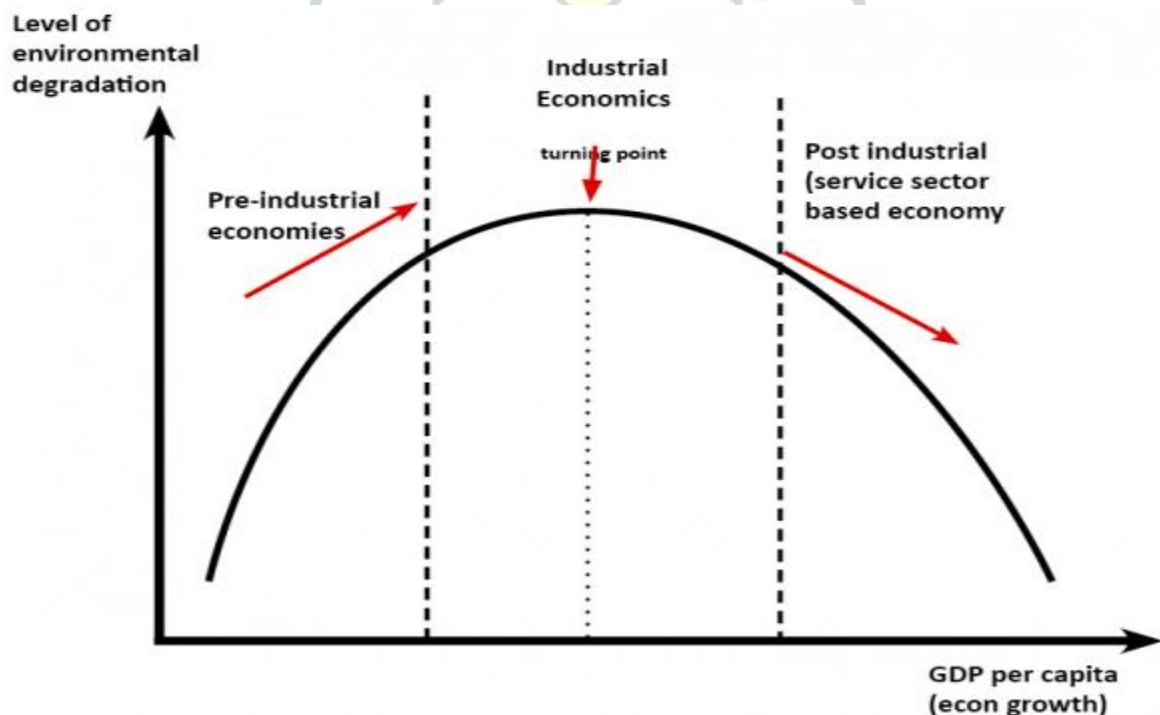
- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.79) Solution (c)

The environmental Kuznets curve suggests that economic development initially leads to deterioration in the environment, but after a certain level of economic growth, a society begins to improve its relationship with the environment and levels of environmental degradation reduces.

From a very simplistic viewpoint, it can suggest that economic growth is good for the environment.

However, critics argue there is no guarantee that economic growth will lead to an improved environment – in fact, the opposite is often the case. At the least, it requires a very targeted policy and attitudes to make sure that economic growth is compatible with an improving environment.

**Limitations of Kuznets Environmental Curve**

- Empirical evidence is mixed. There is no guarantee that economic growth will see a decline in pollutants.
- Pollution is not simply a function of income, but many factors. For example, the effectiveness of government regulation, the development of the economy, population levels.
- Global pollution. Many developed economies have seen a reduction in industry and growth in service sector, but they are still importing goods from developing countries. In that sense, they are exporting environmental degradation. Pollution may reduce in the UK, US, but countries who export to these countries are seeing higher levels of environmental degradation. One example is with regard to deforestation. Higher income countries tend to stop process of deforestation, but at the same time, they still import meat and furniture from countries who are creating farmland out of forests.
- N-Shaped. Some economists argue that there is a degree of reduced environmental degradation post-industrialisation. But, if the economy continues to expand, then inevitably some resources will continue to be used in greater measure. There is no guarantee that long-term levels of environmental degradation will continue to fall.
- Countries with the highest GDP have highest levels of CO2 emission.

