

MAY 2020



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# 1. Economy

- 1) Consider the following statements regarding Priority Sector Lending (PSL).
- 1. At present, all domestic scheduled commercial banks and all foreign banks are required to meet a target of 40 per cent of their Adjusted Net Bank Credit (ANBC) or credit equivalent of Off-Balance Sheet Exposure, whichever is higher for Priority Sector Lending.
- 2. Regional Rural Banks and Small Finance Banks are required to meet a target of 75 per cent towards PSL. Which of the above statements is/are correct?
  - a) 1 only
  - b) 2 only
  - c) Both 1 and 2
  - d) Neither 1 nor 2

Solution: b)

In terms of Reserve Bank of India (RBI) guidelines on Priority Sector Lending (PSL) a target of 40 percent of Adjusted Net Bank Credit (ANBC) or Credit Equivalent amount of Off-Balance Sheet Exposures (OBE), whichever is higher, as of preceding March 31st, has been mandated for lending to the priority sector by domestic scheduled commercial banks and foreign banks with 20 branches and above. Within this, sub-targets of 18% of ANBC or OBE whichever is higher, as of preceding March 31st is for Agriculture and 10% ANBC or OBE whichever is higher, as of preceding March 31st is for weaker sections which includes, among others, persons from SCs/ STs. RBI prescribes PSL targets bank-wise and not state-wise.

RRBs and SFBs are required to meet a target of 75 per cent towards PSL.

#### Source

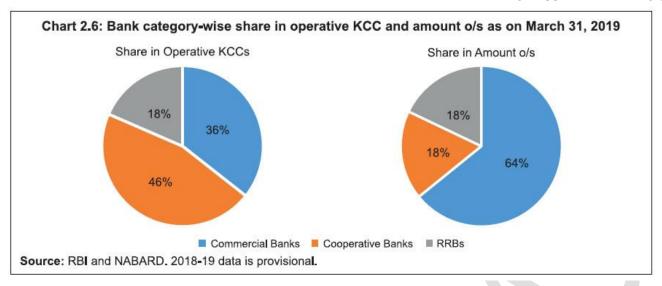
- 2) The Kisan Credit Card (KCC) scheme aimed at providing adequate and timely credit support from the banking system under a single window with flexible and simplified procedure for the farmers for their overall credit requirements such as
  - 1. Marketing of produce
  - 2. Maintenance of farm assets
  - 3. Consumption requirements of farmer households
  - 4. Post-harvest expenses

Select the correct answer code:

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

Solution: d)

The Kisan Credit Card (KCC) scheme, introduced in 1998, aimed at providing adequate and timely credit support from the banking system under a single window with flexible and simplified procedure for the farmers for their overall credit requirements such as cultivation of crops, post-harvest expenses, marketing of produce, maintenance of farm assets, activities allied to agriculture and also consumption requirements of farmer households.



- 3) Consider the following statements regarding Strategic Disinvestment Process.
- 1. Department of Investment and Public Asset Management (DIPAM) under the Ministry of Finance is the nodal department for the strategic stake sale.
  - 2. DIPAM and NITI Aayog will jointly identify PSUs for strategic disinvestment.

Which of the above statements is/are correct?

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

Solution: c)

Department of Investment and Public Asset Management (DIPAM) under the Ministry of Finance has been made the nodal department for the strategic stake sale.

This was done with a view to streamlining and speeding up the process and reducing the role of administrative ministries.

DIPAM and NITI Aayog will now jointly identify PSUs for strategic disinvestment.

#### Source

- 4) Which of the following are the activates and reports by Central Statistics Office (CSO).
  - 1. Conduct of Annual Survey of Industries
  - 2. Compilation of Index of Industrial Production
  - 3. Human Development Statistics
  - 4. Wholesale Price Index

Select the correct answer code:

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

Solution: a)

The Central Statistics Office is responsible for **co-ordination of statistical activities in the country**, and evolving and maintaining statistical standards. **Its activities include** National Income Accounting; conduct of Annual Survey of Industries, Economic Censuses and its follow up surveys, compilation of Index of Industrial Production, as well as Consumer Price Indices for Urban Non-Manual Employees, Human Development Statistics, Gender Statistics, imparting training in Official Statistics;

The WPI is published by the Economic Adviser in the Ministry of Commerce and Industry.

- 5) Which of the following taxes are not subsumed under Goods and Services Tax?
  - 1. Central Excise on Petroleum Products
  - 2. Property tax levied by local bodies
  - 3. Service Tax
  - 4. Taxes on lottery
  - 5. Professional Tax

Select the correct answer code:

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

Solution: c)

Which taxes at the Centre and State level are being subsumed into GST?

#### At the Central level, the following taxes are being subsumed:

- a. Central Excise Duty,
- b. Additional Excise Duty,
- c. Service Tax.
- d. Additional Customs Duty commonly known as Countervailing Duty, and
- e. Special Additional Duty of Customs.

