



**INSIGHTSIAS**

SIMPLIFYING IAS EXAM PREPARATION

# INSIGHTS QUIZ

## DECEMBER 2019

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# 2020

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# 1. Economy

1) Consider the following statements regarding co-operative banks in India.

1. In India, co-operative banks are registered under the States Cooperative Societies Act.
2. The customers of a co-operative bank can also be its owners.
3. They do not come under the regulatory ambit of the Reserve Bank of India (RBI).

Which of the above statements is/are correct?

- a) 1 only
- b) 2, 3
- c) 1, 3
- d) 1, 2

Solution: d)

Co-operative banks are financial entities established on a co-operative basis and belonging to their members. This means that the customers of a co-operative bank are also its owners.

In India, co-operative banks are registered under the States Cooperative Societies Act. They also come under the regulatory ambit of the Reserve Bank of India (RBI) under two laws, namely, the Banking Regulations Act, 1949, and the Banking Laws (Co-operative Societies) Act, 1955.

They were brought under the RBI's watch in 1966, a move which brought the problem of dual regulation along with it.

2) Consider the following statements.

1. India's electricity demand fell in recent times due to sharp reduction in offtake from the industrialised states.
2. Electricity is part of the eight core industries.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: c)

India's electricity demand fell 13% in October led by a sharp reduction in offtake from the industrialised states like Gujarat & Maharashtra, which may indicate a deepening economic slowdown.

Eight Core Industries are Electricity, steel, refinery products, crude oil, coal, cement, natural gas and fertilizers.

Source

3) Consider the following statements.

1. To ensure uninterrupted supply of onion throughout the year, the crop is grown in three cycles – Kharif, late kharif and Rabi.
2. kharif and late kharif onion crops contain large moisture content compared to rabi crop.
3. Karnataka is India's largest onion-growing state.

Which of the above statements is/are correct?

- a) 2, 3
- b) 1, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)

Maharashtra, India's largest onion-growing state.

To ensure uninterrupted supply of onion throughout the year, the crop is grown in three cycles – Kharif (which is sown in May-July and harvested in October-December); late kharif (which is sown in August-September and harvested in January-March); and Rabi (which is sown in October-November and harvested in April).

Of these, kharif and late kharif crops cannot be stored because of large moisture content. Which means, onion grown in the rabi crop cycle is the only one that can be stored.

Source

4) Consider the following statements regarding Deposit insurance.

1. Deposit Insurance and Credit Guarantee Corporation (DICGC) protect depositors if a bank fails.
2. When a bank is liquidated, depositors are entitled to receive 50% of their deposits in the bank.
3. Primary cooperative societies are not insured by the DICGC.

Which of the above statements is/are correct?

- a) 1 only
- b) 1, 3
- c) 2, 3
- d) 1, 2

Solution: b)

Deposit insurance is providing insurance protection to the depositor's money by receiving a premium. The government has set up Deposit Insurance and Credit Guarantee Corporation (DICGC) under RBI to protect depositors if a bank fails.

Every insured bank pays premium amounting to 0.001% of its deposits to DICGC every year.

What happens to depositors' money when a bank fails?

When a bank is liquidated, depositors are entitled to receive an insurance amount of ₹1 lakh per individual from the Deposit Insurance and Credit Guarantee Corporation of India (DICGC).

The ₹1 lakh insurance limit includes both principal and interest dues across your savings bank accounts, current accounts, fixed deposits and recurring deposits held with the bank.

The corporation covers all commercial and co-operative banks, except in Meghalaya, Chandigarh, Lakshadweep and Dadra and Nagar Haveli. Besides, Only primary cooperative societies are not insured by the DICGC.

The DICGC does not include the following types of deposits:

1. Deposits of foreign governments.
2. Deposits of central/state governments.
3. Inter-bank deposits.
4. Deposits of the state land development banks with the state co-operative bank.
5. Any amount due on account of any deposit received outside India.
6. Any amount specifically exempted by the DICGC with previous approval of RBI.

5) Consider the following statements about Renewable Energy Certificates (RECs).

1. REC is a market-based mechanism which will help the states meet their regulatory requirements such as Renewable Purchase Obligations (RPOs) by overcoming the geographical constraints on existing renewable potential in different states.
2. Each REC represents the environmental benefits of 1MWh of renewable energy generation.
3. When one purchase RECs, renewable energy is generated on their behalf.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3

d) 1, 2, 3

Solution: d)

In a bid to promote renewable energy market in India, the Indian government has framed policies under the Electricity Act, 2003 and the National Action Plan on Climate Change (NAPCC) to increase the total renewable power generation capacity in the country.

Renewable Energy Certificates (RECs), also known as green energy certificates or tradable renewable certificates are proof that energy has been generated from renewable sources such as solar or wind power. Each REC represents the environmental benefits of 1MWh of renewable energy generation. When you purchase RECs, renewable energy is generated on your behalf.

Renewable Energy Certificates (REC) is a policy instrument to catalyze the development of renewable energy. It is a market-based mechanism which will help the states meet their regulatory requirements (such as Renewable Purchase Obligations (RPOs)) by overcoming the geographical constraints on existing renewable potential in different states.

Source

6) Consider the following statements regarding Goods & Services Tax Council.

1. Goods & Services Tax Council is a constitutional body for making recommendations to the Union and State Government on issues related to Goods and Service Tax.

2. The GST Council dictates tax rate, tax exemption, tax laws, and tax deadlines.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: c)

Goods & Services Tax Council is a constitutional body for making recommendations to the Union and State Government on issues related to Goods and Service Tax. The GST Council is chaired by the Union Finance Minister and other members are the Union State Minister of Revenue or Finance and Ministers in-charge of Finance or Taxation of all the States.

- The GST council is the key decision-making body that will take all important decisions regarding the GST.
- The GST Council dictates tax rate, tax exemption, the due date of forms, tax laws, and tax deadlines, keeping in mind special rates and provisions for some states.
- The predominant responsibility of the GST Council is to ensure to have one uniform tax rate for goods and services across the nation.

Source

7) Consider the following statements regarding National Housing Bank (NHB).

1. Reserve Bank of India (RBI) is the majority shareholder in NHB.

2. It is the principal agency to promote housing finance institutions both at local and regional levels.

3. It encourages augmentation of supply of buildable land and also building materials for housing.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: c)

Recently Reserve Bank of India (RBI) sold its entire stakes in National Housing Bank. The government now holds a 100 per cent stake in NHB.

NHB is an All India Financial Institution (AIFI), set up in 1988, under the National Housing Bank Act, 1987.

It is an apex agency established to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support incidental to such institutions and for matters connected therewith.

NHB has been established to achieve, inter-Alia, the following objectives –

1. To promote a sound, healthy, viable and cost-effective housing finance system to cater to all segments of the population and to integrate the housing finance system with the overall financial system.
2. To promote a network of dedicated housing finance institutions to adequately serve various regions and different income groups.
3. To augment resources for the sector and channelise them for housing.
4. To make housing credit more affordable.
5. To regulate the activities of housing finance companies based on regulatory and supervisory authority derived under the Act.
6. To encourage augmentation of supply of buildable land and also building materials for housing and to upgrade the housing stock in the country.
7. To encourage public agencies to emerge as facilitators and suppliers of serviced land, for housing.

Source

8) Consider the following statements regarding Currency Swap Arrangement (CSA).

1. The main purpose of currency swaps is to avoid turbulence and other risks in the foreign exchange market and exchange rate.
2. Both Central banks and governments engage in currency swaps with foreign counterparts to ensure adequate foreign currency during the time of foreign currency scarcity.
3. Currency swap agreements are always bilateral and promotes bilateral trade.

Which of the above statements is/are correct?

- a) 1, 3
- b) 1, 2
- c) 2, 3
- d) 1 only

Solution: b)

Currency Swap Arrangement (CSA) is an arrangement, between two friendly countries, which have regular, substantial or increasing trade, to basically involve in trading in their own local currencies, where both pay for import and export trade, at the pre-determined rates of exchange, without bringing in third country currency like the US Dollar.

In such arrangements no third country currency is involved, thereby eliminating the need to worry about exchange variations.

The main purpose of currency swaps is to avoid turbulence and other risks in the foreign exchange market and exchange rate. Central banks and governments engage in currency swaps with foreign counterparts to ensure adequate foreign currency during the time of foreign currency scarcity.

Currency swaps between governments also have supplementary objectives like promotion of bilateral trade, maintaining the value of foreign exchange reserves with the central bank and ensuring financial stability.

Currency swap agreement can be bilateral or multilateral.

9) Consider the following statements regarding Bharat Bond Exchange Traded Fund (ETF).

1. Bharat Bond Exchange Traded Fund (ETF), is the country's first Government bond exchange-traded fund aimed at retail investors.

2. Individuals, non-resident Indians, high networth individuals, top tier corporates and foreign portfolio investors (FPIs) can invest in Bharat Bond Exchange Traded Fund (ETF).

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

Bharat Bond Exchange Traded Fund (ETF), the country's first corporate bond exchange-traded fund aimed at retail investors, saw a strong response, with the issue getting subscribed around 1.7 times.

The issue saw wide participation across categories including individuals, non-resident Indians, high networth individuals, top tier corporates and foreign portfolio investors (FPIs).

The exchange traded fund will invest only in AAA-rated bonds of public sector companies.

Source

10) Consider the following statements regarding the powers and functions of Securities and Exchange Board of India.

- 1. Registering and regulating the working of venture capital funds and collective investment schemes, including mutual funds.
- 2. Promoting investors' education and training of intermediaries of securities markets.
- 3. Promoting insider trading in securities.

Which of the above statements is/are correct?

- a) 1, 3
- b) 2, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)

The Preamble of the Securities and Exchange Board of India describes the basic functions of the Securities and Exchange Board of India as "...to protect the interests of investors in securities and to promote the development of, and to regulate the securities market and for matters connected there with or incidental there to".

Statement 3 - prohibiting insider trading in securities.

Source

11) Consider the following statements regarding NEFT (National Electronic Funds Transfer).

- 1. NEFT has become a 24x7 facility on all days except on bank holidays.
- 2. NEFT has no upper limit to the transaction amount.
- 3. NEFT transactions will only be credited to the beneficiary account in batches, unlike the Immediate Payment Service (IMPS) system.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3



Solution: c)

Starting December 16, you can now transfer money online, using the National Electronic Fund Transfer (NEFT) system at any time of the day, all through the year. Earlier, NEFT transactions could only be carried out between 8 am to 7 pm on weekdays plus first and third Saturday — second and fourth Saturdays, plus Sundays, excluded.

Moreover, NEFT transactions weren't available on public holidays — which is not the case now. NEFT has no upper limit to the transaction amount. This means that you can now transfer large amounts round-the-clock through NEFT. "This will be extremely beneficial for large-value transactions which cannot be done through UPI or IMPS

NEFT transactions will only be credited to the beneficiary account in batches, unlike the Immediate Payment Service (IMPS) system, which transfers money in real time.

Source

12) Consider the following statements regarding IMPS (Immediate Payment Service).

1. IMPS is designed to be used for transferring small amounts with caps at ₹2 lakh per day.
2. IMPS transactions are not chargeable.
3. IMPS transaction can be done offline by visiting a bank branch.

Which of the above statements is/are correct?

- a) 1 only
- b) 1, 2
- c) 1, 3
- d) 1, 2, 3

Solution: a)

RBI announced that processing charges levied for NEFT and RTGS transactions will not apply starting January 2020. IMPS, on the other hand, is still chargeable. While the charge levied on an IMPS transaction depends largely on the amount being transferred and the policy of the bank carrying out the transfer, the fees usually range from ₹1 to ₹25.

Unlike IMPS, which can only be transacted online, a NEFT transaction can be done offline by visiting a bank branch. Additionally, as per the RBI mandate, there's no limit on the amount of money that may be transferred via NEFT — unlike IMPS, where a maximum of Rs 2 lakh per day can be transferred.

Source

13) Consider the following statements regarding Fugitive Economic Offender (FEO).

1. Fugitive Economic Offender (FEO) is any individual against whom a warrant for arrest in relation to a scheduled offence has been issued by any court in India and the person has left India so as to avoid criminal prosecution.
2. The special court can declare suo moto an individual as fugitive economic offender if he/she holds properties or the value of such properties believed to be the proceeds of crime.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: a)

Who is a Fugitive Economic Offender (FEO)?

An FEO is defined by The Fugitive Economic Offenders (FEO) Act, 2018 as “any individual against whom a warrant for arrest in relation to a scheduled offence has been issued by any court in India, who (i) has left India so as to avoid criminal prosecution; or (ii) being abroad, refuses to return to India to face criminal prosecution”.

What is the process for declaring an individual an FEO?

Under the Act, an application must be filed in the special court asking that a particular individual may be declared an FEO.

The application must be accompanied by “reasons for the belief that an individual is a fugitive economic offender; any information available as to the whereabouts of the fugitive economic offender; a list of properties or the value of such properties believed to be the proceeds of crime”, etc.

The special court may then issue notice to the individual to appear at a specified place, and drop the proceedings if the individual complies.

If, however, the special court is satisfied that an individual is an FEO, it may, record so in an order, along with reasons. The court may then order the confiscation of the properties of the accused individual in India or abroad.

In the case of Nirav Modi, the ED filed an application under the FEO Act in July 2018. In the case of Mallya, the application was moved in June 2018, when the Act was still an Ordinance.

So, Nirav Modi is the second businessman, after Vijay Mallya, to be declared a fugitive economic offender under provisions of the Fugitive Economic Offenders (FEO) Act.

Source

14) Consider the following statements regarding Payments Bank.

1. Payments Bank can accept deposits only upto 2 lakh per individual customer.
2. Issues debit cards, but not credit cards.
3. Can distribute financial products such as mutual funds and insurance.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: c)

## GOING FURTHER AFIELD

While some services offered by payments banks and small finance banks will be similar, there are some key differences. Here is a look at what they will offer.

PAYMENTS BANK	SMALL FINANCE BANK
• Can accept deposits, but only up to ₹1 lakh per individual customer	• Allowed to take deposits of any amount
• Can't lend in any form	• Can lend but the focus will be on small lending
• Can open small savings accounts	• Can finance small business units, small and marginal farmers, micro and small industries and unorganised sector entities
• Can provide remittance services	• Can provide remittances as well as credit cards
• Allowed to issue automated teller machine (ATM) or debit cards	• Allowed to issue ATM or debit cards
• Not allowed to issue credit cards	• Has to ensure that 50% of loan portfolio constitutes advances of up to ₹25 lakh
• Can distribute products such as mutual funds, insurance and third-party loans	• Can distribute financial products such as mutual funds, insurance and pension

Source: RBI website

15) Consider the following statements regarding Small Finance Bank (SFBs).

1. Small Finance Bank mainly finance small business units, small and marginal farmers and unorganised sector entities.
2. They do not distribute financial products such as mutual funds and insurance.
3. Payments banks can apply for conversion into small finance banks SFBs after five years of operation.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1, 2, 3

Solution: c)

RBI has announced the final guidelines for on-tap licencing of private sector SFBs.