Source: <http://www.thehindu.com/opinion/op-ed/economic-growth-an-alternative-view/article19907390.ece>

Q.80) Consider the following statements about Juvenile Justice (Care and Protection of Children) Act, 2015

1. Central Adoption Resource Authority (CARA) is given the status of a statutory body to streamline adoption procedures for orphan, abandoned and surrendered children
2. Juveniles in conflict with Law in the age group of 16–18, involved in Heinous Offences, can be tried as adults.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.80) Solution (c)

Juvenile Justice (Care and Protection of Children) Act, 2015 has been passed by Parliament of India. It aims to replace the existing Indian juvenile delinquency law, Juvenile Justice (Care and Protection of Children) Act, 2000, so that juveniles in conflict with Law in the age group

of 16–18, involved in Heinous Offences, can be tried as adults. The Act came into force from 15 January 2016.

It was passed on 7 May 2015 by the Lok Sabha amid intense protest by several Members of Parliament. It was passed on 22 December 2015 by the Rajya Sabha.

To streamline adoption procedures for orphan, abandoned and surrendered children, the existing Central Adoption Resource Authority (CARA) has been given the status of a statutory body to enable it to perform its function more effectively.

Read More - <http://pib.nic.in/newsite/PrintRelease.aspx?relid=134513>

Source: <http://indianexpress.com/article/india/government-plans-to-amend-hindu-adoptions-act-to-check-adoption-under-personal-law-4903592/>

Q.81) Consider the following statements about Chief Election Commissioner of India

1. The Chief Election Commissioner can be removed from his office only by the President of India
2. Other Election Commissioners can be removed by the President of India on the recommendation of the Chief Election Commissioner and it is binding on the President

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.81) Solution (d)

The Chief Election Commissioner of India can be removed from his office by the Parliament with a two-thirds majority in both the Lok Sabha and the Rajya Sabha on the grounds of proved misbehavior or incapacity. Other Election Commissioners can be removed by the President of India on the recommendation of the Chief Election Commissioner. A Chief Election Commissioner has never been impeached in India. In 2009, just before the 2009 Lok Sabha Elections, Chief Election Commissioner N. Gopalaswami sent a recommendation to President Prathibha Patil to remove Election Commissioner Navin Chawla, who was soon to take office as the Chief Election Commissioner and to subsequently supervise the Lok Sabha Election, citing his partisan behavior in favor of one political party. The President opined that such a recommendation is not binding on the President, and hence rejected it.[8]

Subsequently, after Gopalswami's retirement the next month, Chawla became the Chief Election Commissioner and supervised the 2009 Lok Sabha Elections.

Source: <https://economictimes.indiatimes.com/news/politics-and-nation/plea-in-sc-to-protect-election-commissioners-from-removal/articleshow/61206894.cms>

Q.82) Consider the following statements about Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

1. Under this Scheme, Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL)
2. The scheme will be implemented through the National Skill Development Corporation (NSDC)

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.82) Solution (c)

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Approved for another four years (2016-2020) to benefit 10 million youth

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood. Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL). Under this Scheme, Training and Assessment fees are completely paid by the Government.

Key Components of the Scheme:

Short Term Training

The Short Term Training imparted at PMKVY Training Centres (TCs) is expected to benefit candidates of Indian nationality who are either school/college dropouts or unemployed. Apart from providing training according to the National Skills Qualification Framework (NSQF), TCs shall also impart training in Soft Skills, Entrepreneurship, Financial and Digital Literacy. Duration of the training varies per job role, ranging between 150 and 300 hours.

Upon successful completion of their assessment, candidates shall be provided placement assistance by Training Partners (TPs). Under PMKVY, the entire training and assessment fees are paid by the Government. Payouts shall be provided to the TPs in alignment with the Common Norms. Trainings imparted under the Short Term Training component of the Scheme shall be NSQF Level 5 and below.

Recognition of Prior Learning

Individuals with prior learning experience or skills shall be assessed and certified under the Recognition of Prior Learning (RPL) component of the Scheme. RPL aims to align the competencies of the unregulated workforce of the country to the NSQF. Project Implementing Agencies (PIAs), such as Sector Skill Councils (SSCs) or any other agencies designated by MSDE/NSDC, shall be incentivized to implement RPL projects in any of the three Project Types (RPL Camps, RPL at Employers Premises and RPL centres). To address knowledge gaps, PIAs may offer Bridge Courses to RPL candidates.