#### At the State level, the following taxes are being subsumed:

- a. Subsuming of State Value Added Tax/Sales Tax,
- b. Entertainment Tax (other than the tax levied by the local bodies), Central Sales Tax (levied by the Centre and collected by the States),
- c. Octroi and Entry tax,
- d. Purchase Tax,
- e. Luxury tax, and
- f. Taxes on lottery, betting and gambling.

**Taxes not subsumed under GST include** Basic Custom Duty, Central Excise on Petroleum Products, Anti-Dumping Duty, VAT on alcohol for human consumption, Stamp Duty, Property Tax (levied by local bodies), Professional Tax.

#### Source

- 6) Consider the following statements regarding National Anti-Profiteering Authority (NAA).
- 1. National Anti-Profiteering Authority (NAA) has been constituted under the Integrated Goods and Services Tax Act, 2017.
- 2. It ensure that the reduction in rate of tax or the benefit of input tax credit is passed on to the recipient by way of commensurate reduction in prices.

Which of the above statements is/are correct?

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

Solution: b)

The National Anti-Profiteering Authority (NAA) has been constituted under Section 171 of the Central Goods and Services Tax Act, 2017 to ensure that the reduction in rate of tax or the benefit of input tax credit is passed on to the recipient by way of commensurate reduction in prices.

Further, the following steps have been taken by the NAA to ensure that customers get the full benefit of tax cuts:

- Holding regular meetings with the Zonal Screening Committees and the Chief Commissioners of Central Tax to stress upon consumer awareness programmes;
- Launching a helpline to resolve the queries of citizens regarding registration of complaints against profiteering.
- Receiving complaints through email and NAA portal.
- Working with consumer welfare organizations in order to facilitate outreach activities.

#### Source

- 7) Consider the following statements regarding Fair and Remunerative Price (FRP) of sugarcane.
  - 1. It is the minimum price at which the Central Government purchases sugarcane from the farmers.
  - 2. FRP is fixed on basis of recommendations of Commission for Agricultural Costs and Prices (CACP).
  - 3. Some states announce a State Advised Price, which is generally higher than the FRP.

Which of the above statements is/are correct?

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

Solution: b)

Fair and Remunerative Price is the minimum price at which rate sugarcane is to be purchased by sugar mills from farmers. FRP is fixed by Union government on basis of recommendations of Commission for Agricultural Costs and Prices (CACP).

Sugarcane's FRP is determined under Sugarcane (Control) Order, 1966.

Some states announce a State Advised Price, which is generally higher than the FRP.

- 8) Consider the following statements regarding National Payments Corporation of India (NPCI).
- 1. NPCI is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007.
- 2. It has been incorporated as a "for Profit" Company under the provisions of Companies Act 2013 with an intention to provide infrastructure to the entire Banking system in India for physical as well as electronic payment and settlement systems.
  - 3. State Bank of India is one of the core promoter banks.

Which of the above statements is/are correct?

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

Solution: b)

National Payments Corporation of India (NPCI), an umbrella organisation for operating retail payments and settlement systems in India, is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007, for creating a robust Payment & Settlement Infrastructure in India.

Considering the utility nature of the objects of NPCI, it has been incorporated as a "Not for Profit" Company under the provisions of Section 8 of Companies Act 2013, with an intention to provide infrastructure to the entire Banking system in India for physical as well as electronic payment and settlement systems.

The Company is focused on bringing innovations in the retail payment systems through the use of technology for achieving greater efficiency in operations and widening the reach of payment systems.

The ten core promoter banks are State Bank of India, Punjab National Bank, Canara Bank, Bank of Baroda, Union Bank of India, ICICI Bank, HDFC Bank, Citibank N. A. and HSBC.

#### Source

- 9) Consider the following statements regarding Information Technology Agreement (ITA).
- 1. The Information Technology Agreement (ITA) is a plurilateral agreement enforced by the World Trade Organisation.
- 2. The aim of the agreement is to lower all taxes and tariffs on information technology products by signatories to zero.
  - 3. India does not impose basic customs duty on photovoltaic cells and modules.

Which of the above statements is/are correct?

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

Solution: d)

The Information Technology Agreement (ITA) is a plurilateral agreement enforced by the World Trade Organization (WTO) and concluded in the Ministerial Declaration on Trade in Information Technology Products in 1996, and entered into force 1 July 1997.

The aim of the treaty is to lower all taxes and tariffs on information technology products by signatories to zero. India is a signatory to the Information Technology Agreement.

The Ministry of New and Renewable Energy (MNRE) clarified that the basic customs duty (BCD) on imported solar cells and modules would remain nil.

#### Source Source

- 10) Consider the following statements.
- 1. There has been a decline in the number of persons filing income tax returns from financial year (FY) 2013-14 to FY 2017-18.
- 2. The direct tax-GDP ratio fell in FY 2017-18, the lowest it has been in the last 10 years.

Which of the above statements is/are incorrect?