These guidelines include:

- Payments banks can apply for conversion into small finance banks (SFBs) after five years of operation.
- The promoter of a payments bank is eligible to set up an SFB, provided that both banks come under the non-operating financial holding company (NOFHC) structure.
- The minimum paid-up capital requirement for SFBs has been raised from ₹100 crore to ₹200 crore.
- SFBs should be listed within three years of reaching a net worth of ₹500 crore. They will be given scheduled bank status immediately upon commencement of operations, and will have general permission to open banking outlets from the date of commencement of operations.

## 2. Ecology and Environment

1) Consider the following statements regarding Emperor Penguin.

1. Emperor penguin is the shortest of all living penguin species and is endemic to Antarctica.
2. It is the only penguin species that breeds during the Antarctic winter.
3. Disappearing sea ice impacts Emperor Penguins directly, as the animals use it as a home base for their breeding season.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: c)

The emperor penguin (*Aptenodytes forsteri*) is the tallest and heaviest of all living penguin species and is endemic to Antarctica. It is the only penguin species that breeds during the Antarctic winter.

Disappearing sea ice impacts Emperor Penguins directly, as the animals use it as a home base for their nine-month breeding season and for feeding and moulting.

Source

2) Consider the following statements.

1. International Day for the Preservation of the Ozone Layer, commemorates the date of the signing of the Montreal Protocol on Substances that Deplete the Ozone Layer.
2. Ozone layer absorbs about 97 to 99% of ultraviolet rays and maintain the ozone-oxygen cycle.
3. The ozone layer is mainly found in the lower portion of the stratosphere and its thickness varies seasonally and geographically.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

In 1994, the UN General Assembly proclaimed 16 September the International Day for the Preservation of the Ozone Layer, commemorating the date of the signing, in 1987, of the Montreal Protocol on Substances that Deplete the Ozone Layer.

What you need to know about the Ozone layer?

1. Absorbs most of the Sun's ultraviolet light which is harmful to human life and other life forms.
2. Absorbs about 97 to 99% of ultraviolet rays and maintain the ozone-oxygen cycle.

The ozone layer is mainly found in the lower portion of the stratosphere, from approximately 15 to 35 kilometers (9.3 to 21.7 mi) above Earth, although its thickness varies seasonally and geographically.

3) Signal fish, recently seen in news, was discovered near

- a) Andaman and Nicobar Island
- b) Gulf of Mannar
- c) Kerala Coast
- d) Gulf of Khambhat

Solution: c)

New signal fish discovered off Kerala coast.

Called *Pteropsaron indicum*, it is the first one of the genus recorded in Indian waters

The deep waters of the Lakshadweep sea off the Kerala coast are home to an unusual species of fish with a unique colour pattern and an interesting behaviour that allows it to communicate with others of the same species by flipping its highly specialised dorsal fins.

Source

4) Jing kieng jri or living root bridges are predominantly found in

- a) Assam
- b) Nagaland
- c) Manipur
- d) Meghalaya

Solution: d)

The jing kieng jri or living root bridges — aerial bridges built by weaving and manipulating the roots of the Indian rubber tree — have been serving as connectors for generations in Meghalaya.

Source

5) Consider the following statements regarding Sumatran rhinoceros.

- 1. Sumatran rhinoceros are the largest of the living rhinoceroses.
- 2. The Sumatran rhinoceros is now extinct in Malaysia.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

The Sumatran rhinoceros is now extinct in Malaysia with the death of the last known specimen.

Sumatran rhinos are the smallest of the living rhinoceroses and the only Asian rhino with two horns.

Sumatran rhinos prefer lower altitudes, especially secondary forests where low-growing plants are more abundant. Their habitat ranges from lowland swamps to montane forests, but they generally favour forests with thick vegetation.

In the wild, Sumatran rhinos live at low densities and are mostly solitary.

Source

6) National Disaster Management Authority will involve in which of the following disasters?

- 1. Urban Floods
- 2. Heat Wave
- 3. Nuclear and Radiological Disaster
- 4. Chemical and Biological threat

Select the correct code:

- a) 1, 2
- b) 1, 3, 4
- c) 1, 2, 3
- d) 1, 2, 3, 4

Solution: d)

On 23 December 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of the National Disaster Management Authority (NDMA), headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers, to spearhead and implement a holistic and integrated approach to Disaster Management in India.

It involves in the following disasters

Natural Disaster:

- Earthquakes
- Floods
- Landslides
- Cyclones
- Tsunamis
- Urban Floods
- Heat Wave
- Man-Made Disasters
- Nuclear and Radiological Disaster
- Chemical Disaster

Biological Disaster

7) Consider the following statements regarding Sea Ranching.

1. Fishes that are commercially important and need replenishment are reared in a controlled laboratory environment and let into the sea when they are of a certain size.
2. The sea ranching programme is being carried out by Central Marine Fisheries Research Institute (CMFRI).
3. Integrated Coastal Zone Management Plan supports Sea Ranching.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

“Sea ranching or ocean ranching is an internationally accepted concept, where fish that are commercially important and need replenishment are reared in a controlled laboratory environment and let into the sea when they are of a certain size. The expectation is that they would develop so that local fishers can catch them. This is being done as part of the phase II of the Integrated Coastal Zone Management Plan. The sea ranching programme being carried out by Central Marine Fisheries Research Institute (CMFRI).

Source Source

8) Consider the following statements regarding Cochin Forest Cane Turtle.

1. Cochin Forest Cane Turtle is an extremely rare species which is endemic to India.
2. Recently, Cochin Forest Cane Turtle was spotted in the Anamalai Tiger Reserve.
3. It is listed as Endangered by the IUCN and is listed in CITES Appendix II.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

India Biodiversity Portal had initiated a 'Turtle Spotting Week' as part of a unique exercise to document the creatures across India.

Among the turtles sighted in Tamil Nadu is the Cochin Forest Cane Turtle in the Anamalai Tiger Reserve, an extremely rare species which is endemic to India. The rare Leith's Softshell Turtle was also observed at Melagiri.

The Cochin forest cane turtle is listed as Endangered by the IUCN and is listed in CITES Appendix II.

Source

9) Consider the following statements regarding coalbed methane (CBM).

1. Coalbed methane (CBM) is an unconventional form of natural gas found in coal deposits or coal seams.
2. India has the largest coal reserves in the world, and CBM has been looked at as a clean alternative fuel.
3. CBM cannot be used as feedstock for fertilisers.

Which of the above statements is/are correct?

- a) 1 only
- b) 1, 2
- c) 1, 3
- d) 1, 2, 3

Solution: a)

India has the fifth-largest coal reserves in the world, and CBM has been looked at as a clean alternative fuel with significant prospects.

- The country's coal and CBM reserves are found in 12 states of India, with the Gondwana sediments of eastern India holding the bulk.
- The Damodar Koel valley and Son valley are prospective areas for CBM development.

What is coalbed methane (CBM)?

It is an unconventional form of natural gas found in coal deposits or coal seams.

CBM is formed during the process of coalification, the transformation of plant material into coal.

CBM can be used

- In Power generation.
- As Compressed natural gas (CNG) auto fuel.
- As feedstock for fertilisers.
- Industrial uses such as in cement production, rolling mills, steel plants, and for methanol production.

10) Consider the following statements regarding Madden-Julian Oscillation (MJO).

1. Madden-Julian Oscillation (MJO) is a moving band of rain clouds that travels around the globe spanning across the tropical oceans.
2. In its journey, it interacts with surface waters of the Indo-Pacific Ocean and the lifecycle of the MJO gets affected.
3. When the MJO appears in the Indian Ocean during the monsoon months of June-September, it always decreases rains over India.

Which of the above statements is/are correct?

- a) 1, 3
- b) 2, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)



The Madden–Julian Oscillation (MJO), as it's called, is a moving band of rain clouds that travels around the globe spanning 12,000–20,000 km across the tropical oceans. In its journey, it interacts with surface waters of the Indo-Pacific Ocean, the largest pool of warm water in the globe, and due to this the lifecycle of the MJO gets affected.

The MJO clouds on average are spending only 15 days, instead of 19, over the Indian Ocean. Over the west Pacific, it increased by five days (from an average 16 days to 23 days). "It is this change in the residence time of MJO clouds that has altered the weather patterns across the globe.

When the MJO appears in the Indian Ocean during the monsoon months of June–September, it can increase rains over India. This year, India was poised to receive below normal monsoon rainfall in April but ended up with excessive rain partly due to the MJO.

Source

11) Talley Valley Wildlife Sanctuary, is located in

- a) Himachal Pradesh
- b) Arunachal Pradesh
- c) Manipur
- d) Sikkim

Solution: b)

A team of researchers have discovered a new species of natricid snakes, *Trachischium apteii* from Arunachal Pradesh. The discovery was a result of rigorous fieldwork at Talley Valley Wildlife Sanctuary.

Source

12) Consider the following statements.

1. Guru Ghasidas National Park is set to become Chattisgarh's first tiger reserve.
2. In-principle approval has to be accorded by the National Tiger Conservation Authority for the creation of new tiger reserves.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

Guru Ghasidas National Park:

This will be Chattisgarh's 4<sup>th</sup> tiger reserve.

Current 3 tiger reserves: Achanakmar, Udanti- Sitanadi and Indravati tiger reserves.

The National Tiger Conservation Authority (NTCA) had approved to declare Guru Ghasidas National Park as a tiger reserve.

13) An estimated 4.2 million premature deaths globally are linked to ambient air pollution. Worldwide ambient air pollution can lead to

1. Lung cancer
2. Acute lower respiratory infection
3. Stroke
4. Ischaemic heart disease
5. Chronic obstructive pulmonary disease

Select the correct answer code:

- a) 1, 2, 3, 4
- b) 1, 3, 4, 5



- c) 2, 3, 4, 5
- d) 1, 2, 3, 4, 5

Solution: d)

An estimated 4.2 million premature deaths globally are linked to ambient air pollution, mainly from heart disease, stroke, chronic obstructive pulmonary disease, lung cancer, and acute respiratory infections in children.

Worldwide ambient air pollution accounts for:

- 29% of all deaths and disease from lung cancer
- 17% of all deaths and disease from acute lower respiratory infection
- 24% of all deaths from stroke
- 25% of all deaths and disease from ischaemic heart disease
- 43% of all deaths and disease from chronic obstructive pulmonary disease

Source

14) Consider the following statements regarding Operation 'Clean Art'.

1. It is the first pan India operation to crackdown on the smuggling of mongoose hair.
2. Operation Clean Art was conceived by Wildlife Crime Control Bureau.
3. Any smuggling or possession of mongoose body part is a non-bailable offence.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

Operation 'Clean Art':

It is first pan India operation to crackdown on the smuggling of mongoose hair.

Conceived by WCCB.

Aim: To ensure that the mongoose hair brush trade should be closed down across the country.

Protection: Mongoose is listed in Schedule II Part 2 of the Wildlife Protection Act. Any smuggling or possession of its body part is a non-bailable offence.

Source

15) Consider the following statements regarding Common But Differentiated Responsibilities and Respective Capability (CBDR-RC).

1. Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) is a principle within the United Nations Framework Convention on Climate Change (UNFCCC).
2. The UNFCCC divided countries into "Annex I" and "non-Annex I," the former generally referring to developing countries and the latter to developed countries.
3. CBDR-RC and the annex classifications were codified in the 1997 Kyoto Protocol.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1 only

Solution: c)

Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) is a principle within the United Nations Framework Convention on Climate Change (UNFCCC).

It acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.

Reflecting CBDR-RC, the Convention divided countries into “Annex I” and “non-Annex I,” the former generally referring to developed countries and the latter to developing countries.

Under the Convention Annex I countries have a greater mitigation role than non Annex-I countries.

CBDR-RC and the annex classifications were codified in the 1997 Kyoto Protocol, and Annex I country emissions reductions were legally bound.

Source

16) Consider the following statements regarding Goldman Environmental Prize.

1. The Prize recognizes individuals for sustained and significant efforts to protect and enhance the natural environment.

2. The Prize was instituted by World Wide Fund for Nature (WWF).

Which of the above statements is/are correct?

a) 1 only

b) 2 only

c) Both

d) None

Solution: a)

- The Goldman Environmental Prize honors grassroots environmental heroes from the world’s six inhabited continental regions: Africa, Asia, Europe, Islands & Island Nations, North America, and South & Central America.
- The Prize recognizes individuals for sustained and significant efforts to protect and enhance the natural environment, often at great personal risk.
- The Goldman Prize views “grassroots” leaders as those involved in local efforts, where positive change is created through community or citizen participation in the issues that affect them. Through recognizing these individual leaders, the Prize seeks to inspire other ordinary people to take extraordinary actions to protect the natural world.
- 2019 marks the 30th anniversary of the Prize founded in 1989 by U.S. philanthropists Rhoda and Richard Goldman.

Source

17) Consider the following statements about Hangul, Kashmir’s iconic wildlife species.

1. It is placed under Schedule I of the Indian Wildlife (Protection) Act, 1972.

2. It is listed under the Species Recovery Programme of the Wildlife Institute of India (WII) and the Environmental Information System (ENVIS) of the MoEFCC.

3. The state of Jammu & Kashmir, along with the IUCN and the WWF prepared a project for the protection of these animals, which was known as Project Hangul.

Which of the above statements is/are correct?

a) 1, 2

b) 2, 3

c) 1, 3

d) 1, 2, 3

Solution: d)

A massive decline in the population of Kashmir’s iconic wildlife species, the Hangul (*Cervus hanglu hanglu*), also known as the Kashmir stag, continues to be a big concern.

- It is the state animal of Jammu & Kashmir.
- It is found in dense riverine forests in the high valleys and mountains of the Kashmir Valley and northern Chamba district in Himachal Pradesh. In Kashmir, it’s found in the Dachigam National Park

- It is placed under Schedule I of the Indian Wildlife (Protection) Act, 1972.
- The Hangul was once widely distributed in the mountains of Kashmir and parts of Chamba district in neighbouring Himachal Pradesh.
- The IUCN's Red List has classified it as Critically Endangered and is similarly listed under the Species Recovery Programme of the Wildlife Institute of India (WII) and the Environmental Information System (ENVIS) of the MoEFCC.
- The state of Jammu & Kashmir, along with the IUCN and the WWF prepared a project for the protection of these animals, which was known as Project Hangul.

18) The first multilateral bloc to declare climate emergency is

- ASEAN
- BIMSTEC
- European Union (EU)
- G20 Members

Solution: c)

European Union (EU) has become the first multilateral bloc to declare climate emergency.

Similar climate emergency declarations have already been made in several EU member states, including Spain, France and the United Kingdom. Outside Europe Canada, Argentina and Bangladesh have declared a climate emergency.

19) Consider the following statements regarding Carbon offsetting.

1. Carbon offsetting allows a country to help reach its own emissions reduction targets by funding emission reductions in another country.
2. The United Nation's Clean Development Mechanism (CDM) set up under the 1997 Kyoto Protocol is first major Carbon offsetting scheme.
3. Carbon offsets can be bought by individuals, companies or countries.

Which of the above statements is/are correct?