Special Projects

The Special Projects component of PMKVY envisages the creation of a platform that will facilitate trainings in special areas and/or premises of Government bodies, Corporates or Industry bodies, and trainings in special job roles not defined under the available Qualification Packs (QPs)/National Occupational Standards (NOSs). Special Projects are projects that require some deviation from the terms and conditions of Short Term Training under PMKVY for any stakeholder. A proposing stakeholder can be either Government Institutions of Central and State Government(s)/Autonomous Body/Statutory Body or any other equivalent body or corporates who desire to provide training to candidates.

Kaushal and Rozgar Mela

Social and community mobilisation is extremely critical for the success of PMKVY. Active participation of the community ensures transparency and accountability, and helps in leveraging the cumulative knowledge of the community for better functioning. In line with this, PMKVY assigns special importance to the involvement of the target beneficiaries through a defined mobilisation process. TPs shall conduct Kaushal and Rozgar Melas every six months with press/media coverage; they are also required to participate actively in National Career Service Melas and on-ground activities.

Placement Guidelines

PMKVY envisages to link the aptitude, aspiration, and knowledge of the skilled workforce it creates with employment opportunities and demands in the market. Every effort thereby needs to be made by the PMKVY TCs to provide placement opportunities to candidates, trained and certified under the Scheme. TPs shall also provide support to entrepreneurship development.

Monitoring Guidelines

To ensure that high standards of quality are maintained by PMKVY TCs, NSDC and empanelled Inspection Agencies shall use various methodologies, such as self-audit reporting, call validations, surprise visits, and monitoring through the Skills Development Management System (SDMS). These methodologies shall be enhanced with the engagement of latest technologies.

The scheme will be implemented through the National Skill Development Corporation (NSDC).

Source: <http://indiatoday.intoday.in/education/story/pradhan-mantri-kaushal-kendra-for-skilling/1/1073525.html>

Q.83) Vultures are considered to be declining in population mostly due to consumption of carcasses of livestock and cattle injected with

- a) Ketoprofen
- b) Diclofenac
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.83) Solution (c)

The cause of the rapid plunge in the population was initially unclear, but in 2003 was traced to the anti-inflammatory drugs diclofenac and ketoprofen, which is lethal to vultures when they consume the carcasses of dead animals treated with it.

Read More - <http://indiatoday.intoday.in/education/story/vulture-crisis-in-india/1/498395.html>

Source: <http://www.thehindu.com/news/national/tamil-nadu/hc-turns-down-plea-of-pharmaccompanies-in-diclofenac-case/article19914580.ece>

Q.84) Indradhanush scheme is concerned with

- a) Recapitalisation of banks
- b) SBI and its associate banks merger
- c) Black money post demonetisation
- d) Securing NPAs

Q.84) Solution (a)

Source: <https://blogs.economictimes.indiatimes.com/FindingtheCenter/bank-recapitalization-an-integrated-package/>

Q.85) Rashtriya Rail Sanraksha Kosh is focused on

- a) High Speed Railways
- b) Passenger Safety
- c) Pension for Railway staff
- d) Upgrading all the meter and narrow gauge to broad gauge

Q.85) Solution (b)

Source: http://www.business-standard.com/article/economy-policy/for-web-print-under-goyal-railways-set-to-get-safety-stimulus-117102500983_1.html

Q.86) Ichthyosaur fossils have been found in which of the following?

- 1. India
- 2. Australia
- 3. South America
- 4. Europe

Select the correct code:

- a) 1, 2 and 3
- b) 2, 3 and 4
- c) 1, 3 and 4
- d) All of the above

Q.86) Solution (d)

While many ichthyosaur fossils have been found in North America and Europe, the fossil record in the Southern Hemisphere has mostly been limited to South America and Australia.

Recently, Ichthyosaur fossil has been unearthed in Kutch, Gujarat.

It throws light on the evolution and diversity of ichthyosaurs in the Indo-Madagascan region of the former Gondwanaland and India's biological connectivity with other continents in the Jurassic.