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

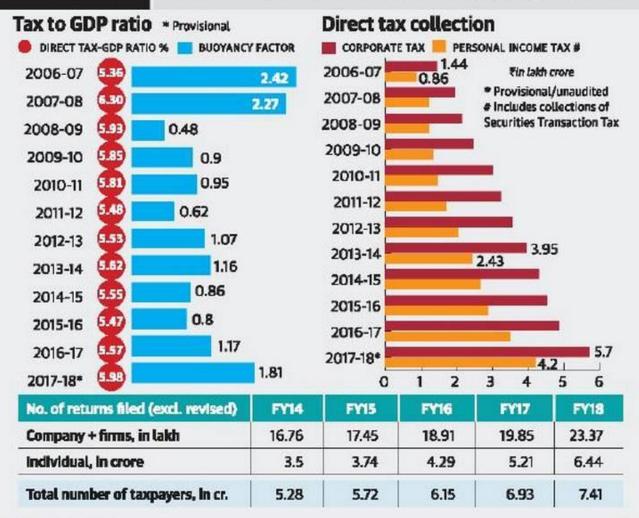
Solution: c)

The data showed a growth of more than 80% in the number of returns filed in the last four financial years from 3.79 crore in financial year (FY) 2013-14 to 6.85 crore (these figures include revised returns) in FY 2017-18. Further, the number of persons filing income tax returns also increased by about 65% during this period from 3.31 crore in FY 2013-14 to 5.44 crore in FY 2017-18.

The data also showed that the direct tax-GDP ratio rose to 5.98% in FY 2017-18, the highest it has been in the last 10 years.



No. of individual taxpayers with income above ₹1 cr. rose from 48,416 in AY15 to 81,344 in AY18. Salaried taxpayer count too rose from 1.7 cr. to 2.33 cr. Graphs below show flutuating tax ratios and rising collections



Source: Ministry of Finance

#### Source

- 11) New Arrangement to Borrow (NAB), a funding mechanism, recently seen in news is related to which bank
  - a) World Bank
  - b) Asian Development Bank
  - c) Asian Infrastructure Investment Bank
  - d) International Monetary Fund

Solution: d)

The New Arrangement to Borrow is the fund mobilization arrangement of the IMF to mobilise additional funds through borrowing from member countries. Under NAB, member countries and institutions can stand ready to lend to the Fund.

#### Source

- 12) Consider the following statements regarding Minimum Alternative Tax (MAT).
- 1. Minimum Alternate Tax (MAT) was created to bring the 'zero-tax paying companies' within the ambit of income tax and make them pay a minimum amount in tax to the government.
  - 2. MAT is applicable to all corporate entities, whether public or private.

Which of the above statements is/are correct?

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

Solution: c)

On September 20, 2019 Finance Minister Nirmala Sitharaman announced the reduction of Minimum Alternative Tax (MAT) for companies from 18.5 percent to 15 percent for those who continue to avail exemptions and incentives. Also, companies that have their corporate tax rate cut to 22 percent without exemptions are not applicable to pay MAT.

Minimum Alternate Tax (MAT) is a tax effectively introduced in India by the Finance Act of 1987, vide Section 115J of the Income Tax Act, 1961 (IT Act), to facilitate the taxation of 'zero tax companies' i.e., those companies which show zero or negligible income to avoid tax. Under MAT, such companies are made liable to pay to the government, by deeming a certain percentage of their book profit as taxable income.

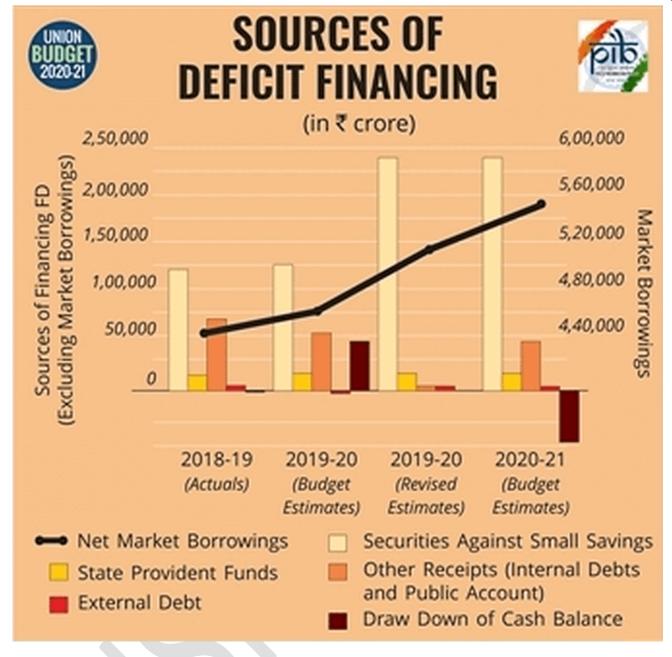
#### MAT is applicable to all corporate entities, whether public or private.