- 1, 2
- 1, 3
- 2, 3
- 1, 2, 3

Solution: d)

Carbon offsetting allows a country to help reach its own emissions reduction targets by funding emission reductions in another country. Companies are also increasingly using carbon credits to offset their emissions. The first major offsetting scheme, the U.N.s clean development mechanism (CDM), was set up under the 1997 Kyoto Protocol, in which 190 countries agreed country-by-country emission reduction targets. The scheme was designed to help fund emission reduction projects in developing countries, while also providing offset credits to the developed world to help meet its Kyoto targets.

Carbon offset schemes cover all greenhouse gases but are measured in terms of carbon dioxide equivalent and can be awarded carbon credits.

More than 8,100 projects in 111 countries have registered with the CDM scheme, which has handed out over 2 billion carbon credits, called Certified Emission Reductions (CERs), representing 2 billion tonnes of carbon dioxide reduction.

Projects registered under the scheme range from capturing and using methane gasses in pig manure to create electricity to replacing traditional wood and coal burning cookstoves with cleaner alternatives such as ethanol. Offsets can be bought by individuals, companies or countries.

Source

20) India's cold wave zone covers which of the following states.

1. Punjab
2. Haryana
3. Gujarat
4. Madhya Pradesh
5. Bihar

Select the correct answer code:

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

Solution: d)

India's cold-wave zone covers the north Indian states of Punjab, Himachal Pradesh, Uttarakhand, Delhi, Haryana, Rajasthan, Uttar Pradesh and also other states like Gujarat, Madhya Pradesh, and Bihar.

Source

21) Which of the following are natural carbon sinks

1. Grasslands
2. Soil
3. Ocean
4. Coral reefs
5. Natural-gas purification plants

Select the correct answer code:

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

Solution: c)

There are three main natural carbon sinks:

- Plants
- Soil
- Oceans

Other natural carbon sinks found throughout the globe.

- Grasslands
- Agricultural Lands
- Northern, boreal forests
- Tropical Rainforests
- Peat Bogs
- Freshwater lakes and wetlands
- Coastal ecosystems such as seagrass beds, kelp forests, salt marshes and swamps
- Coral reefs

For carbon to be sequestered artificially (i.e. not using the natural processes of the carbon cycle) it must first be captured, or it must be significantly delayed or prevented from being re-released into the atmosphere (by combustion, decay, etc.) from an existing carbon-rich material, by being incorporated into an enduring usage (such as in construction). Natural-gas purification plants often already have to remove carbon dioxide, either to avoid dry ice clogging gas tankers or to prevent carbon-dioxide concentrations exceeding the 3% maximum permitted on the natural-gas distribution grid.

22) Consider the following statements regarding Platform of Science-based Ocean Solutions.

1. It was launched during the 25th session of the Conference of the Parties (COP 25) to the UNFCCC.

2. The Platform of Science-based Ocean Solutions aims “to enhance the sharing of knowledge created by various actors in the ocean and climate community to advance ocean-climate action”.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: c)

Chile, in its role as the Presidency of the 25th session of the Conference of the Parties (COP 25) to the UNFCCC, launched the Platform for Science-Based Ocean Solutions (PSBOS). The Platform aims to promote the necessity of addressing ocean and climate issues synergistically and to encourage the incorporation of the ocean in country climate commitments and strategies.

The Platform of Science-based Ocean Solutions aims “to enhance the sharing of knowledge created by various actors in the ocean and climate community to advance ocean-climate action”.

Source

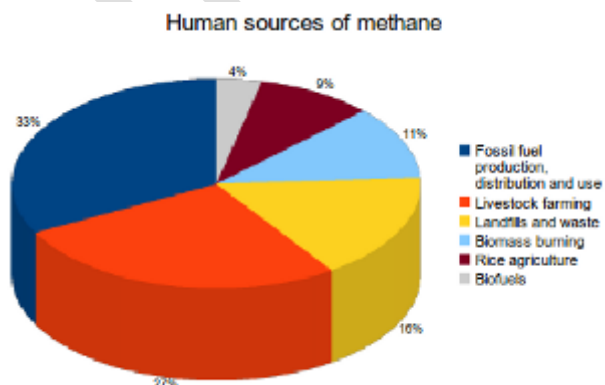
23) Which of the following constitutes highest human source of Methane?

- a) Livestock Farming
- b) Fossil fuel production and use
- c) Biomass burning
- d) Rice agriculture

Solution: b)

There are both natural and human sources of methane emissions. The main natural sources include wetlands, termites and the oceans. Natural sources create 36% of methane emissions. Human sources include landfills and livestock farming. But the most important source being the production, transportation and use of fossil fuels. Human-related sources create the majority of methane emissions, accounting for 64% of the total. Methane levels have more than doubled over the last 150 years. This is because of human activities like fossil fuel use and intensive farming.

Since the Industrial Revolution, human sources of methane emissions have been growing. Fossil fuel production and intensive livestock farming have caused the current increase methane levels. Together these two sources are responsible for 60% of all human methane emissions. Other sources include landfills and waste (16%), biomass burning (11%), rice agriculture (9%) as well as biofuels (4%)



- 24) Torrefaction, recently seen in news is related to
- Farm extension services and mechanization
  - Management of pesticides and plant quarantine
  - Converting biomass into a coal-like material
  - None of the above

Solution: c)

India tests Swedish torrefaction technology to reduce stubble burning.

It is a thermal process used to produce high-grade solid biofuels from various streams of woody biomass or agro residues.

The end product is a stable, homogeneous, high quality solid biofuel with far greater energy density and calorific value than the original feedstock, providing significant benefits in logistics, handling and storage, as well as opening up a wide range of potential uses.

25) Consider the following statements.

- Climate change and unprecedented floods can facilitate the introduction of aquatic invasive alien species into new habitats.
- Invasive alien species slowly begin to wipe out local diversity and the economy by altering the functions of the ecosystem.

Which of the above statements is/are correct?

- 1 only
- 2 only
- Both
- None

Solution: c)

Climate change and unprecedented floods resulting from cloud bursts have facilitated the introduction of aquatic invasive alien species into new habitats in India. This phenomenon threatens ecosystems, habitats and native species. Recently, a study by Biju Kumar and others from the Department of Aquatic Biology and Fisheries, University of Kerala, revealed the role of the 2018 floods in introducing the most dangerous fish species into Kerala's wetlands.

Researchers say that during heavy floods, invasive alien fishes which are illegally farmed in fragile systems, including domestic aquarium tanks, ponds, lakes and abandoned quarries, effortlessly escape from captivity and enter nearby wetlands. After a while, they slowly begin to wipe out local diversity and the economy by altering the functions of the ecosystem. And yet no State or Union Territory has any strong policy or law on the illegal rearing, breeding and trading of such invasive ornamental and commercially important fish species.

Source

26) Consider the following statements regarding International Union for the Protection of New Varieties of Plants (UPOV).

- The International Union for the Protection of New Varieties of Plants (UPOV) is an intergovernmental organization with headquarters in Geneva.
- UPOV's mission is to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.
- India has not joined International Union for the Protection of New Varieties of Plants (UPOV) due to conflict with Intellectual Property Rights (IPR) over plant varieties.

Which of the above statements is/are correct?

- 2, 3
- 1, 3
- 1, 2

d) 1, 2, 3

Solution: c)

The International Union for the Protection of New Varieties of Plants (UPOV) is an intergovernmental organization with headquarters in Geneva (Switzerland).

UPOV was established by the International Convention for the Protection of New Varieties of Plants. The Convention was adopted in Paris in 1961 and it was revised in 1972, 1978 and 1991.

UPOV's mission is to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.

In 2002, India joined the International Union for the Protection of New Varieties of Plants (UPOV) Convention.

Source

27) Consider the following statements.

1. Convention on Biological Diversity (CBD) provided for prior informed consent of farmers before the use of genetic resources and fair and equitable sharing of benefits arising out of their use.

2. The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) recognised farmers' rights as the rights to save, use, exchange and sell farm-saved seeds.

Which of the above statements is/are correct?

a) 1 only

b) 2 only

c) Both

d) None

Solution: c)

In 1992, the Convention on Biological Diversity (CBD) provided for "prior informed consent" of farmers before the use of genetic resources and "fair and equitable sharing of benefits" arising out of their use. In 2001, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) recognised farmers' rights as the rights to save, use, exchange and sell farm-saved seeds.

Source

28) Consider the following statements regarding Taj Trapezium Zone (TTZ).

1. Taj Trapezium Zone (TTZ) is a defined area around the Taj Mahal to protect the monument from pollution.

2. Supreme Court banned the use of coal/ coke in industries located in the TTZ.

3. Taj Mahal is the only monument covered in TTZ.

Which of the above statements is/are correct?

a) 1, 3

b) 2, 3

c) 1, 2

d) 1, 2, 3

Solution: c)

Supreme Court recently lifted its earlier interim order imposing a complete ban on construction, industrial activities and cutting of trees in the Taj Trapezium Zone (TTZ).

A Bench headed by Chief Justice Sharad Arvind Bobde said non polluting industries with proper clearances and those complying with the rules can be allowed. It said ban on heavy industry will continue.

Taj Trapezium Zone (TTZ) is a defined area of 10,400 sq km around the Taj Mahal to protect the monument from pollution. The Supreme Court of India delivered a ruling on December 30, 1996 regarding industries covered under the TTZ, in response to a PIL seeking to protect the Taj Mahal from environmental pollution. It banned the use of coal/ coke in industries located in the TTZ with a mandate for switching over from coal/ coke to natural gas, and relocating them outside the TTZ or shutting down. The TTZ comprises monuments including three World Heritage Sites the Taj Mahal, Agra Fort and Fatehpur Sikri. TTZ is so named since it is located around the Taj Mahal and is shaped like a trapezoid.

Source

29) Consider the following statements regarding Global Carbon Project.

1. The Global Carbon Project is a Global Research Project of Intergovernmental Panel on Climate Change (IPCC).

2. It is formed to work with the international science community to establish a common and mutually agreed knowledge base to support policy debate and action to slow down and ultimately stop the increase of greenhouse gases in the atmosphere.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

Global Carbon Project:

Formed in 2001 to help the international science community to establish a common, mutually agreed knowledge base that supports policy debate and action to slow the rate of increase of greenhouse gases in the atmosphere.

It is a Global Research Project of Future Earth and a research partner of the World Climate Research Programme.

It works collaboratively with the International Geosphere-Biosphere Programme, the World Climate Programme, the International Human Dimensions Programme on Global Environmental Change and Diversitas, under the Earth System Science Partnership.

Its projects include global budgets for three dominant greenhouse gases — CO<sub>2</sub>, methane, and nitrous oxide — and complementary efforts in urban, regional, cumulative, and negative emissions.

Source

30) Consider the following statements with reference to Asiatic Lion.

1. For the first time, the entire genome of Asiatic lion has been sequenced by scientists from CSIR-Centre for Cellular and Molecular Biology.

2. At present the only home of Asiatic lion is Gir National Park and Wildlife Sanctuary with over 1000 animals present in the Gir forests.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: a)

For the first time, the entire genome of Asiatic lion has been sequenced by scientists from CSIR-Centre for Cellular and Molecular Biology, Hyderabad.



The objective is to understand the species at DNA level and study if there are any specific problems with regard to adaptability to environment or behaviour vis-à-vis other big cats.

About Asiatic Lion:

- IUCN Red List Status: Endangered
- Listed in Schedule I of Wildlife (Protection) Act 1972, in Appendix I of Convention on International Trade in Endangered Species (CITES).
- At present the only home (natural habitat) of Asiatic lion is Gir National Park and Wildlife Sanctuary in Gujarat.
- The population of the endangered Asiatic lion is very low — around 523 animals are present in the Gir forests.

Source

31) Consider the following statements regarding FrogPhone.

1. It is the world's first solar-powered remote survey device that will allow scientists to monitor frogs in the wild.
2. It can be installed at any frog pond and receives a 3G or 4G cellular network.
3. Environmental data such as air temperature and water temperature can be retrieved through FrogPhone.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

Researchers have developed a device that will allow scientists to monitor frogs in the wild. Described as the world's first solar-powered remote survey device that can be installed at any frog pond and which receives a 3G or 4G cellular network, it has been named "FrogPhone".

It has been developed by a team from various Australian institutions, including the University of New South Wales and the University of Canberra.

With FrogPhone, researchers can simply "call" a frog habitat. After a call is made to one of the FrogPhones already on a site, the device will take three seconds to receive it. During these few seconds, the device's temperature sensors will get activated, and environmental data such as air temperature, water temperature and battery voltage will be sent to the caller's phone via a text message.

Because frogs are most active during night, researchers are usually required to make nightly observations in order to monitor them on site. The FrogPhone will allow researchers to dial these devices remotely, and analyse the data later.

It will reduce costs and risks, including the negative impact of human presence on the field site, the researchers say. These devices also allow for monitoring of local frog populations more frequently than before, which is important because these populations are recognised as indicators of environmental health.

Source

### 3. Government Schemes and Programmes

1) With reference to Digi Yatra, which of the following statement is correct?

- a) A mobile application where user can enter road quality-related information and to report any accident or pothole on highway.
- b) A mobile application where users can purchase FASTag tag.
- c) Biometric based digital processing of passengers at airports.
- d) None of the above

Solution: c)

The Ministry of Civil Aviation has released the Policy on biometric based digital processing of passengers at Airports called "Digi Yatra". DigiYatra envisages a connected ecosystem enhancing the seamless travel experience for the passengers and simultaneously improving the security.

Source

2) Consider the following statements regarding Online Child Sexual Abuse and Exploitation (OCSAE) Prevention/Investigation Unit.

1. Ministry of Women and Child Development has set up an Online Child Sexual Abuse and Exploitation (OCSAE) Prevention/Investigation Unit.

2. It will function under CBI's Special Crime Zone in Delhi.

3. The unit's territorial jurisdiction would be throughout the country.

4. It will probe such offences covered under various provisions of the IPC and the Protection of Children from Sexual Offences Act and the Information Technology Act.

Which of the above statements is/are correct?

- a) 1, 2, 3
- b) 1, 3, 4
- c) 2, 3, 4
- d) 1, 2, 3, 4

Solution: c)

The Central Bureau of Investigation (CBI) has set up an Online Child Sexual Abuse and Exploitation (OCSAE) Prevention/Investigation Unit.

It will also probe such offences covered under various provisions of the IPC, the Protection of Children from Sexual Offences Act and the Information Technology Act, apart from other relevant laws.

The unit, which will function under the agency's Special Crime Zone in Delhi, will collect and disseminate information on online child sexual abuse and exploitation.

The unit's territorial jurisdiction would be throughout the country.

Source

3) Consider the following statements regarding Bharatiya Poshan Krishi Kosh.

1. The Ministry of Women and Child Development (WCD) along with Bill & Melinda Gates Foundation has launched the Bharatiya Poshan Krishi Kosh (BPKK).

2. The BPKK will be a repository of diverse crops across different agro-climatic zones in India.

3. It aims at reducing malnutrition through a multi-sectoral results-based framework, including agriculture, among women and children across the country.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1, 2, 3

Solution: d)

The Ministry of Women and Child Development (WCD) along with Bill & Melinda Gates Foundation has launched the Bharatiya Poshan Krishi Kosh (BPKK). The BPKK will be a repository of diverse crops across 128 agro-climatic zones in India for better nutritional outcomes. The Kosh aims at reducing malnutrition through a multi-sectoral results-based framework, including agriculture, among women and children across the country.