Earlier too researchers have discovered evidence of ichthyosaurs in prehistoric India. Remnants were reported from Ariyalur in Tamil Nadu in 2016 but these were only fossils of teeth and part of the vertebra. In Kutch, the team reported the finding of vertebral column, ribs, neural spines and a part of the snout.

Source: <http://www.thehindu.com/sci-tech/science/fish-lizard-fossil-from-kutch-is-a-jurassic-first/article19920228.ece>

Q.87) Which one is not an encryption technique?

- a) RSA
- b) DES
- c) AES
- d) FTP

Q.87) Solution (d)

RSA, DES & Triple DES, AES are types of encryption techniques. Others being Blowfish, Twofish etc.

Source: <https://blogs.economictimes.indiatimes.com/et-commentary/digital-india-better-safe-atms-than-sorry/>

Q.88) 'Stubble burning' is concerned with

- a) Burning crop residue
- b) Solid waste disposal
- c) Burning of e-waste
- d) None of the above

Q.88) Solution (a)

Stubble burning is the deliberate setting fire of the straw stubble that remains after wheat and other grains have been harvested.

The burning of stubble, contrasted with alternatives such as ploughing the stubble back into the ground has a number of consequences and effects on the environment

Stubble burning:

- Quickly clears the field and is cheap.
- Kills weeds, including those resistant to herbicide.
- Kills slugs and other pests.
- Can reduce nitrogen tie-up

However, it has a number of harmful effects on the environment:

- Loss of nutrients.
- Pollution from smoke.
- Damage to electrical and electronic equipment from floating threads of conducting waste.
- Risk of fires spreading out of control

Source: <https://economictimes.indiatimes.com/news/politics-and-nation/delhis-air-quality-set-to-dip-but-stubble-burning-no-villain/articleshow/61226357.cms>

Q.89) 'T.K. Vishwanathan Committee' is associated with?

- a) Money Laundering
- b) Defence Procurement
- c) Cybercrime
- d) Education reforms

Q.89) Solution (c)

The TK Viswanathan committee was formed to propose new laws or amendments to deal with hate speech on the internet in particular and Cybercrimes in general. The committee was formed after the Supreme Court struck down section 66A of the Information Technology (IT) Act. The committee has recently submitted the report and Ministry of Home affairs is examining the report.

Source: <http://www.thehindu.com/news/national/govt-studying-report-on-online-abuse/article19772279.ece>

Q.90) Consider the following statements about 'Mechi River'

1. It is a trans-boundary river flowing through Nepal and India
2. It is a tributary of the Mahananda River

Select the correct statements

- a) 1 Only
- b) 2 Only

- c) Both 1 and 2
- d) Neither 1 nor 2

Q.90) Solution (c)

The Mechi River is a trans-boundary river flowing through Nepal and India. It is a tributary of the Mahananda River. The Mechi originates in the Mahabharat Range in Nepal. It flows through Nepal, forms the boundary between India and Nepal and then flows through the Indian state of Bihar to join the Mahananda in Kishanganj district.

Q.91) Consider the following statements about 'National Court Management Systems' (NCMS)

1. It is under overall control of the Chief Justice of India
2. It primarily deals with policy issues
3. The NCMS Committee is to be advised by an Advisory Committee consisting of two Judges of Supreme Court of India and such other Chief Justices/Judges of High Courts as may be nominated by the Chief Justice of India.

Select the correct statements

- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.91) Solution (d)

National Court Management Systems in India

Acting on the recommendations made by the Law Commission, the Chief Justice of India, in consultation with Minister of Law and Justice, Government of India, in 2012 directed that National Court Management Systems, for enhancing timely justice, may be established. The National Court Management Systems will be under overall control of Hon'ble the Chief Justice of India. It will primarily deal with policy issues. NCMS will include the following six main elements:

- A National Framework of Court Excellence (NFCE) would be set up, that will set measurable performance standards for Indian courts, addressing issues of quality, responsiveness and timeliness.