- 13) Through which of the following sources the Government can finance the fiscal deficit?
  - 1. Market borrowings
  - 2. Securities against Small Savings
  - 3. State Provident Funds
  - 4. External Debt

Select the correct answer code:

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

Solution: d)



- 14) Which of the following would be the implications of issuing international sovereign bonds by Indian Government.
  - 1. It can lead to higher foreign inflows into India.
  - 2. It could also improve the attractiveness of rupee-denominated sovereign bonds.
- 3. The rates at which the government borrows overseas will act as a yardstick for pricing of other corporate bonds.
- 4. Fluctuations in exchange rate may lead to increased pay out pressure on the issuing government. Select the correct answer code:
  - a) 1, 2, 3
  - b) 1, 3, 4
  - c) 1, 2, 4
  - d) 1, 2, 3, 4

Solution: d)

The issue of international sovereign bonds will have several long-term implications. It may facilitate the **inclusion of India's government bonds in the global debt indices**. India's representation in global debt market indices is small compared to other emerging markets. This may lead to **higher foreign inflows** into India.

Two, inclusion in global benchmarks would also improve the attractiveness of rupee-denominated sovereign bonds. Three, the rates at which the government borrows overseas will act as a yardstick for pricing of other corporate bonds, helping India Inc raise money overseas. While some commentators think that the government can borrow at very low costs overseas, this argument is weak, as it will have to hedge against forex risks.

But despite so many benefits, there are risks too. **Dollar-denominated bonds are more sensitive to global interest rates**. Global shocks, as seen in the 2013 taper tantrums, can lead to heightened selling pressure on Indian bonds.

#### Source

- 15) Consider the following statements regarding Electoral Bonds in India.
  - 1. Electoral Bond is a bearer Banking Instrument to be used for funding all Political Parties.
- 2. During the purchase of Electoral Bonds, RBI as Authorised Bank may call for any additional Know Your Customer documents, if it deems necessary.
  - 3. RBI has kept limits on the purchase of electoral bonds.

Which of the above statements is/are incorrect?

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

Solution: c)

Electoral Bond is a bearer Banking Instrument to be used for funding eligible Political Parties. An eligible Political Party is the one registered under Section 29A of the Representation of the People Act, 1951 (43 of 1951) and secured not less than one per cent of the votes polled in the last General Election to the House of the People or the Legislative Assembly.

The Electoral Bonds shall be valid for Fifteen Days from the Date of Issue ie: An Electoral Bond issued on 1<sup>st</sup> March 2018 will be valid upto 15<sup>th</sup> March 2018.

The Electoral Bonds can be redeemed only by an eligible Political Party by depositing the same in their Designated Bank Account maintained with Authorised Bank.

The Electoral Bonds under this Scheme may be purchased by a Person, who is a Citizen of India or Incorporated or Established in India.

The Electoral Bonds shall be issued in the denomination of Rs1000, Rs 10,000, Rs 1,00,000, Rs 10,00,000 and Rs 1,00,000,000.

The extant instructions issued by the Reserve Bank of India regarding Know Your Customer norms of a Bank's customer shall apply for all Applicants of the Electoral Bonds. However, **SBI as Authorised Bank** may call for any additional Know Your Customer documents, if it deems necessary.

The minimum amount for donation in Electoral Bonds is Rs 1000. There is no maximum limit for Donation.

SBI is the Sole Authorized Bank by the Government of India for selling Electoral Bonds.

#### Source

- 16) Consider the following statements regarding Gini Coefficient.
  - 1. Gini Coefficient only looks at distribution of incomes or wealth among a nation's residents.
- 2. Gini Coefficient ranges from 0 to 1, with 0 representing perfect inequality and 1 representing perfect equality.

Which of the above statements is/are correct?

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

Solution: a)

Gini coefficient is a measure of statistical dispersion intended to represent the income or wealth distribution of a nation's residents, and is the most commonly used measurement of inequality.

Gini coefficient does not depend on either high income or low income. It also does not look at absolute incomes.

A Gini coefficient of zero expresses perfect equality, where all values are the same (for example, where everyone has the same income). A Gini coefficient of one (or 100%) expresses maximal inequality among values (e.g., for a large number of people, where only one person has all the income or consumption, and all others have none, the Gini coefficient will be very nearly one).



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# 2. Ecology and Environment

- 1) Consider the following statements regarding C40 Cities.
- 1. C40 is a group of 40 cities around the world that is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens.
- 2. From India, New Delhi and Mumbai are the only two cities that are member cities of the C40. Which of the above statements is/are incorrect?
  - a) 1 only
  - b) 2 only
  - c) Both 1 and 2
  - d) Neither 1 nor 2

Solution: c)

The C40 Cities Climate Leadership Group (C40) is a group of 96 cities around the world. C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens.

From India, Bengaluru, Chennai, Jaipur, Kolkata, Mumbai and New Delhi are member cities of the C40.