Source

- 4) SAANS campaign, recently seen in news is related to
- Reducing child mortality due to pneumonia
  - Improve the overall quality of life of children through early detection of birth defects
  - Prevention of anaemia among under-5 children
  - Vaccination against vaccine preventable diseases

Solution: a)

SAANS, a campaign aimed at reducing child mortality due to pneumonia, which contributes to around 15% deaths annually of children under the age of five.

SAANS, short for 'Social Awareness and Action to Neutralise Pneumonia Successfully' was launched to mobilise people to protect children from pneumonia, and train health personnel and other stakeholders to provide prioritised treatment to control the disease.

Source

5) Consider the following statements regarding Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

- The Act grants legal recognition to the rights of traditional forest dwelling communities, partially correcting the injustice caused by the forest laws.
- To be eligible to get the rights, the claimant must be a member of the Scheduled Tribes scheduled in that area or must have been residing in the forest for 70 years.
- The act provides rehabilitation in case of illegal eviction or forced displacement.

Which of the above statements is/are correct?

- 1, 2
- 2, 3
- 1, 3
- 1, 2, 3

Solution: c)

The Mizoram government has passed a resolution revoking the implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA).

About Forest Rights Act (FRA):

- The act was passed in December 2006.
- It deals with the rights of forest-dwelling communities over land and other resources.
- The Act grants legal recognition to the rights of traditional forest dwelling communities, partially correcting the injustice caused by the forest laws.

Rights under the Act:

1. Title rights –Ownership to land that is being farmed by tribals or forest dwellers subject to a maximum of 4 hectares; ownership is only for land that is actually being cultivated by the concerned family, meaning that no new lands are granted.
2. Use rights –to minor forest produce (also including ownership), to grazing areas, to pastoralist routes, etc.
3. Relief and development rights –to rehabilitation in case of illegal eviction or forced displacement; and to basic amenities, subject to restrictions for forest protection.
4. Forest management rights –to protect forests and wildlife.

6) Consider the following statements regarding Intensified Mission Indradhanush programme.

1. It aims to reach each and every child up to two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme.
2. Special attention will be given to unserved/low coverage pockets in sub-centre and urban slums with migratory population.
3. It will cover vaccines for measles, tetanus, diphtheria, whooping cough, Hepatitis B, tuberculosis (Tb), meningitis and poliomyelitis.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

To further intensify the immunization programme, the government launched the Intensified Mission Indradhanush (IMI) on October 8, 2017.

- Aim: To reach each and every child up to two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme/UIP.
- Coverage: Low performing areas in the selected districts (high priority districts) and urban areas. Special attention will be given to unserved/low coverage pockets in sub-centre and urban slums with migratory population.

It will cover vaccines for measles, tetanus, diphtheria, whooping cough, Hepatitis B, tuberculosis (Tb), meningitis and poliomyelitis. In selected areas, vaccines for Japanese encephalitis (JE) and Hemophilus influenza will also be provided.

7) Consider the following statements regarding One Stop Centre Scheme.

1. One Stop Centres are being established across the country to provide integrated support and assistance under one roof to women affected by violence in public spaces.
2. Girls below 18 years of age are also covered under the scheme.
3. The Scheme will be funded through Nirbhaya Fund.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

The Government of India is implementing One Stop Centre (OSC) scheme for setting up One Stop Centre since 1st April 2015 to support women affected by violence.

Popularly known as Sakhi, Ministry of Women and Child Development (MWCD) has formulated this Centrally Sponsored Scheme.

It is a sub – scheme of Umbrella Scheme for National Mission for Empowerment of women including Indira Gandhi Matritav Sahyaog Yojana.

Under the scheme, One Stop Centres are being established across the country to provide integrated support and assistance under one roof to women affected by violence, both in private and public spaces in phased manner. Target group: The OSC will support all women including girls below 18 years of age affected by violence, irrespective of caste, class, religion, region, sexual orientation or marital status. The Scheme will be funded through Nirbhaya Fund. The Central Government will provide 100% financial assistance to the State Government /UT Administrations under the Scheme.

Source

8) Consider the following statements regarding malaria elimination in India.

1. The Indian Council of Medical Research has launched the 'Malaria Elimination Research Alliance (MERA) India' to eliminate the disease from India by 2030.
2. Over the past decade malaria deaths have increased substantially in India.
3. National Vector Borne Diseases Control Program (NVBDCP) aims to achieve "Malaria free India by 2030".

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: b)

The Indian Council of Medical Research has launched the 'Malaria Elimination Research Alliance (MERA) India' – a conglomeration of partners working on malaria control – in order to prioritise, plan and scale up research to eliminate the disease from India by 2030.

Over the past two decades, India has made impressive progress in malaria control. The malaria burden has declined by over 80 per cent, 2.03 million cases in 2000 to 0.39 million in 2018, and malaria deaths by over 90 per cent, 932 deaths in 2000 to 85 in 2018.

This success has provided a strong foundation for the commitment from the leadership of the government of India to eliminate malaria from India by 2030.

National Vector Borne Diseases Control Program (NVBDCP) of India has developed a comprehensive framework to achieve the overarching vision of "Malaria free India by 2030".

NVBDCP's National Strategic Plan clearly recognises the critical role of research to support and guide malaria elimination efforts.

9) Consider the following statements regarding Ken-Betwa river interlinking project.

1. It will be the country's first river interlinking project.
2. Ken and Betwa rivers originate in Madhya Pradesh and are the tributaries of Narmada River.
3. Ken River passes through Panna tiger reserve.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 3 only

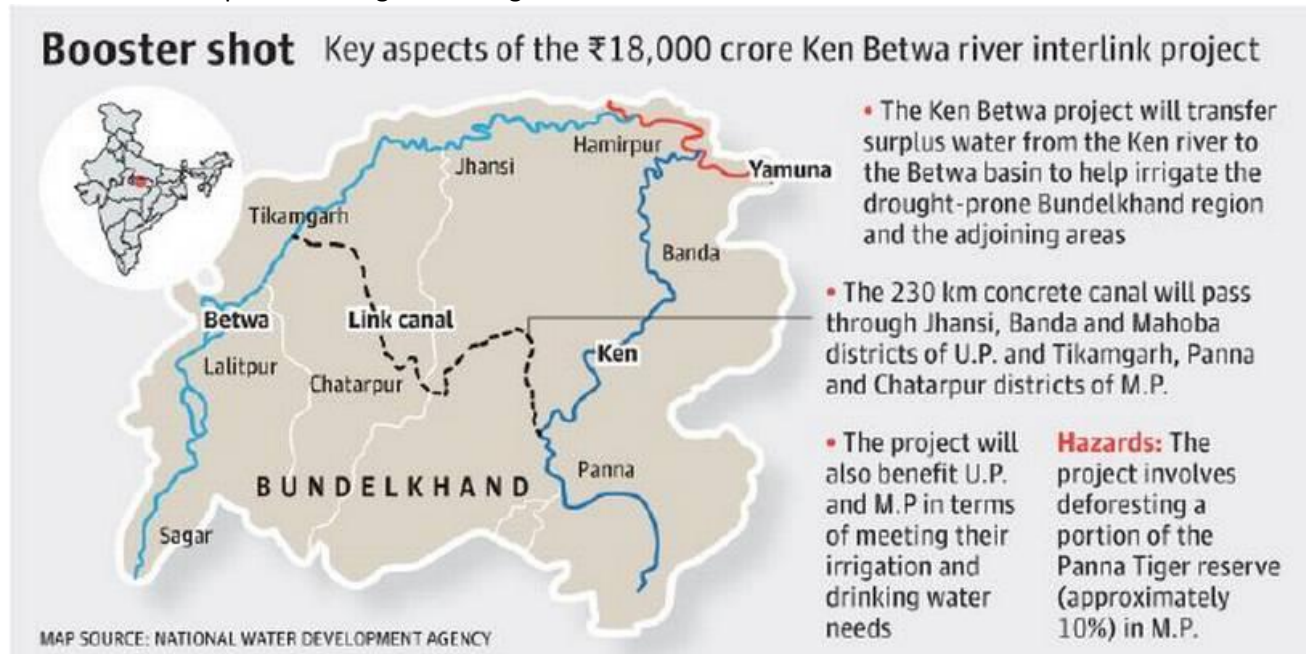
Solution: b)

The government has said it is pushing Uttar Pradesh and Madhya Pradesh to make progress on the Ken-Betwa river interlinking project.

Conceived as a two-part project, this is the country's first river interlinking project.

The project aims to transfer surplus water from the Ken river in MP to Betwa in UP to irrigate the drought-prone Bundelkhand region spread across the districts of two states mainly Jhansi, Banda, Lalitpur and Mahoba districts of UP and Tikamgarh, Panna and Chhatarpur districts of MP.

- Ken and Betwa rivers originate in MP and are the tributaries of Yamuna.
- Ken meets with Yamuna in Banda district of UP and with Betwa in Hamirpur district of UP.
- Rajghat, Paricha and Matatila dams are over Betwa river.
- Ken River passes through Panna tiger reserve.



10) Consider the following statements regarding Pradhan Mantri MUDRA Yojana (PMMY) scheme.

1. The scheme's objective is to refinance collateral-free loans given by the lenders to small borrowers.
2. Loans up to 10 lakhs to the non-corporate, non-farm small/micro enterprises are provided under the scheme.
3. It has the track record of more than 80% of the borrowers repaying the loan amount, with NPAs as a percentage of MUDRA loans less than 0.5%.

Which of the above statements is/are correct?

- a) 1, 3
- b) 1, 2
- c) 2, 3
- d) 1 only

Solution: b)

RBI Deputy Governor MK Jain has expressed concerns over growing non-performing assets (NPAs) in Mudra category.

Why the concern?

- Non-performing assets ratio or bad loans as a percentage of MUDRA loans were at 2.68% in 2018-19, up 16 basis points from 2.52% in the previous year. These loan NPAs were at 2.89% in 2016-17.
- Of the 182.60 million MUDRA loans sanctioned, 3.63 million accounts defaulted as on 31 March.

The PMMY Scheme was launched in April, 2015. The scheme's objective is to refinance collateral-free loans given by the lenders to small borrowers.

- The scheme, which has a corpus of Rs 20,000 crore, can lend between Rs 50,000 and Rs 10 lakh to small entrepreneurs.
- Banks and MFIs can draw refinance under the MUDRA Scheme after becoming member-lending institutions of MUDRA.
- Mudra Loans are available for non-agricultural activities upto Rs. 10 lakh and activities allied to agriculture such as Dairy, Poultry, Bee Keeping etc, are also covered.



- Mudra's unique features include a Mudra Card which permits access to Working Capital through ATMs and Card Machines.

There are three types of loans under PMMY:

1. Shishu (up to Rs.50,000).
2. Kishore (from Rs.50,001 to Rs.5 lakh).
3. Tarun (from Rs.500,001 to Rs.10,00,000).

Source

11) Consider the following statements regarding Automotive Mission Plan.

1. Automotive Mission Plan 2026 is the collective vision of the government of India and the automotive industry on where the various segments of the automotive industry need to be by 2026 in terms of size and contribution to the overall Indian economy.

2. It aims to promote safe, efficient and comfortable mobility for every person in the country.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: c)

AMP 2026 is the collective vision of the government of India and the automotive industry on where the various segments of the automotive industry and auto component industry need to be by 2026 in terms of size and contribution to the overall Indian economy.

The objective of the Automotive Mission Plan 2026 includes:

1. To propel the Indian Automotive industry to become the engine of the "Make in India" programme.
2. To make the Indian Automotive Industry a significant contributor to the "Skill India" programme.
3. Promote safe, efficient and comfortable mobility for every person in the country, with an eye on environmental protection and affordability through both public and personal transport options.
4. To seek increase of net exports of the Indian Automotive industry several fold.
5. Promote comprehensive and stable policy dispensation for all regulations impacting the industry.

12) Consider the following statements regarding State Disaster Response Fund (SDRF).

1. SDRF was constituted based on the recommendations of the 14th Finance Commission.

2. The Central Government contributes 50% to SDRF and the remaining 50% is provided from the State Government.

3. A State Government may use the funds available under the SDRF for providing immediate relief to the victims of natural disasters that they consider to be 'disasters' within the local context in the State.

Which of the above statements is/are incorrect?

- a) 1 only
- b) 1, 2
- c) 1, 3
- d) 2, 3

Solution: b)

- SDRF has been constituted by each state under the provisions of Disaster Management act 2005.
- It was constituted based on the recommendations of the 13th Finance Commission.
- Funding: The government of India contributes 75% and 90% of the total yearly allocation of SDRF to general states and special category states respectively.
- Heads: The state executive committee headed by the Chief Secretary is authorized to decide on all matters relating to the financing of the relief expenditure from the SDRF.

Disaster (s) covered under SDRF: Cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloudburst, pest attack, frost and cold waves.

Local Disaster: A State Government may use up to 10 percent of the funds available under the SDRF for providing immediate relief to the victims of natural disasters that they consider to be 'disasters' within the local context in the State and which are not included in the notified list of disasters of the Ministry of Home Affairs subject to the condition that the State Government has listed the State specific natural disasters and notified clear and transparent norms and guidelines for such disasters with the approval of the State Authority, i.e., the State Executive Authority (SEC).

Source

13) Which of the following statement is correct regarding Sustainable Alternative Towards Affordable Transportation (SATAT) initiative.

- a) Sub component under FAME India Phase II for promotion of Electric Mobility in the country.
- b) Dedicated lanes for buses in urban areas for improving the reliability of public transport services.
- c) Setting up of Compressed Bio-Gas production plants and make it available for use in automotive fuels.
- d) None of the above

Solution: c)

Sustainable Alternative Towards Affordable Transportation (SATAT) is an initiative aimed at setting up of Compressed Bio-Gas production plants and make it available in the market for use in automotive fuels by inviting Expression of Interest from potential entrepreneurs. The initiative was launched in October 2018 by the Ministry of Petroleum & Natural Gas in association with Public Sector Undertaking (PSU) Oil Marketing Companies (OMC)

Source

14) Consider the following statements regarding Directorate of Revenue Intelligence.

- 1. The Directorate of Revenue Intelligence is the apex anti-smuggling agency of India, working under the Central Board of Indirect Taxes & Customs.
- 2. It is tasked with combating commercial frauds related to international trade and evasion of Customs duty.
- 3. Curbing illicit international trade in wildlife and environmentally sensitive items does not come under the ambit of Directorate of Revenue Intelligence, as it is the responsibility of Wildlife Crime Control Bureau.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2 only
- d) 2, 3

Solution: a)

The Directorate of Revenue Intelligence is the apex anti-smuggling agency of India, working under the Central Board of Indirect Taxes & Customs, Ministry of Finance, Government of India. It is tasked with detecting and curbing smuggling of contraband, including drug trafficking and illicit international trade in wildlife and environmentally sensitive items, as well as combating commercial frauds related to international trade and evasion of Customs duty.