- A system for monitoring and enhancing the performance parameters established in the NFCE on quality, responsiveness and timeliness would be established.
- A system of Case Management to enhance user friendliness of the Judicial System, via technology would be incorporated.
- A National System of Judicial Statistics (NSJS) would be appointed to provide a common national platform for recording and maintaining judicial statistics from across the country. NSJS should provide real time statistics on case and courts that will enable systematic analysis of key factors such as quality, timeliness and efficiency of the judicial system across courts, districts/states, types of cases, stages of cases, costs of adjudication, time lines of cases, productivity and efficiency of courts, use of budgets and financial resources. It would enhance transparency and accountability.
- A Court Development Planning System would be assigned to provide a framework for systematic five year plans for the future development of the Indian judiciary.
- A Human Resource Development Strategy would be considered which would be standards on selection and training of judges of subordinate courts.

National Court Management Systems Committee (NCMSC): Specific proposals for the Court Management System outlined above will be developed by an 18 member National Court Management Systems Committee.

Advisory Committee: The NCMS Committee shall be advised by an Advisory Committee consisting of two Judges of Supreme Court of India and such other Chief Justices/Judges of High Courts as may be nominated by the Hon'ble Chief Justice of India.

Read More - <http://www.pib.nic.in/newsite/backgrounders.aspx?relid=88143>

Q.92) With reference to the 'Gram Nyayalaya Act', which of the following statements is/are correct?

1. As per the Act, Gram Nyayalayas can hear only civil cases and not criminal cases.
2. The Act allows local social activists as mediators/reconciliators.

Select the correct code

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.92) Solution (b)

Gram Nyayalayas can hear both civil and criminal cases. Social workers in the village level can be appointed as mediators/reconciliators.

Q.93) Consider the following statements about 'National Green Tribunal' (NGT)

1. It provides for compensation, relief and restoration of the ecology in accordance with the 'Polluter Pays' principle and powers to enforce the 'precautionary principle'.
2. India is the third country following Australia and New Zealand to have such a system.

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.93) Solution (c)

The National Green Tribunal ('NGT') was established on 18th October, 2010 under the National Green Tribunal Act 2010. The Tribunal is dedicated to the effective and expeditious disposal of cases relating to the subject of forest, environment, biodiversity, air and water. It is a specialized body equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues. The National Green Tribunal started functioning since 4th July, 2011. The Principal Bench is based at New Delhi with circuit benches at Chennai, Bhopal, Pune and Kolkata so that it can reach remoter parts of India. The principal bench and the regional benches are all currently functional.

This court can rightly be called 'special' because India is the third country following Australia and New Zealand to have such a system. The National Green Tribunal is India's first dedicated environmental court with a wide jurisdiction to deal with not only violations of environmental laws, but also to provide for compensation, relief and restoration of the ecology in accordance with the 'Polluter Pays' principle and powers to enforce the 'precautionary principle'.

Source: <http://indianexpress.com/article/india/international-conference-to-discuss-ways-to-set-up-ngt-like-tribunal-4911570/>

Q.94) Trace Gas Orbiter (TGO) is a collaborative Mars Mission between

- a) Russian and European Space Agency
- b) JAXA and NASA

- c) NASA and ISRO
- d) None of the above

Q.94) Solution (a)

The ExoMars Trace Gas Orbiter (TGO) is a collaborative project between the European Space Agency (ESA) and Roscosmos that sent an atmospheric research orbiter and the Schiaparelli demonstration lander to Mars in 2016 as part of the European-led ExoMars programme.

Q.95) Āstika has been defined as those who accept the epistemic authority of the Vedas. Which of the following is a Āstika school of Indian philosophy?

- a) Buddhism
- b) Jainism
- c) Nyāyá
- d) None of the above

Q.95) Solution (c)

Āstika literally means "there is, there exists" and nāstika means "not āstika". These have been concepts used to classify Indian philosophies by modern scholars, and some Hindu, Buddhist and Jaina texts. Āstika has been defined in one of three ways; as those who accept the epistemic authority of the Vedas, as those who accept the existence of ātman, or as those who accept the existence of Ishvara. In contrast, nāstika are those who deny the respective definitions of āstika.