#### Source

- 2) Consider the following statements regarding Great Indian Bustards (GIB).
- 1. It is Identified as one of the species for the recovery programme under the Integrated Development of Wildlife Habitats of the Ministry of Environment and Forests.
- 2. Project Great Indian Bustard was launched by the Ministry of Environment and Forests for identifying and fencing off bustard breeding grounds in existing protected areas as well as provide secure breeding enclosures in areas outside protected areas.
- 3. The bird is categorised as "critically endangered" by the International Union for Conservation of Nature (IUCN).

Which of the above statements is/are correct?

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

Solution: b)

- IUCN status: critically endangered.
- Found in Gujarat, Maharashtra, Karnataka and Andhra Pradesh.
- Listed in Schedule I of the Indian Wildlife (Protection) Act, 1972 and in the CMS Convention and in Appendix I of CITES.
- Identified as one of the species for the recovery programme under the Integrated Development of Wildlife Habitats of the Ministry of Environment and Forests.
- Project Great Indian Bustard by the state of Rajasthan identifying and fencing off bustard breeding
  grounds in existing protected areas as well as provide secure breeding enclosures in areas outside
  protected areas.
- Protected areas: Desert National Park Sanctuary Rajasthan, Rollapadu Wildlife Sanctuary Andhra Pradesh and Karera Wildlife Sanctuary— Madhya Pradesh.

#### Source

3) Consider the following statements regarding International Union for Conservation of Nature (IUCN).

- 1. IUCN is an international organization working in the field of nature conservation and sustainable use of natural resources.
  - 2. Its main aim to mobilize the public in support of nature conservation.
  - 3. It has observer and consultative status at the United Nations.
  - 4. It was involved in establishing the World Wide Fund for Nature.

Which of the above statements is/are correct?

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

Solution: b)

The International Union for Conservation of Nature (IUCN) is an international organization working in the field of nature conservation and sustainable use of natural resources. It is involved in data gathering and analysis, research, field projects, advocacy, and education. IUCN's mission is to "influence, encourage and assist societies throughout the world to conserve nature and to ensure that any use of natural resources is equitable and ecologically sustainable".

Over the past decades, IUCN has widened its focus beyond conservation ecology and now incorporates issues related to sustainable development in its projects. **IUCN does not itself aim to mobilize the public in support of nature conservation**. It tries to influence the actions of governments, business and other stakeholders by providing information and advice, and through building partnerships. The organization is best known to the wider public for compiling and publishing the IUCN Red List of Threatened Species, which assesses the conservation status of species worldwide.

IUCN has a membership of over 1400 governmental and non-governmental organizations. Some 16,000 scientists and experts participate in the work of IUCN commissions on a voluntary basis. It employs approximately 1000 full-time staff in more than 50 countries. Its headquarters are in Gland, Switzerland.

**IUCN** has observer and consultative status at the United Nations and plays a role in the implementation of several international conventions on nature conservation and biodiversity. It was involved in **establishing** the World Wide Fund for Nature and the World Conservation Monitoring Centre.

IUCN was established in 1948. It was previously called the International Union for the Protection of Nature (1948–1956) and the World Conservation Union (1990–2008).

#### Source

- 4) Which of the following releases methane into the atmosphere.
  - 1. Forest Fire
  - 2. Glaciers
  - 3. Landfills
  - 4. Waste water treatment facilities
  - 5. Hydraulic fracturing

Select the correct answer code:

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

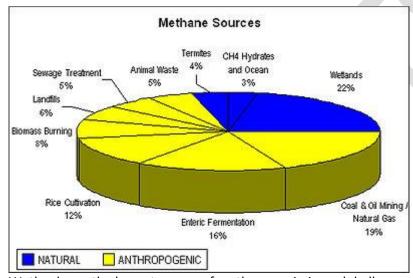
Solution: d)

(A) Permafrost, glaciers, and ice cores – A source that slowly releases methane trapped in frozen environments as global temperatures rise.

- (B) Wetlands Warm temperatures and moist environments are ideal for methane production.
- (C) Forest fire Mass burning of organic matter releases methane into the atmosphere.
- (D) Rice paddies The warmer and moister the rice field, the more methane is produced.
- (E) Animals Microorganisms, breaking down difficult to digest material in the guts of ruminant livestock and termites, produce methane that is then released during defecation.
- (F) Plants While methane can be consumed in soil before being released into the atmosphere, plants allow for direct travel of methane up through the roots and leaves and into the atmosphere. Plants may also be direct producers of methane.
- (G) Landfills Decaying organic matter and anaerobic conditions cause landfills to be a significant source of methane.
- (H) Waste water treatment facilities Anaerobic treatment of organic compounds in the water results in the production of methane.
- (I) Hydroxyl radical OH in the atmosphere is the largest sink for atmospheric methane as well as one of the most significant sources of water vapor in the upper atmosphere.
- (J) Chlorine radical Free chlorine in the atmosphere also reacts with methane.

#### Other sources of methane include:

- Natural gas extraction, transportation and use, hydraulic fracturing
- Natural gas seeps from coal areas and natural gas deposits
- Methane hydrates located around the world on the seafloor



Wetlands are the largest source of methane emissions globally.