Source

15) Consider the following statements regarding Mahila Kisan Sashaktikaran Pariyojana.

- 1. The "Mahila Kisan Sashaktikaran Pariyojana" (MKSP), a sub component of National Food Security Mission (NFSM) seeks to improve the present status of women in Agriculture.



2. Projects are conceived in such a manner that the skill base of the women in agriculture is enhanced to enable them to pursue their livelihoods on a sustainable basis.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

In line with the provisions of National Policy for Farmers (NPF) (2007), the Department of Rural Development, Ministry of Rural Development is implementing a programme exclusively for women farmers namely, Mahila Kisan Sashaktikaran Pariyojana (MKSP).

Funding support to the tune of up to 60% (90% for North Eastern States) for such projects is provided by the Government of India.

Mahila Kisan Sashaktikaran Pariyojana is a sub component of the Deendayal Antodaya Yojana-NRLM (DAY-NRLM). It seeks to improve the present status of women in Agriculture, and to enhance the opportunities available to empower her.

MKSP recognizes the identity of “Mahila” as “Kisan” and strives to build the capacity of women in the domain of agro-ecologically sustainable practices.

Objectives and significance:

- The focus of MKSP is on capacitating smallholders to adopt sustainable climate resilient agro-ecology and eventually create a pool of skilled community professionals.
- Its objective is to strengthen smallholder agriculture through promotion of sustainable agriculture practices such as Community Managed Sustainable Agriculture (CMSA), Non Pesticide Management (NPM), Zero Budget Natural Farming (ZBNF), Pashu-Sakhi model for doorstep animal care services, Sustainable regeneration and harvesting of Non-Timber Forest Produce.

Source

16) Consider the following statements regarding Eat Right India movement.

1. The Eat Right India movement is a preventive healthcare measure to trigger social and behavioural change through a mix of regulatory measures, combined with interventions for ensuring awareness and capacity building of food businesses and citizens alike.

2. It is launched by the Food Safety and Standards Authority of India (FSSAI).

3. The movement aims to completely stop oil consumption in three years.

Which of the above statements is/are correct?

- a) 1, 3
- b) 2, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)

The Eat Right India movement is a crucial preventive healthcare measure to trigger social and behavioural change through a judicious mix of regulatory measures, combined with soft interventions for ensuring awareness and capacity building of food businesses and citizens alike.

This movement is aligned with the government’s flagship public health programmes such as POSHAN Abhiyaan, Anemia Mukt Bharat, Ayushman Bharat Yojana and Swachh Bharat Mission.

The Food Safety and Standards Authority of India (FSSAI) has also put in place robust regulatory measures under three major pillars: Eat Safe, Eat Health and Eat Sustainably for the programme.

The movement aims to cut down salt/sugar and oil consumption by 30% in three years.

FSSAI has prescribed a limit for Total Polar Compounds (TPC) at 25% in cooking oil to avoid the harmful effects of reused cooking oil.

Source

17) In the National Policy for Farmers, 2007 the term 'FARMER' includes

1. Agricultural operational holders
2. Gardeners
3. Pastoralists
4. Person engaged in shifting cultivation
5. Non-corporate planters

Select the correct answer code:

- a) All except 2
- b) All except 3
- c) All except 5
- d) All of the above

Solution: d)

In the National Policy for Farmers, which was officially approved by the Centre in 2007 there is a clear and comprehensive definition available for the term farmer.

'For the purpose of this Policy, the term 'FARMER' is referred to a person actively engaged in the economic and/or livelihood activity of growing crops and producing other primary agricultural commodities.

It will include all agricultural operational holders, cultivators, agricultural labourers, sharecroppers tenants, poultry and livestock rearers, fishers, beekeepers, gardeners, pastoralists, non-corporate planters and planting labourers.

It will also include persons engaged in various farming related occupations such as sericulture, vermiculture and agro-forestry.

The term will also include tribal families / persons engaged in shifting cultivation and in the collection, use and sale of minor and non-timber forest produce.

The National Policy for Farmers was drafted by the National Commission of Farmers headed by M.S. Swaminathan.

Source

## 4. Science and Technology

- 1) Consider the following statements regarding Geosynchronous Satellite Launch Vehicle Mark III (GSLV-III).
1. GSLV Mk III is a three-stage heavy lift launch vehicle developed by ISRO.
  2. It is designed to carry 10 tons of satellites to Low Earth Orbit (LEO).
  3. The GSLV Mk III will be the launch vehicle for Gaganyaan.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1, 2, 3

Solution: d)

GSLV Mk III is a three-stage heavy lift launch vehicle developed by ISRO. The vehicle has two solid strap-ons, a core liquid booster and a cryogenic upper stage.

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

The powerful cryogenic stage of GSLV Mk III enables it to place heavy payloads into Low Earth Orbits of 600 km altitude.

GSLV Mk III uses two S200 solid rocket boosters to provide the huge amount of thrust required for lift off.

The L110 liquid stage is powered by two Vikas engines designed and developed at the Liquid Propulsion Systems Centre.

GSLV MkIII launched CARE, India's space capsule recovery experiment module, Chandrayaan-2, India's second lunar mission and will be used to carry Gaganyaan, the first manned mission under Indian Human Spaceflight Programme.

Source

- 2) Consider the following statements about Bhuvan, a web mapping service.
1. It allows users to explore a 2D/3D representation of the surface of the Earth.
  2. Bhuvan also provides timely disaster support services.
  3. It is developed by Indian Institute of Science (IISc), Bangalore.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: a)

Bhuvan is a web mapping service which allows users to explore a 2D/3D representation of the surface of the Earth. Apart from visualization, Bhuvan provides timely disaster support services (domestic and international). Bhuvan is developed by ISRO.

Source

- 3) Consider the following statements regarding space internet.
1. Starlink network project of SpaceX is one of several ongoing efforts to start beaming data signals from space.
  2. Usually Geostationary orbit is used for placing satellites because satellites in this orbit complete one revolution of the Earth in the same time that the earth rotates once on its axis.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: a)

SpaceX, the world's leading private company in space technology, has launched 60 satellites into the low earth orbit, under the Starlink network project. The Starlink network is one of several ongoing efforts to start beaming data signals from space.

The aim is to provide low-cost and reliable space-based Internet services to the world.

Why use low earth orbit instead of geostationary?

Geostationary orbit is located at a height of 35,786 km over the Earth's surface, directly above the Equator. Satellites in this orbit move at speeds of about 11,000 km per hour, and complete one revolution of the Earth in the same time that the earth rotates once on its axis. To the observer on the ground, therefore, a satellite in geostationary orbit appears stationary.

Advantages: Signals from geostationary orbit can cover a very large part of the Earth. Signals from one satellite can cover roughly a third of the planet — and three to four satellites would be enough to cover the entire Earth. Also, because they appear to be stationary, it is easier to link to them.

Then what's the issue?

There is a time lag — called latency — between a user seeking data, and the server sending that data. And because data transfers cannot happen faster than the speed of light (in reality, they take place at significantly lower speeds), the longer the distance that needs to be covered the greater is the time lag, or latency. A transmission from a satellite in geostationary orbit has a latency of about 600 milliseconds.

4) Consider the following statements regarding Sowa -Rigpa.

1. It is a traditional system of medicine practised in the Western-coastal belt of India.
2. The majority of theory and practice of Sowa-Rigpa is similar to Ayurveda.
3. It is formally recognized and promoted as traditional medical system by the Government of India.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: c)

Sowa-Rigpa" is one of the oldest, living and well documented medical tradition popular in the world. The term 'Sowa Rigpa' is derived from Bhoti language which means 'Knowledge of Healing'. It is an ancient Indian medical system which was enriched in the entire Trans-Himalayan region. At present Sowa-Rigpa is more popular in Himalayan societies especially in J & K region', Ladakh, Himachal Pradesh (Lahoul & Spiti), West Bengal (Darjeeling), Sikkim and Arunachal Pradesh and other parts of India. It is also being practiced in countries like Bhutan, Mongolia and Russia etc.

Sowa Rigpa is formally recognized and promoted as traditional medical system by the Government of India. The majority of theory and practice of Sowa-Rigpa is similar to "Ayurveda".

Source

5) Consider the following statements regarding Golden Rice.

1. Golden rice is claimed to be able to fight Vitamin A deficiency, which is the leading cause of blindness among children.

2. Golden Rice is provided in the Mid-Day Meal programme in regions with high malnutrition among children.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: a)

The International Rice Research Institute (IRRI) and its national research partners have developed Golden Rice to complement existing interventions to address vitamin A deficiency (VAD). Vitamin A deficiency is the leading cause of blindness among children and can also lead to death due to infectious diseases such as measles.

Source

6) Consider the following statements regarding ElectroSkin.

- 1. ElectroSkin is a robot made from the skin.
- 2. ElectroSkin is an important step toward soft robots that can be easily transported, deployed and even worn.
- 3. While traditional robots are rigid and incompressible, soft robots are compliant and can stretch and twist to adapt to their environments.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

Researchers have developed stretchable, pocket-sized robots which could crawl up walls and across ceiling to clean them, for environmental monitoring and deployment in hazardous environments.

"ElectroSkin" is a new fundamental building block for a range of soft next-generation robots.

'ElectroSkin' is an important step toward soft robots that can be easily transported, deployed and even worn. The combination of electrical artificial muscles and electrical gripping replicated the movements of animals like slugs and snails

The thin and light robots have been developed using a new way of embedding artificial muscles and electrical adhesion into soft materials.

traditional robots are rigid and incompressible whereas soft robots are compliant and can stretch and twist to adapt to their environments.

Source

7) Consider the following statements regarding Measles.

- 1. Measles is a highly contagious viral disease.
- 2. It remains an important cause of death among young children globally.
- 3. Severe measles is more likely among poorly nourished young children, especially those with insufficient vitamin A, or whose immune systems have been weakened by HIV/AIDS.

Which of the above statements is/are correct?

- a) 1, 2

- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

Measles is a highly contagious viral disease. It remains an important cause of death among young children globally, despite the availability of a safe and effective vaccine.

WHO is the lead technical agency responsible for coordination of immunization and surveillance activities supporting all countries to achieve this goal.

Measles is transmitted via droplets from the nose, mouth or throat of infected persons. Initial symptoms, which usually appear 10–12 days after infection, include high fever, a runny nose, bloodshot eyes, and tiny white spots on the inside of the mouth.

Severe measles is more likely among poorly nourished young children, especially those with insufficient vitamin A, or whose immune systems have been weakened by HIV/AIDS or other diseases. The most serious complications include blindness, encephalitis (an infection that causes brain swelling), severe diarrhoea and related dehydration, and severe respiratory infections such as pneumonia.

Source

8) Consider the following statements regarding Anti-tank guided missile (ATGM).

1. It is primarily designed to hit and destroy heavily armored military vehicles.
2. The Indian Army has inducted Israel-made anti-tank guided missiles (ATGM) Spike along the LoC in Jammu and Kashmir.
3. Known as the 'fire and forget' missiles, Spike ATGMs are portable by men.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

The Indian Army has inducted Israel-made anti-tank guided missiles (ATGMS) Spike along the LoC in northern command theatre in Jammu and Kashmir to bolster defence along the country's border with Pakistan.

Known as the "fire and forget" missiles, Spike ATGMs are portable by men and are powerful enough to destroy tanks and bust bunkers within four kilometers.

The "fire and forget" ATGMs have a strike range of up to four kilometers and can be used to destroy bunkers, shelters, launching pads and terrorist training camps close to the LoC.

The missiles can be deployed in both mountains and plains, they can be fired from different platforms, including vehicles, helicopters, ships and ground launchers.

Source

9) India's Polar Satellite Launch Vehicle, PSLV-C47 has launched Cartosat-3. Cartosat-3 is mainly used for

1. Weather mapping
2. Measure wind speeds and direction
3. Urban planning
4. Coastal land use

Select the correct answer code:

- a) 1, 2, 3
- b) 1, 3, 4
- c) 2, 3, 4
- d) 1, 2, 3, 4

Solution: b)

Cartosat-3 satellite is a third-generation agile advanced satellite having high resolution imaging capability.

Cartosat-3 could be potentially used for weather mapping and cartography. It aims to address the increased demands for large scale urban planning, rural resource and infrastructure development, coastal land use and land cover.

Source

10) Consider the following statements regarding Anaemia.

1. Anaemia is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiologic needs.
2. Protein deficiency is the most common cause of anaemia.
3. Premature delivery can also lead to childhood anaemia.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1 only

Solution: c)

Anaemia is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiologic needs, which vary by age, sex, altitude, smoking, and pregnancy status.

Iron deficiency is thought to be the most common cause of anaemia globally, although other conditions, such as folate, vitamin B12 and vitamin A deficiencies, chronic inflammation, parasitic infections, and inherited disorders can all cause anaemia.

In its severe form, it is associated with fatigue, weakness, dizziness and drowsiness. Pregnant women and children are particularly vulnerable.

Studies from across the globe have shown that severe anaemia in mothers and premature delivery can also lead to childhood anaemia.

Source Source

11) Consider the following statements regarding Nuclear magnetic resonance spectroscopy.

1. Nuclear magnetic resonance spectroscopy is a technique for structural characterization of pharmaceutical and other chemical molecules.
2. The technique is used in quality control and research for determining the content and purity of a sample as well as its molecular structure.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: c)

The NMR spectroscopy is an important technique for structural characterization of pharmaceutical and other chemical molecules.

The technique is used in quality control and research for determining the content and purity of a sample as well as its molecular structure.

How it works?

1. The sample is placed in a magnetic field and the NMR signal is produced by excitation of the nuclei sample with radio waves into nuclear magnetic resonance, which is detected with sensitive radio receivers.
2. The intramolecular magnetic field around an atom in a molecule changes the resonance frequency, thus giving access to details of the electronic structure of a molecule and its individual functional groups.
3. As the fields are unique or highly characteristic to individual compounds, in modern organic chemistry practice, NMR spectroscopy is the definitive method to identify monomolecular organic compounds.

Source

12) Consider the following statements regarding hydrogen fuel cell.

1. Fuel cell electric vehicles (FCEV) uses hydrogen, and an oxidant to create electricity by an electrochemical process.
2. Like a battery-electricity vehicle, fuel cell electric vehicles (FCEV) can also store energy.
3. Hydrogen fuel cells produce much smaller quantities of greenhouse gases.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1, 2, 3

Solution: c)

Supreme Court has asked government to look into the feasibility of hydrogen-based tech to deal with vehicular air pollution in capital.

At the heart of the fuel cell electric vehicles (FCEV) is a device that uses a source of fuel, such as hydrogen, and an oxidant to create electricity by an electrochemical process. Put simply, the fuel cell combines hydrogen and oxygen to generate an electric current, water being the only byproduct. Like conventional batteries under the bonnets of automobiles, hydrogen fuel cells too convert chemical energy into electrical energy.

While the fuel cells generate electricity through an electrochemical process, unlike a battery-electricity vehicle, it does not store energy and, instead, relies on a constant supply of fuel and oxygen — in the same way that an internal combustion engine relies on a constant supply of petrol or diesel, and oxygen. In that sense, it may be seen as being similar to a conventional internal combustion engine.