The most studied Āstika schools of Indian philosophies, sometimes referred to as orthodox schools, are six: Nyāyá, Vaiśeṣika, Sāṃkhya, Yoga, Mīmāṃsā, and Vedānta – all schools of Hinduism. The most studied Nāstika schools of Indian philosophies, sometimes referred to as heterodox schools, are four: Buddhism, Jainism, Cārvāka, and Ājīvika – last two are also schools of Hinduism.

Q.96) Which of the following provided for a common currency for the member countries of European Community?

- a) Marrakesh Treaty
- b) Bonn Convention
- c) Basel convention
- d) Maastricht Treaty

Q.96) Solution (d)

Leaders reached agreement on currency union with the Maastricht Treaty, signed on 7 February 1992. It agreed to create a single currency, although without the participation of the United Kingdom, by January 1999.

The Maastricht Treaty (formally, the Treaty on European Union or TEU) undertaken to integrate Europe was signed on 7 February 1992 by the members of the European Community in Maastricht, Netherlands. On 9–10 December 1991, the same city hosted the European Council which drafted the treaty.

Q.97) Consider the following statements about Air Mass

1. It is a large volume of air in the atmosphere that is uniform in temperature and humidity
2. Air Masses are not formed over water

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.97) Solution (a)

An air mass is a large volume of air in the atmosphere that is mostly uniform in temperature and moisture. Air masses can extend thousands of kilometers across the surface of the Earth, and can reach from ground level to the stratosphere—16 kilometers (10 miles) into the atmosphere.

Air masses form over large surfaces with uniform temperatures and humidity, called source regions. Low wind speeds let air remain stationary long enough to take on the features of the source region, such as heat or cold. When winds move air masses, they carry their weather conditions (heat or cold, dry or moist) from the source region to a new region. When the air mass reaches a new region, it might clash with another air mass that has a different temperature and humidity. This can create a severe storm.

Meteorologists identify air masses according to where they form over the Earth. There are four categories for air masses: arctic, tropical, polar and equatorial. Arctic air masses form in the Arctic region and are very cold. Tropical air masses form in low-latitude areas and are

moderately warm. Polar air masses take shape in high-latitude regions and are cold. Equatorial air masses develop near the Equator, and are warm.

Air masses are also identified based on whether they form over land or over water. Maritime air masses form over water and are humid. Continental air masses form over land and are dry.

Therefore, an air mass that develops over northern Canada is called a continental polar air mass and is cold and dry. One that forms over the Indian Ocean is called a maritime tropical air mass and is warm and humid.

Q.98) "EU 3 + 3" is associated with

- a) Brexit
- b) Catalan Referendum
- c) Greek Bailout
- d) None of the above

Q.98) Solution (d)

"EU 3 + 3", more commonly referred to as the "E3+3", refers to a grouping which includes the EU-3 and China, Russia, and the United States. It was coined when these states joined the EU diplomatic efforts with Iran in 2006. In the United States and Russia, it is more commonly known as P5+1, which refers to the five permanent members of the UN Security Council plus Germany.

It is associated with Iran Nuclear Deal

Q.99) The total liability of the monetary authority of the country is called as

- a) Monetary base
- b) High powered money
- c) Both (a) and (b)
- d) Dead Currency

Q.99) Solution (c)

High Powered Money:

- The total liability of the monetary authority of the country, RBI, is called the monetary base or high powered money.
- It consists of currency (notes and coins in circulation with the public and vault cash of commercial banks) and deposits held by the Government of India and commercial banks with RBI.
- If a member of the public produces a currency note to RBI the latter must pay her value equal to the figure printed on the note.
- Similarly, the deposits are also refundable by RBI on demand from deposit-holders. These items are claims which the general public, government or banks have on RBI and hence are considered to be the liability of RBI.

Q.100) What is Medecins Sans Frontieres (MSF)?

- a) A non-government organization which specializes in international humanitarian aid and emergency medical assistance.
- b) An agency formed by the International Olympic Committee (IOC) to check misuse of drugs by sportspersons.
- c) An organization to develop applications of nano-technology in medicine.
- d) An organization of medical practitioners funded by the European Union which carries out research against spread of AIDS.

Q.100) Solution (a)

Medecins Sans Frontieres (MSF) also known in English as Doctors without Borders, is an international humanitarian non-governmental organization (NGO) best known for its projects in war-torn regions and developing countries affected by endemic diseases.