#### Source

- 5) Consider the following statements about Biodiversity Heritage Sites (BHS).
  - 1. Biodiversity Heritage Sites (BHS) are declared as per the provisions of Biological Diversity Act, 2002.
  - 2. Areas with High endemism and presence of keystone species can be declared as Biodiversity Heritage Sites.
  - 3. Ministry of Environment, Forest and Climate Change (MoEFCC) will notify areas of biodiversity importance as Biodiversity Heritage Sites (BHS).

Which of the above statements is/are correct?

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

Solution: c)

"Biodiversity Heritage Sites" (BHS) are well defined areas that are unique, ecologically fragile ecosystems - terrestrial, coastal and inland waters and, marine having rich biodiversity comprising of any one or more of the following components: richness of wild as well as domesticated species or intra-specific categories, high endemism, presence of rare and threatened species, keystone species, species of evolutionary significance, wild ancestors of domestic/cultivated species or their varieties, past pre-eminence of biological components represented by fossil beds and having significant cultural, ethical or aesthetic values and are important for the maintenance of cultural diversity, with or without a long history of human association with them.

Under Section 37 of Biological Diversity Act, 2002 (BDA) the State Government in consultation with local bodies may notify in the official gazette, areas of biodiversity importance as Biodiversity Heritage Sites (BHS).

#### Source

- 6) Consider the following statements regarding Eco-sensitive zones.
- 1. Eco-Sensitive Zones (ESZs) are areas notified by the Ministry of Environment, Forests and Climate Change (MoEFCC) around Protected Areas, National Parks and Wildlife Sanctuaries.
  - 2. They act as a transition zone from areas of high protection to areas involving lesser protection.
  - 3. Eco-Sensitive Zones are defined and mentioned in Environment (Protection) Act, 1986.

Which of the above statements is/ are correct?

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

Solution: c)

Eco-Sensitive Zones (ESZs) or Ecologically Fragile Areas (EFAs) are areas notified by the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India around Protected Areas, National Parks and Wildlife Sanctuaries. The purpose of declaring ESZs is to create some kind of "shock absorbers" to the protected areas by regulating and managing the activities around such areas. They also act as a transition zone from areas of high protection to areas involving lesser protection.

ESZ are regulated by central government through Min. of Environment, Forests and Climate change (MoEFCC). Ministry came out with new guidelines for regulation of such areas in 2011.

The Environment Protection Act, 1986 does not mention the word "Eco-sensitive Zones".

- 7) Consider the following statements regarding Snow Leopard.
  - 1. Snow leopard is listed as Critically endangered under the IUCN Red List.
- 2. In India, the snow leopard habitat is spread over the northern Himalayan mountains of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh and Sikkim.
- 3. The Union Government had launched SECURE Himalaya project for the protection of Snow Leopard. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1, 3
  - c) 2, 3
  - d) 1, 2, 3

Solution: c)

Snow leopard is listed as Vulnerable under the IUCN Red List. In India, the snow leopard habitat is spread over the northern Himalayan mountains of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Arunachal Pradesh and Sikkim.

The Union Government had launched **SECURE Himalaya**, a six-year project to ensure conservation of locally and globally significant biodiversity, land and forest resources in high Himalayan ecosystem spread over four states viz. Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Sikkim.

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

Protection of snow leopard and other endangered species and their habitats is one of the key components of the project which will also focus on securing livelihoods of the people in the region and enhancing enforcement to reduce wildlife crime.

- 8) Consider the following statements regarding Green Climate Fund.
- 1. Green Climate Fund was set up under the Kyoto Protocol to channel funding from developed countries to developing countries to allow them to mitigate climate change.
  - 2. The Fund's investments can be in the form of grants, loans, equity or guarantees.
- 3. When the Paris Agreement was reached in 2015, the Green Climate Fund was given an important role in serving the agreement and supporting the goal of keeping climate change well below 2 degrees Celsius. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 2, 3
  - c) 1, 3
  - d) 1, 2, 3

Solution: b)

Green Climate Fund was set up by countries who are parties to the United Nations Framework Convention on Climate Change (UNFCCC) in 2010, as part of the Convention's financial mechanism. It aims to deliver equal amounts of funding to mitigation and adaptation, while being guided by the Convention's principles and provisions.

When the Paris Agreement was reached in 2015, the Green Climate Fund was given an important role in serving the agreement and supporting the goal of keeping climate change well below 2 degrees Celsius.

The Fund pays particular attention to the needs of societies that are highly vulnerable to the effects of climate change, in particular Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States.

The Fund's investments can be in the form of grants, loans, equity or guarantees.

Source

- 9) Consider the following statements regarding Wildlife Sanctuaries in India.
- 1. Wildlife Protection Act, 1972 gives State Government power to declare certain areas as wildlife sanctuaries.
  - 2. There are more than 500 wildlife sanctuaries in India.
  - 3. Andaman & Nicobar Islands has the highest number of wildlife sanctuaries in India.

Which of the above statements is/are correct?