Fuel cells have strong advantages over conventional combustion-based technologies currently used in many power plants and cars, given that they produce much smaller quantities of greenhouse gases and none of the air pollutants that cause health problems. Also, if pure hydrogen is used, fuel cells emit only heat and water as a byproduct. Such cells are also far more energy efficient than traditional combustion technologies.

Source

13) Consider the following statements regarding Extra Neutral Alcohol (ENA).

1. Extra Neutral Alcohol (ENA) is the primary raw material for making alcoholic beverages.
2. ENA is a byproduct of the sugar industry, and is formed from molasses that are a residue of sugarcane processing.



3. ENA also serves as an essential ingredient in the production of paints and ink for the printing industry, as well as in pharmaceutical products.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

Extra Neutral Alcohol (ENA) is the primary raw material for making alcoholic beverages. It is a colourless food-grade alcohol that does not have any impurities. It has a neutral smell and taste, and typically contains over 95 per cent alcohol by volume. It is derived from different sources — sugarcane molasses and grains — and is used in the production of alcoholic beverages such as whisky, vodka, gin, cane, liqueurs, and alcoholic fruit beverages.

ENA also serves as an essential ingredient in the manufacture of cosmetics and personal care products such as perfumes, toiletries, hair spray, etc. Given its properties as a good solvent, ENA also finds industrial use and is utilised in the production of some lacquers, paints and ink for the printing industry, as well as in pharmaceutical products such as antiseptics, drugs, syrups, medicated sprays.

Like ethanol, ENA is a byproduct of the sugar industry, and is formed from molasses that are a residue of sugarcane processing.

Source

14) Consider the following statements regarding tyre pyrolysis.

- 1. Tyre pyrolysis refers to a technique of breaking down used tyres in the absence of oxygen.
- 2. Tyre pyrolysis is considered a safer technique than burning tyres, without leaving any carbon matter.
- 3. India is a recipient of used tyres from other countries for recycling and disposal.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1, 2, 3

Solution: c)

Tyre pyrolysis refers to a technique of breaking down used tyres in the absence of oxygen. Shredded tyres, at temperatures between 250° C and 500° C, produce liquid oil and gases.

While this is considered a safer technique than burning tyres, pyrolysis leaves fine carbon matter, pyro-gas, oil as residue and the inadequate management of these by-products poses health risks.

India is also a recipient of used tyres from Australia and the U.K., which are sent for recycling and disposal.

The National Green Tribunal in 2014 prohibited used tyres from being burnt in the open or being used as fuel in brick kilns, because of the toxic emissions.

Source

15) Consider the following statements regarding 5G Technology.

- 1. 5G is the next generation cellular technology that will provide faster and more reliable communication with high latency.
- 2. The Indian government has launched a three-year programme to advance innovation and research in 5G.

3. Once 5G becomes commercial, users will be required to change their current devices in favour of 5G-enabled ones.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: c)

5G is the next generation cellular technology that will provide faster and more reliable communication with ultra-low latency. Latency is the amount of time data takes to travel between its source and destination.

With 5G, the peak network data speeds are expected to be in the range of 2-20 Gigabit per second (Gbps). This is in contrast to 4G link speeds in averaging 6-7 Megabit per second (Mbps) in India as compared to 25 Mbps in advanced countries

With 5G technology, consumers will be able to download data heavy content such as 8K movies and games with better graphics in just a few seconds. But once 5G becomes commercial, users will be required to change their current devices in favour of 5G-enabled ones.

5G is expected to form the backbone of emerging technologies such as the Internet of Things (IoT) and machine to machine communications, thereby supporting a much larger range of applications and services, including driverless vehicles, tele-surgery and real time data analytics. The ultra low latency offered by 5G makes the technology desirable for such use cases.

Source

16) Consider the following statements regarding virtual autopsy.

- 1. In a virtual autopsy, doctors use radiation to examine the innards to reach a conclusion about the cause of death.
- 2. A computerized tomography (CT) or a magnetic resonance imaging (MRI) machine cannot be used in virtual autopsy.
- 3. Virtual autopsy is time consuming compared to traditional postmortem.

Which of the above statements is/are incorrect?

- a) 3 only
- b) 1, 2
- c) 1, 3
- d) 2, 3

Solution: d)

In a virtual autopsy, doctors use radiation to examine the innards to reach a conclusion about the cause of death. A CT or an MRI machine could be used, in the same way that they are used to scan a living human's body.

“The All India Institute of Medical Science (AIIMS), New Delhi and Indian Council of Medical Research (ICMR) are working together on a technique for postmortem without incising/dissecting the body. This technique is likely to become functional in the next six months.”

A virtual autopsy is also faster than a traditional one — 30 minutes against 2½ hours, — and more cost-effective.

Source

## 5. International Relations and Organisations

- 1) Consider the following statements regarding United Nations Mission in South Sudan (UNMISS).
1. UNMISS is a United Nations peacekeeping mission for South Sudan established by United Nations Security Council Resolution.
  2. Its mandate is to support the Government of the Republic of South Sudan in developing its capacity to provide security, to establish rule of law, and to strengthen the security and justice sectors.
  3. At present there are no Indian peacekeepers serving with the UN Mission in South Sudan (UNMISS)

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: a)

A total of 150 Indian peacekeepers serving with the UN Mission in South Sudan (UNMISS) have received medals of honour for their dedicated service and sacrifice.

The United Nations Mission in South Sudan (UNMISS) is the United Nations peacekeeping mission for the independent South Sudan, which became independent on 9 July 2011. UNMISS was established on 8 July 2011 by United Nations Security Council Resolution 1996 (2011).

The UNMISS Mandate includes:

- Support for peace consolidation and thereby fostering longer-term state building and economic development.
- Support the Government of the Republic of South Sudan in exercising its responsibilities for conflict prevention, mitigation and resolution and protect civilians.
- Support the Government of the Republic of South Sudan in developing its capacity to provide security, to establish rule of law, and to strengthen the security and justice sectors.

Source

- 2) Consider the following statements regarding Paris Peace Forum
1. The Paris Peace Forum is an international event on global governance issues and multilateralism, held annually in Paris.
  2. The Forum convenes heads of states, national and local representatives and representatives from international organizations.
  3. 1<sup>st</sup> edition of Paris Peace Forum was held in 2019.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: a)

The Paris Peace Forum is an international event on global governance issues and multilateralism, held annually in Paris, France. The second edition took place on 11–13 November 2019. More than 30 heads of state and government attended the forum and India was represented by External Affairs Minister S. Jaishankar.

The Forum convenes heads of states, national and local representatives, representatives from international organizations among others for the purpose of discussing in depth major global challenges and finding practical solutions.

At the forum over 100 projects coming from all across the world, that have put in practice specific solutions to governance challenges are showcased.

Source

3) Consider the following statements regarding Hong Kong Convention, recently seen in news.

1. The International Maritime Organisation (IMO) adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.
2. It is aimed at ensuring that ships being recycled after reaching the end of their operational lives do not pose any unnecessary risks to human health, safety and to the environment.
3. Recently cabinet committee on economic affairs (CCEA) approved India's accession to the Hong Kong Convention.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

Recently, the cabinet committee on economic affairs (CCEA) approved India's accession to the Hong Kong Convention on Hong Kong International Convention for Ship Recycling, which will help in providing boost to the ship- recycling industry in India.

The International Maritime Organization (IMO) adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships in 2009. This is aimed at ensuring that ships being recycled after reaching the end of their operational lives do not pose any unnecessary risks to human health, safety and the environment.

Hong Kong Convention 2009 is not yet in force, but, with India's accession, the first of the three conditions for the Convention's entry into force has now been fulfilled.

Source

4) Consider the following statements about Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).

1. It comprises of eight Member States lying in the littoral and adjacent areas of the Bay of Bengal.
2. It came into being through the Bangkok Declaration.
3. It is headquartered in Kathmandu, Nepal
4. In 2018, the 4th BIMSTEC Summit concluded in Kathmandu

Which of the above statements is/are correct?

- a) 2, 4
- b) 1, 3
- c) 1, 2, 4
- d) 2, 3, 4

Solution: a)

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization comprising seven Member States lying in the littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity. This sub-regional organization came into being on 6 June 1997 through the Bangkok Declaration.

The BIMSTEC member states—Bangladesh, India, Myanmar, Sri Lanka, Thailand, Nepal and Bhutan. The permanent secretariat is in Dhaka.

In 2018, the 4th BIMSTEC Summit concluded in Kathmandu.

5) Consider the following statements regarding Central Asian Flyway (CAF).

1. Central Asian Flyway (CAF) is a flyway covering a large continental area of Eurasia between the Arctic Ocean and the Indian Ocean and the associated island chains.

2. CAF migration routes include the steppes and cold deserts of Central Eurasia.

3. National action plan for conservation of migratory birds along the Central Asian Flyway emphasizes on coordinated efforts by all relevant stakeholders in conservation of the winged species.

Which of the above statements is/are correct?

a) 1, 2

b) 1, 3

c) 2, 3

d) 1, 2, 3

Solution: d)

The Central Asian Flyway (CAF) covers a large continental area of Eurasia between the Arctic and Indian Oceans and the associated island chains.

The flyway comprises several important migration routes of waterbirds, most of which extend from the northernmost breeding grounds in the Russian Federation (Siberia) to the southernmost non-breeding (wintering) grounds in west and south Asia, the Maldives and the British Indian Ocean Territory.

The government has launched a national action plan for conservation of migratory birds along the Central Asian Flyway which emphasizes on coordinated efforts by all relevant stakeholders in conservation of the winged species.

India provides a critical stopover as well as a wintering habitat to more than 370 species of migratory birds.

Source

6) Consider the following statements regarding Budapest Convention.

1. Budapest Convention, is the first international treaty seeking to address Internet and computer crime by harmonizing national laws, improving investigative techniques, and increasing cooperation among nations.

2. It was drawn up by the Council of Europe and is open for ratification even to states that are not members of the Council of Europe.

3. Recently India ratified the Budapest Convention due to surge in cybercrime.

Which of the above statements is/are correct?

a) 1, 2

b) 1, 3

c) 2, 3

d) 1, 2, 3

Solution: a)

The Convention on Cybercrime, also known as the Budapest Convention on Cybercrime or the Budapest Convention, is the first international treaty seeking to address Internet and computer crime by harmonizing national laws, improving investigative techniques, and increasing cooperation among nations.

It was drawn up by the Council of Europe in Strasbourg, France, with the active participation of the Council of Europe's observer states Canada, Japan, South Africa and the United States.

It is open for ratification even to states that are not members of the Council of Europe.

As of September 2019, 64 states have ratified the convention.

The Budapest Convention provides for the criminalisation of conduct, ranging from illegal access, data and systems interference to computer-related fraud and child pornography, procedural law tools to make investigation of cybercrime and securing of e-evidence in relation to any crime more effective, and international police and judicial cooperation on cybercrime and e-evidence.

Since it entered into force, important countries like Brazil and India have declined to adopt the Convention on the grounds that they did not participate in its drafting. Since 2018, India has been reconsidering its stand on the Convention after a surge in cybercrime, though concerns about sharing data with foreign agencies remain.

7) Consider the following statements about Arms Trade Treaty (ATT).

1. It is a multilateral treaty that regulates the international trade in conventional weapons.
2. The treaty was negotiated under the auspices of the United Nations (UN).
3. It regulates the domestic sale or use of weapons in any country.

Which of the above statements is/are correct?

- a) 1, 3
- b) 2, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)

The Arms Trade Treaty (ATT) is a multilateral treaty that regulates the international trade in conventional weapons.

The ATT is an attempt to regulate the international trade of conventional weapons for the purpose of contributing to international and regional peace; reducing human suffering; and promoting co-operation, transparency, and responsible action by and among states.

The treaty was negotiated in New York City at a global conference under the auspices of the United Nations (UN) from 2–27 July 2012. On 2 April 2013, the UN General Assembly adopted the ATT.

Conventional weapons covered by the UN Arms Trade Treaty include tanks and other armored combat vehicles, artillery, attack helicopters, naval warships, missiles and missile launchers, and small arms.

It also establishes common international standards for the regulation of the international trade in ammunition, weapons parts, and arms components.

The treaty does not regulate the domestic sale or use of weapons in any country. It also recognizes the legitimacy of the arms trade to enable states to provide for their own security.

Source

8) Consider the following statements regarding Instrument in Support of Trade Exchanges (INSTEX).

1. The Instrument in Support of Trade Exchanges (INSTEX) is China's payment mechanism established in 2019.
2. Its mission is to facilitate non-USD transactions and non-SWIFT to avoid breaking U.S. sanctions.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

Six Countries – Belgium, Denmark, Finland, the Netherlands, Norway and Sweden have recently joined INSTEX.

What is it?

It is a payment mechanism being setup by the European Union to secure trade with Iran and skirt US sanctions after Washington pulled out of the landmark nuclear deal last May.

It is registered at Paris with an initial 3,000 Euros in the capital and a supervisory board with members from France and Germany and chaired by the UK.

Key features of INSTEX:

- It will allow trade between the EU and Iran without relying on direct financial transactions.
- It will initially be used for non-sanctionable trade, including humanitarian goods such as medicine, food and medical devices.

9) Consider the following statements regarding 'Contract for the Web'.

1. The 'Contract for the Web' is a United Nations document that aims to create a standard policy for a Web that benefits all.
2. Governments who are looking to regulate in the digital era, can use the contract as a roadmap to lay out their policies and laws going forward.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

Sir Tim Berners-Lee, inventor of the World Wide Web, has announced a "Contract for the Web" — aimed at saving the future of his invention.

The idea is to create a global plan of action for all stakeholders to together commit to building a "better" Web. The goal is to create a standard policy for a Web that benefits all.

The Contract consists of nine principles — three each for governments, private companies, and individuals and civil society to endorse.

It has been created by representatives from over 80 organisations, including governments, companies, civil society activists, and academics.

The Contract is not meant to be "simply aspirational", or just a "declaration". "It's actually meant to be implemented, and it's meant to be a plan of action.

Governments who are looking to regulate in the digital era, can use the contract as a roadmap to lay out their policies and laws going forward.

10) Consider the following statements regarding Alliance of Small Island States (AOSIS).

1. Alliance of Small Island States (AOSIS) is an intergovernmental organization of low-lying coastal and small island countries.
2. The main purpose of the alliance is to consolidate the voices of Small Island Developing States (SIDS) to address global warming.
3. AOSIS partners with United Nations Development Programme (UNDP) to effectively influence climate negotiations.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

AOSIS is a coalition of 44 small island and low-lying coastal developing states, including five observers. As a voice for the vulnerable, its mandate is more than amplifying marginalised voices as it also advocates for these countries' interests. In terms of size, AOSIS closely resembles the countries it represents on the global stage, but often punches far above its weight, negotiating historic global commitments to cut greenhouse gas emissions, among other achievements.



To achieve its goals, AOSIS often draws on partnerships, including with the United Nations Development Programme (UNDP) and the European Commission, to bolster its capacity to effectively influence climate negotiations, some of the most complex and difficult in the world. AOSIS also makes vital contributions by helping its members to pool their resources and amplify their collective voice in climate talks. This goes beyond just speaking up to securing ambitious agreements with tangible benefits for vulnerable communities.

Source

11) Consider the following statements about Asia-Pacific awards for cultural heritage conservation.

1. It is awarded by UNESCO.
2. It recognises the efforts taken to restore and conserve historical structures without affecting their heritage value.
3. New Delhi has won most recognitions in India since the inception of the awards.

Which of the above statements is/are correct?

- a) 1, 3
- b) 2, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)

- Launched in 2000, Unesco Asia-Pacific awards for cultural heritage conservation programme is aimed at acknowledging the efforts taken to restore and conserve historical structures without affecting their heritage value in the region comprising 48 countries.
- The awards are classified under four categories — Award of Excellence, Awards of Distinction, Awards of Merit and Award for New Design in Heritage Context.
- They are being given to encourage the efforts of all stakeholders and the public in conserving and promoting monuments and religious institutes with rich heritage in the Asia-Pacific region.

Mumbai has won maximum recognitions since the inception of the awards in 2000 – the most for any city in India.

12) Consider the following statements regarding “Power of Siberia” gas pipeline.

1. Power of Siberia is the first cross-border gas pipeline between Russia and China.
2. The pipeline passes through China’s Yangtze River.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: c)

Chinese President Xi Jinping and his Russian counterpart Vladimir Putin inaugurated the “Power of Siberia” gas pipeline — a massive cross-border undertaking not only central to China’s energy security but also for bolstering special ties between Beijing and Moscow.

Russia has been a primary gas supplier to Europe, but the Power of Siberia is the first cross-border gas pipeline between Russia and China, adding a prominent eastern dimension to Moscow’s energy blueprint.

From Siberia to China’s Yangtze River delta in Shanghai, the massive pipeline will cover 8,000 km, with 5,111 km inside China, passing through nine provinces and municipalities.

Gas is being sourced from Chayandinskoye and Kovytko fields in eastern Siberia, and is then piped to Blagoveshchensk — the last town on the Russian side of the border. From there, it is tunneled under the Amur River, before entering Heihe on the Chinese side.

## Source

13) Consider the following statements regarding YuWaah initiative.

1. It is launched by UNESCO.
2. It is a multi-stakeholder alliance which aims to facilitate youth inside and outside formal education systems to gain relevant skills for productive lives and the future of work.
3. It brings young people together with the private sector, governments, international and local organisations.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: c)

YuWaah'- Generation Unlimited initiative:

Launched by UNICEF.

The target age group of YuWaah includes adolescent girls and boys and its key mission is to promote access to foundational, transferable and 21<sup>st</sup> century skills for youth inside and outside formal education systems, which includes defining foundational skills, life skills and flexible learning and identifying and scaling impactful delivery models.

YuWaah intends to create platforms to guide youth to market opportunities (career guidance, mentorship, internships, apprenticeships) and facilitate integration of career guidance in school education.

- It brings young people together with the private sector, governments, international and local organisations.
- The aim is to tackle the urgent challenge of investing in their learning and training so that they are prepared for the complex and fast-changing world of work and can be active and engaged citizens.

## Source

14) Consider the following statements about Treaty on the Prohibition of Nuclear Weapons (TPNW).

1. It is the first legally binding international agreement to comprehensively prohibit nuclear weapons.
2. It was passed in 1974 after India conducted its first nuclear test.
3. The treaty prohibits the development, testing, production, stockpiling, transfer and use of nuclear weapons for all the UN member countries.

Which of the above statements is/are correct?

- a) 1 only
- b) 1, 2
- c) 1, 3
- d) 1, 2, 3

Solution: a)

The Treaty on the Prohibition of Nuclear Weapons (TPNW), 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.



Source


15) Reporters Without Borders, often in the news, is

- a) An inter-governmental agency sponsored by European Union
- b) A United Nations agency to help refugees of civil war
- c) Non-governmental organization on issues relating to freedom of the press
- d) United Nations organisation to regulate freedom of press.

Solution: c)

Reporters Without Borders (RWB), or Reporters Sans Frontières (RSF), is an international non-profit, non-governmental organization based in Paris, France, that conducts political advocacy on issues relating to freedom of information and freedom of the press.

Source



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## 6. Polity

1) Consider the following statements regarding Contempt of Court.

1. In India, the Contempt of Courts Act, 1971, divides contempt into civil contempt and criminal contempt.

2. Civil contempt is the publication of any matter or doing of any act which scandalises or lowers the authority of any court.

3. The Contempt of Courts Act, 1971, states that fair criticism of any case which has been heard and decided is not contempt.

Which of the above statements is/are correct?

a) 1, 2

b) 2, 3

c) 1, 3

d) 1, 2, 3

Solution: c)

In India, the Contempt of Courts Act, 1971, divides contempt into civil contempt and criminal contempt.

‘Civil contempt’ is a ‘wilful disobedience to any judgment, decree, direction, order, writ or other processes of a Court or wilful breach of an undertaking given to the court’.

‘Criminal contempt’ is ‘the publication (whether by words, spoken or written, or by signs, or by visible representation, or otherwise) of any matter or the doing of any other act whatsoever which:

1. Scandalises or tends to scandalise, or lowers or tends to lower the authority of, any court.
2. Prejudices, or interferes or tends to interfere with the due course of any judicial proceeding.
3. Interferes or tends to interfere with, or obstructs or tends to obstruct, the administration of justice in any other manner.’

The Contempt of Courts Act, 1971, very clearly states that fair criticism of any case which has been heard and decided is not contempt.

2) Consider the following statements.

1. The Upper House of the Indian Parliament traces its history to the first bicameral legislature introduced in British India in 1919 as a consequence of the Montagu-Chelmsford reforms.

2. Unlike the US Senate, India’s Rajya Sabha does have more members from populous states.

3. Rajya Sabha is not subjected to dissolution and cannot be prorogued by the President.

Which of the above statements is/are correct?

a) 1, 2

b) 1, 3

c) 2 only

d) 2, 3

Solution: a)

1. The Upper House of the Indian Parliament traces its direct history to the first bicameral legislature introduced in British India in 1919 as a consequence of the Montagu-Chelmsford reforms.

2. Unlike the US Senate which ensures equal representation for all federal units (each state having two representatives), India’s Rajya Sabha does have more members from populous states.

The Rajya Sabha meets in continuous sessions, and unlike the Lok Sabha, being the lower house of the Parliament, the Rajya Sabha, which is the upper house of Parliament, is not subjected to dissolution. However, the Rajya Sabha, like the Lok Sabha can be prorogued by the President.

Source



3) Consider the following statements regarding Gram Sabha.

1. Gram Sabha is not a permanent body.
2. Constitution mentions that Gram Sabha exercises such powers and performs such functions at the village level as the Legislature of a State may, by law, provide.
3. The power to annul a decision of the Gram Sabha rests with the Gram Panchayat only.

Which of the above statements is/are incorrect?

- a) 3 only
- b) 1, 3
- c) 1, 2
- d) 2, 3

Solution: b)

The term Gram Sabha is defined in the Constitution of India under Article 243(b). Gram Sabha is the primary body of the Panchayati Raj system and by far the largest.

It is a permanent body.

The power to annul a decision of the Gram Sabha rests with the Gram Sabha only.

Composition:

1. Persons, those who are above 18 years of age.
2. Living in the village.
3. Whose names are included in the electoral rolls for the Panchayat at the village level.

Constitution mentions that Gram Sabha exercises such powers and performs such functions at the village level as the Legislature of a State may, by law, provide.

4) Consider the following statements regarding Private member's Bills (PMB).

1. A Private member's Bill can be introduced in either the Lok Sabha or Rajya Sabha.
2. There are no restrictions as to what a Private member's Bill should be about.
3. Private member's Bill cannot be a Constitutional Amendment Bill.
4. In the past 2 decades, less than 10% of the Private member's bills introduced are discussed.

Which of the above statements is/are correct?

- a) 1, 2, 3
- b) 2, 3, 4
- c) 1, 2, 4
- d) 1, 2, 3, 4

Solution: c)

- A Member of Parliament (MP) who is not a Minister in the Union Cabinet is called a Private Member. Bills introduced by such members are called Private Member's Bills. A PMB can be introduced in either the Lok Sabha or Rajya Sabha. Bills introduced by ministers are called Government Bills.
- Generally, the 2.00 pm to 6.00 pm slot on alternate Fridays during sessions are reserved for discussion on PMBs.
- There are no restrictions as to what a PMB should be about. The scope of a PMB is same as that of a Government Bill. These bills can deal with any issue and can also be a Constitutional Amendment Bill.
- Unlike a Government Bill, a PMB is not discussed by the Council of Ministers internally.

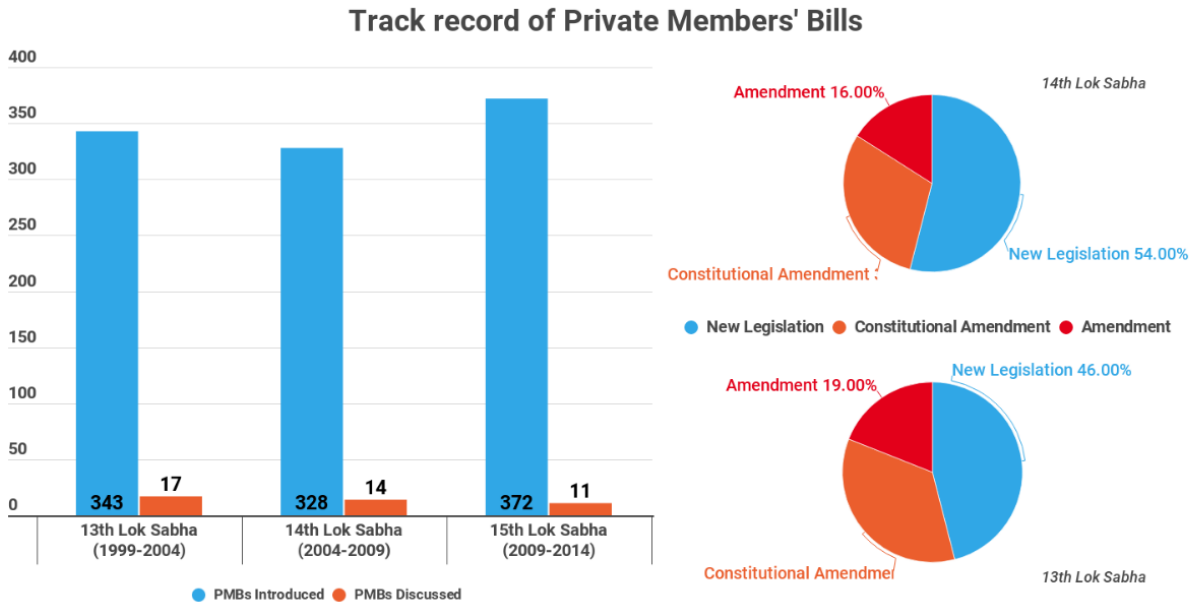
The procedure

- PMBs are drafted by MPs themselves or by their staff. These bills are, however, scrutinised and checked by the Parliament Secretariat for technicalities and legal consistency.
- The member has to provide a one-month notice along with a copy of the 'Statement of Object and Reasons'. Through the statement, the member is required to elaborate on the bill.
- In case there are multiple PMBs being proposed at the same time, a ballot system is used to determine the sequence of bills for introduction.

- There is also a Parliamentary Committee on Private Member's Bills and Resolutions that goes through all PMBs. The committee classifies these Bills based on their urgency and importance, which in turn, determines which would be discussed first.

**Track record**

- According to PRS Legislative Research (PRS), 372 PMBs were introduced in the 15<sup>th</sup> Lok Sabha (2009-2014). Only 11 out of them were discussed.



**5) Consider the following statements regarding President's rule.**

1. The imposition of the President's rule requires the sanction of both the houses of Parliament.
2. President's rule cannot be revoked without Cabinet approval even if the Prime Minister deems it necessary.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: a)

Article 356 of the Constitution of India gives President of India the power to suspend state government and impose President's rule of any state in the country "if he is satisfied that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the Constitution".

1. Upon the imposition of this rule, there would be no Council of Ministers. The Vidhan Sabha is either dissolved or prorogued.
2. The state will fall under the direct control of the Union government, and the Governor will continue to head the proceedings, representing the President of India – who is the Head of the State.
3. The imposition of the President's rule requires the sanction of both the houses of Parliament.
4. If approved, it can go on for a period of six months. However, the imposition cannot be extended for more than three years, and needs to be brought before the two houses every six months for approval.

To revoke President's Rule, the government can use a special Section in the Union government's Transaction of Business Rules (Rule 12), which allows for revocation of President's Rule without Cabinet approval if the Prime Minister "deems it necessary".

- Rule 12 of the Government of India (Transaction of Business) Rules, 1961, allows the Prime Minister to depart from laid down norms at his discretion.
- It says, “The Prime Minister may, in case or classes of cases permit or condone a departure from these rules, to the extent he deems necessary.”
- The Cabinet can subsequently give post-facto approval for any decision taken under Rule 12.

6) Consider the following statements regarding Review Petition.

1. According to the Indian Constitution, the Supreme Court has the power to review any of its judgments or orders.
2. Any person aggrieved by a ruling can seek a review.
3. The court exercises its discretion to allow a review petition only when it shows the grounds for seeking the review.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

Under Article 137, the Supreme Court has the power to review any of its judgments or orders.

When a review takes place, the law is that it is allowed not to take fresh stock of the case but to correct grave errors that have resulted in the miscarriage of justice.

The court has the power to review its rulings to correct a “patent error” and not “minor mistakes of inconsequential import”.

Who can file a review petition?

As per the Civil Procedure Code and the Supreme Court Rules, any person aggrieved by a ruling can seek a review. However, the court exercises its discretion to allow a review petition only when it shows the grounds for seeking the review.

7) Consider the following statements regarding Question Hour in the Indian Parliament.

1. A Starred Question is one to which a member desires an oral answer from the Minister in the House and is required to be distinguished by him/her with an asterisk.
2. An Unstarred Question is not called for oral answer in the House and no supplementary question can be asked thereon.
3. As per Rules of Procedure and Conduct of Business in Lok Sabha, there are no Questions addressed to Private Members.

Which of the above statements is/are correct?

- a) 1, 3
- b) 2, 3
- c) 1, 2
- d) 1, 2, 3

Solution: c)

Members have a right to ask questions to elicit information on matters of public importance within the special cognizance of the Ministers concerned. The questions are of four types:

1. Starred Questions: A Starred Question is one to which a member desires an oral answer from the Minister in the House and is required to be distinguished by him/her with an asterisk. Answer to such a question may be followed by supplementary questions by members.



2. Unstarred Questions: An Unstarred Question is one to which written answer is desired by the member and is deemed to be laid on the Table of the House by Minister. Thus it is not called for oral answer in the House and no supplementary question can be asked thereon.
3. Short Notice Questions: A member may give a notice of question on a matter of public importance and of urgent character for oral answer at a notice less than 10 days prescribed as the minimum period of notice for asking a question in ordinary course. Such a question is known as 'Short Notice Question'.
4. Questions to Private Members: A Question may also be addressed to a Private Member (Under Rule 40 of the Rules of Procedure and Conduct of Business in Lok Sabha), provided that the subject matter of the question relates to some Bill, Resolution or other matter connected with the business of the House for which that Member is responsible. The procedure in regard to such questions is same as that followed in the case of questions addressed to a Minister with such variations as the Speaker may consider necessary.