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

Solution: d)

Any area other than area comprised with any reserve forest or the territorial waters can be notified by the State Government to constitute as a sanctuary if such area is of adequate ecological, faunal, floral, geomorphological, natural or zoological significance, for the purpose of protecting, propagating or developing wildlife or its environment. Some restricted human activities are allowed inside the Sanctuary area.

There are 551 existing wildlife sanctuaries in India which is 3.64 % of the geographical area of the country according to National Wildlife Database, May, 2019.

Andaman & Nicobar Islands has the highest number of wildlife sanctuaries in India.

#### Source

- 10) Consider the following statements regarding Sundarbans.
- 1. The Sundarbans mangrove forest, one of the largest such forests lies on the delta of the Ganges, Brahmaputra and Meghna rivers on the Bay of Bengal.
- 2. According to the census conducted for the year 2019-20, the number of Royal Bengal Tigers in the Sundarbans has increased.
- 3. The entire Sundarbans mangrove forest is now a UNESCO World Heritage Site. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1, 3
  - c) 2, 3
  - d) 1, 2, 3

Solution: a)

The number of Royal Bengal Tigers in West Bengal's Sundarbans has risen to 96, up by eight, according to the latest census.

The Sundarbans is a mangrove area in the delta formed by the confluence of the Ganges, Brahmaputra and Meghna Rivers in the Bay of Bengal.

Four protected areas in the Sundarbans are enlisted as UNESCO World Heritage Sites, viz Sundarbans National Park, Sundarbans West, Sundarbans South and Sundarbans East Wildlife Sanctuaries.

#### Source

- 11) Consider the following statements regarding National Board for Wildlife (NBWL).
- 1. National Board for Wildlife (NBWL) is a "Statutory Organization" constituted under the Environment (Protection) Act, 1986.
- 2. Its roles is "advisory" in nature and advises the Central Government on framing policies and measures for conservation of wildlife in the country.
- 3. It has power to review all wildlife-related matters and approve projects in and around national parks and sanctuaries.
- 4. NBWL meets at least twice a year for taking major policy decisions on wildlife clearance for a number of developmental projects.

Which of the above statements is/are correct?

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

Solution: b)

India's National Board for Wildlife (NBWL) hasn't met in six years. "Under the provisions of the Wild Life (Protection) Act, 1972 (WLPA), the NBWL can constitute a Standing Committee, but the board has to meet at least twice a year.

National Board for Wildlife:

- It is a "Statutory Organization" constituted under the Wildlife Protection Act, 1972.
- Its roles is "advisory" in nature and advises the Central Government on framing policies and measures for conservation of wildlife in the country.
- Primary function of the Board is to promote the conservation and development of wildlife and forests.
- It has power to review all wildlife-related matters and approve projects in and around national parks and sanctuaries.
- No alternation of boundaries in national parks and wildlife sanctuaries can be done without approval of the NBWL.
- Composition: The NBWL is chaired by the Prime Minister. It has 47 members including the Prime Minister. Among these, 19 members are ex-officio members. Other members include three Members of Parliament (two from Lok Sabha and one from Rajya Sabha), five NGOs and 10 eminent ecologists, conservationists and environmentalists.

#### Source

- 12) Consider the following statements regarding South Asia Co-operative Environment Programme (SACEP).
- 1. South Asia Co-operative Environment Programme (SACEP) is an arm of Asian Development Bank to promote and support protection, management and enhancement of the environment in the region.
- 2. SACEP supports national government's efforts for environmental protection and sustainable development.
  - 3. Afghanistan, India and Pakistan are the member countries of SACEP.

Which of the above statements is/are correct?

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

Solution: c)

South Asia Co-operative Environment Programme (SACEP) is an inter-governmental organization, established in 1982 by the governments of South Asia to promote and support protection, management and enhancement of the environment in the region. SACEP member countries are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

Since its creation, SACEP has implemented a number of projects and programmes in the areas of environment education, environment legislation, biodiversity, air pollution, and the protection and management of the coastal environment. SACEP is also secretariat for the South Asian Seas Programme.

The Malé Declaration on control and prevention of air pollution and its likely transboundary effects for South Asia is another significant effort which encourages intergovernmental cooperation to combat the transboundary air pollution problem.

#### Source

- 13) Which of the following is India's easternmost tiger reserve.
  - a) Sunderbans Tiger Reserve
  - b) Kamlang Tiger Reserve
  - c) Namdapha Tiger Reserve
  - d) Pakke Tiger Reserve

Solution: c)

Namdapha Tiger Reserve in Arunachal Pradesh is India's easternmost tiger reserve.

Source

- 14) Consider the following statements regarding Clownfish.
  - 1. Clownfish are found in various parts of the Indian and Pacific Oceans, including the Great Barrier Reef.
  - 2. Clownfish breed only in sea anemones, sharing a symbiotic relationship.
- 3. Presently the sea anemones are degrading more and more every year which is posing a threat to Clownfish.

Which of the above statements is/are correct?