8) Consider the following statements regarding Parliamentary committees.

1. Committee meetings are 'closed door' and members are not bound by party whips.
2. Most committees are standing committees as their existence is uninterrupted and usually reconstituted on an annual basis.
3. Select committees are formed for a specific purpose, for instance, to deliberate on a particular bill.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1, 2, 3

Solution: d)

Parliamentary Committees are an instrument of Parliament for its own effective functioning. Committee meetings are 'closed door' and members are not bound by party whips.

Most committees are 'standing' as their existence is uninterrupted and usually reconstituted on an annual basis.

Some are 'select' committees formed for a specific purpose, for instance, to deliberate on a particular bill. Once the Bill is disposed of, that select committee ceases to exist. Some standing committees are departmentally related.

The three financial committees are the Public Accounts Committee, the Estimates Committee and the Committee on Public Undertakings.

## 7. History, Art and Culture

1) Consider the following statements regarding Suranga Bawadi.

1. Suranga Bawadi is an integral part of the ancient Karez system of supplying water through subterranean tunnels.

2. It was built during Adil Shahi era.

3. It has been included in the UNESCO's World Monument Watch list.

Which of the above statements is/are correct?

a) 1, 3

b) 2, 3

c) 1, 2

d) 1, 2, 3

Solution: c)

Suranga Bawadi, an integral part of the ancient Karez system of supplying water through subterranean tunnels built during Adil Shahi era in Vijayapura, is now set to get funding for restoration. A New York-based non-governmental organisation has included it in the World Monument Watch list for 2020 along with 24 other monuments from across the world.

The monument has been selected under the 'Ancient Water System of the Deccan Plateau' by World Monuments Fund [the NGO], which monitors restoration of ancient monuments across the globe.

It will be working on the ancient water system 'Karez' which is believed to be one of the best systems in the world.

Though the Karez system was built in the 16th century by Ali Adil Shah-I, his successor, Ibrahim Adil Shah-II, brought in several changes by adding more structures to strengthen it.

Source

2) Consider the following statements.

1. He participated in the Swadeshi movement.

2. He established the Dayanand Anglo-Vedic School in Lahore.

3. He was attacked by police during a protest rally against the Simon Commission.

4. He was elected President of the Indian National Congress during its Special Session in Kolkata in 1920.

The above statements refer to?

a) Bhai Parmanand.

b) Kartar Singh Sarabha.

c) Tej Bahadur Sapru

d) None of the above

Solution: d)

November 17 is the death anniversary of Lala Lajpat Rai, the firebrand Indian nationalist leader affectionately called 'Punjab Kesari'.

- Rai is remembered for his role during the Swadeshi movement and for his advocacy of education.
- Born in 1865, he became a follower of Dayanand Saraswati, the founder of the Arya Samaj, and went on to become one of the society's leaders.
- He also helped found the Punjab National Bank.
- In 1885, Rai established the Dayanand Anglo-Vedic School in Lahore and remained a committed educationist throughout his life.

- Rai, Tilak, and Bipin Chandra Pal (called Lal-Bal-Pal) fervently advocated the use of Swadeshi goods and mass agitation in the aftermath of the controversial Partition of Bengal in 1905 by Lord Curzon.
- He founded the Indian Home Rule League of America in New York City in 1917.
- He was elected President of the Indian National Congress during its Special Session in Kolkata in 1920, which saw the launch of Mahatma Gandhi's Non-cooperation Movement.
- The patriot died at Lahore in 1928 after he was attacked by police during a protest rally against the Simon Commission.



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## 8. Defence and Security

- 1) Which of the following statement is correct regarding 'Tiger Triumph', recently seen in news
- International programme to create awareness about tiger conservation.
  - Restoring tiger conservation areas.
  - India and U.S. armed forces tri-services exercise.
  - None of the above

Solution: c)

The first-ever India and U.S. armed forces tri-services exercise 'Tiger Triumph' concluded off the Kakinada coast, East Godavari district.

This was the first tri-services exercise by both countries on humanitarian assistance and disaster relief (HADR).

Source

- 2) Mission Raksha Gyan Shakti is related to
- Enhance the private sector participation in defence manufacturing.
  - Boost Export of India's Defence production
  - Boost Intellectual Property Right (IPR) culture in indigenous defence industry
  - Invisible laser walls to bolster security along border with Pakistan in Jammu and Kashmir

Solution: c)

As part of the ongoing initiatives to enhance self-reliance in defence, the Mission Raksha Gyan Shakti aims to provide a boost to the IPR culture in indigenous defence industry.

Source

- 3) Consider the following statements regarding Border Roads Organisation (BRO)
- BRO contributes to the Socio-Economic Development of the Border States.
  - They constructed the Delaram-Zaranj Highway in Afghanistan.
  - The BRO works in close association with the Indian Army in cases of natural disasters.

Which of the above statements is/are correct?

- 1, 2
- 1, 3
- 2, 3
- 1, 2, 3

Solution: d)

- Functioning under the control of the Ministry of Defence since 2015, the BRO is engaged in road construction to provide connectivity to difficult and inaccessible regions in the border areas of the country.

Most of the development in the North Eastern states of India can be attributed to the relentless work done by the BRO.

The highly-skilled BRO personnel undertook and successfully completed construction of the Delaram-Zaranj Highway in Afghanistan in 2008. The Farkhor and Ayni air bases of Tajikistan were also restored and repaired by the BRO.

The BRO works in close association with the Indian Army in cases of natural disasters.

Role of the BRO

In Peace:

Develop & Maintain the Operational Road Infrastructure of General Staff in the Border Areas.  
Contribute to the Socio-Economic Development of the Border States.

In War:

To Develop & Maintain Roads to Keep Line of Control through in Original Sectors and Re-Deployed Sectors.

To Execute Addl Tasks as laid down by the Govt Contributing to the War Effort.

Source



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## 9. Reports and Indices

- 1) Global Food Policy Report is released by
- a) Food and Agriculture Organisation (FAO)
  - b) World Health Organisation (WHO)
  - c) International Food Policy Research Institute (IFPRI)
  - d) Both a and c

Solution: c)

International Food Policy Research Institute (IFPRI) has released Global Food Policy Report-2019. The report reviews the major food policy issues, developments, and decisions of 2018, and considers challenges and opportunities for 2019.

This year's Report highlights the urgency of rural revitalization to address a growing crisis in rural areas.

Source

- 2) 2019 Emissions Gap Report is released by
- a) Intergovernmental Panel on Climate Change (IPCC)
  - b) International Union for Conservation of Nature
  - c) United Nations Environment Programme (UNEP)
  - d) United Nations Framework Convention on Climate Change (UNFCCC)

Solution: c)

UNEP's Emissions Gap Report warns: 'Very hard to meet 1.5-degree goal without deeper, faster cuts'

Source

- 3) Emissions Gap Report measures
1. The amount of greenhouse gas emissions every year up to 2030.
  2. The commitments countries are making to reduce their emissions and the impact these commitments are likely to have on overall emission reduction.
  3. The pace at which emissions must be reduced to reach an emission low that would limit temperature increase to 1.5 degree Celsius.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: d)

This Emissions Gap Report from UNEP examines the progress of countries to close the gap via their commitments to emissions reduction, to ultimately stop climate change.

The Emissions Gap Report measures and projects three key trendlines:

1. The amount of greenhouse gas emissions every year up to 2030
2. The commitments countries are making to reduce their emissions and the impact these commitments are likely to have on overall emission reduction
3. The pace at which emissions must be reduced to reach an emission low that would limit temperature increase to 1.5°C, affordably

The report also identifies key opportunities for each country to increase the pace of emission reduction necessary to close the gap.

## Source

4) Consider the following statements regarding Global Migration Report 2020.

1. 'Global Migration Report 2020' has been released by International Organisation for Migration (IOM).
2. After China, India accounts for the next highest share of its diaspora living outside the country.
3. Remittances received by India have consistently increased since 2005.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: b)

'Global Migration Report 2020' has been released by International Organisation for Migration (IOM).

Key findings- India specific:

- India accounts for the highest share with 17.5 million Indians living outside the country.
- India is the leading recipient of remittances. International remittances in 2018 (2020 report) reached \$689 billion, out of which India received \$78.6 billion from the 17.5 million living abroad.
- Remittances received by India have consistently increased between the 2005 and 2020.
- The top migration corridors for Indians are the United Arab Emirates, the US and Saudi Arabia.
- Highest number of migrants entering India come from Bangladesh.

## Source

5) Global Climate Risk Index is released by

- a) Intergovernmental Panel on Climate Change (IPCC)
- b) United Nations Framework Convention on Climate Change (UNFCCC)
- c) Germanwatch
- d) UN Environment

Solution: c)

India is the fifth most vulnerable country to climate change, according to a report released by Environment think tank, Germanwatch.

## Source

6) Special Report on Oceans and Cryosphere in a Changing Climate (SROCC) is prepared by

- a) Intergovernmental Panel on Climate Change (IPCC)
- b) United Nations Framework Convention on Climate Change (UNFCCC)
- c) Germanwatch
- d) UN Environment

Solution: a)

The Intergovernmental Panel on Climate Change's (IPCC) Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC) was approved at the IPCC's 51st Session (IPCC-51) in September 2019 in Monaco.

The report is the third in the series of three Special Reports in the current Sixth Assessment Report (AR6) cycle, which began in 2015 and will be completed in 2022. The first was the Special Report on Global Warming of 1.5 °C, while the second was the Special Report on Climate Change and Land (SRCCL).

## Source



## 10. Maps / Places

- 1) Sabang, a strategic location for India is located across?
- a) Strait of Hormuz
  - b) Bab-el-Mandeb
  - c) Strait of Malacca
  - d) Johore Strait

Solution: c)

India and Indonesia have agreed to develop a naval port in Sabang, a strategic location at the entrance of Malacca Strait.

Source

- 2) Ganga Sagar and Mousuni Islands, recently in news is located in
- a) Aminidivi Islands
  - b) Ritchie's Archipelago
  - c) Great Andaman Islands
  - d) Sundarbans archipelago

Solution: d)

Ganga Sagar, is the largest island in the Sundarbans archipelago.



Source

- 3) Kerch Strait, recently in news, connects Black sea to
- a) Aegean Sea
  - b) Sea of Marmara
  - c) Adriatic Sea
  - d) Sea of Azov

Solution: d)



4) Bougainville island, recently in news is part of

- a) Sunda Islands
- b) Islands on the Great Barrier Reef
- c) Solomon Islands
- d) Marshall Islands

Solution: c)

Bougainville island is the largest of the Solomon Islands archipelago.

5) Sukapaika river, recently seen in news is the distributary of which river?

- a) Yamuna
- b) Godavari
- c) Mahanadi
- d) Krishna

Solution: c)

Sukapaika is one of the several distributaries of the mighty Mahanadi river in Odisha.

Embankments have killed Odisha's Sukapaika river that was the lifeline of over 0.5 million people.

Source

6) White Island, recently seen in news is located in

- a) Australia
- b) New Zealand
- c) Vietnam
- d) Indonesia

Solution: b)

Whakaari /White Island volcano in New Zealand erupts.

Source

7) Consider the following statements.

1. It is a strait between the Persian Gulf and the Gulf of Oman.
2. It provides the only sea passage from the Persian Gulf to the open ocean.
3. Almost 25% of total global oil production passes through the strait.

The above statements refer to

- a) Strait of Bab-el-Mandeb
- b) Dardenleez Strait
- c) Strait of Hormuz
- d) Gibraltar Strait

Solution: c)

Strait of Hormuz is a strait between the Persian Gulf and the Gulf of Oman. It provides the only sea passage from the Persian Gulf to the open ocean and is one of the world's most strategically important choke points.



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## 11. Miscellaneous

1) Consider the following statements regarding K-12 Education Transformation Framework.

1. Google has launched “K-12 Education Transformation Framework” more widely in India.
2. The Framework provides a holistic framework to facilitate a comprehensive digital transformation of schools.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: b)

Microsoft rolls out its K12 Education Transformation Framework more widely in India.

1. The Framework provides a holistic framework to facilitate a comprehensive digital transformation of schools.
2. The framework is a flexible platform based on the latest research and input from hundreds of academics, experts, and policymakers.
3. It comprises four pillars — leadership and policy, modern teaching and learning, intelligent environments and technology blueprint.

2) Consider the following statements regarding ‘She Shuttle’, recently seen in news.

1. It is the bus service for women passengers and an exclusive transport system for the working female professionals.
2. It was inaugurated in New Delhi.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Solution: a)

In a move to improve measures for the safety and security of women, the Rachakonda Police inaugurated the exclusive bus service for women passengers in Hyderabad.

It is the latest technology-driven security system for all women passengers and an exclusive transport system for the working female professionals in the area.

'She Shuttle' is equipped with a well-monitored surveillance system with CCTV cameras, a lady security guard and a smartphone application for every passenger with a panic button.

Source

3) Who among the following are listed as the Particularly Vulnerable Tribal Groups in Andaman & Nicobar Islands.

1. Jarawa
2. Toda
3. Sentinelese
4. Shompen

Select the correct answer code:

- a) 1, 2, 3
- b) 2, 3, 4
- c) 1, 3, 4

d) 1, 2, 3, 4

Solution: c)

Name of the Particularly Vulnerable Tribal Group(s) in Andaman & Nicobar Islands - Great Andamanese, Jarawa, Onge, Sentinelese and Shompen.

Toda in Tamil Nadu

Source

4) GOAL (Going Online As Leaders), a mission to empower women is launched by

- a) Google
- b) Microsoft
- c) Facebook
- d) Twitter

Solution: c)

GOAL (Going Online as Leaders), a Facebook program aimed at inspiring, guiding and encouraging tribal girls from across India to become village-level digital young leaders for their communities.

GOAL connects underprivileged young tribal women with senior expert mentors in the areas of business, fashion and arts to learn digital and life skills.

Source

5) Consider the following statements regarding Formation of a New Country.

1. There is no law barring regions from declaring independence.
2. A region's quest for nationhood mainly depends on how many countries and international organisations it manages to convince to recognise it as a country.
3. The right of "self-determination" is not included in the UN charter.

Which of the above statements is/are correct?

- a) 1, 3
- b) 2, 3
- c) 1, 2
- d) 1 only

Solution: c)

How does a territory become a new country?

There is no straightforward rule. Beyond a few set requirements, a region's quest for nationhood mainly depends on how many countries and international organisations it manages to convince to recognise it as a country. The biggest sanction of nationhood is the United Nations recognising a territory as a country.

Who can declare itself a country?

Anyone. There is no law barring regions from declaring independence.

Somaliland in Somalia has been calling itself a country since 1991, but no one else recognises it. Kosovo in Serbia declared independence in 2008, and only a few other countries recognise it.

In June 1945, the right of "self-determination" was included in the UN charter. This means that a population has the right to decide how and by whom it wants to be governed.

Source