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

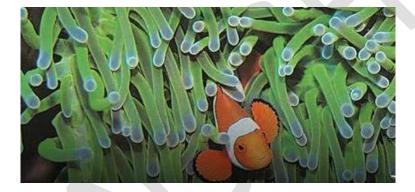
Solution: d)

While clownfish are found in various parts of the Indian and Pacific Oceans, including the Great Barrier Reef, only some species are widespread and most of the others have restricted distributions. Clownfish typically live at the bottom of shallow seas in sheltered reefs or in shallow lagoons. It is this habitat that is under threat.

Clownfish breed only in sea anemones, sharing a symbiotic bond. "It is a strong, obligate symbiosis,"

"Clownfish shelter in the anemone and are the only fish that do not get stung by the nematocysts of the anemone. The anemone benefits because clownfish can defend the anemone from fish that might eat it. They never live anywhere but in the anemone,"

And now the anemones, like coral reefs in general, are under direct threat from the impacts of climate change. It works like this: The anemones share another symbiotic bond, with algae. Under stress in warming waters, the algae leave the anemones. If the algae stay away too long, the anemone starve to death. Which leaves the clownfish without a home.



#### Source

- 15) Consider the following statements regarding Earth Overshoot Day.
  - 1. Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year.
  - 2. Earth Overshoot Day is hosted and calculated by Global Footprint Network.
- 3. In the last ten years, every year the overshoot date has been advancing compared to the previous year. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1, 3
  - c) 2, 3
  - d) 1, 2, 3

Solution: a)

Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year. We maintain this deficit by liquidating stocks of ecological resources and accumulating waste, primarily carbon dioxide in the atmosphere. Earth Overshoot Day is hosted and calculated by Global Footprint Network, an international research organization that provides decision-makers with a menu of tools to help the human economy operate within Earth's ecological limits.

#### Past Earth Overshoot Days<sup>[1]</sup>

Year	Overshoot Date	Year	Overshoot Date
1987	October 23	2013	August 3
1990	October 11	2014	August 5
1995	October 5	2015	August 6
2000	September 23	2016	August 5
2005	August 26	2017	August 3
2010	August 8	2018	August 1
2011	August 4	2019	July 29
2012	August 4	2020	TBD

#### Source

- 16) Which of the following statements is correct regarding 'Bamboonomics'?
- a) Bamboo plantation in urban areas in order to maintain a sustainable environment and pollution free clean air.
  - b) Promoting Bamboo as an alternative in building construction.
  - c) Encourage bamboo plantation by farmers in private lands.
  - d) A movement to combat desertification and climate change

Solution: d)

#### Bamboonomics:

It is a movement to combat desertification and climate change which will involve the tribal community of India since they have the expertise in this field.

The movement will ensure that tribals can earn a livelihood without causing environmental harm. It was launched at the COP 14 of the United Nations Convention to Combat Desertification (UNCCD).

#### Source

- 17) Consider the following statements regarding International Plant Protection Convention (IPPC).
- 1. International Plant Protection Convention (IPPC) is a multilateral treaty overseen by the Food and Agriculture Organization.
- 2. It aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products.
  - 3. It is the only international standard setting body for plant health.

Which of the above statements is/are correct?

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

Solution: c)

The International Plant Protection Convention (IPPC) is a 1951 multilateral treaty deposited with the **Food and Agriculture Organization of the United Nations (FAO)** that aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products. The Convention extends

beyond the protection of cultivated plants to the protection of natural flora and plant products. It also takes into consideration both direct and indirect damage by pests, so it includes weeds.

The Convention created a governing body consisting of each party, known as the **Commission on Phytosanitary Measures (CPM)**, which oversees the implementation of the Convention. As of March 2017, the Convention has 183 parties, which includes 180 United Nations member states, the Cook Islands, Niue, and the European Union. The Convention is recognized by the World Trade Organization's (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement) as the **only international standard setting body for plant health.** 

While the IPPC's primary focus is on plants and plant products moving in international trade, the Convention also covers research materials, biological control organisms, germplasm banks, containment facilities, food aid, emergency aid and anything else that can act as a vector for the spread of plant pests – for example, containers, packaging materials, soil, vehicles, vessels and machinery.

#### Source

- 18) Consider the following statements regarding Petersberg Climate Dialogue.
  - 1. Petersberg Climate Dialogue has been hosted by Germany.
- 2. It provides a forum for informal high-level political discussions, focusing both on international climate negotiations and the advancement of climate action.
- 3. Recently India participated in the virtual Petersberg Climate Dialogue and deliberated over ways and means to tackle the challenge of reinvigorating economies and societies after COVID-19. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1, 3
  - c) 2, 3
  - d) 1, 2, 3

Solution: d)

The eleventh and first ever virtual Petersberg Climate Dialogue was held on April 28th 2020.

India, along with 30 countries, deliberated over ways and means to tackle the challenge of reinvigorating economies and societies after COVID-19, while enhancing collective resilience and catalysing climate action while also supporting in particular those most vulnerable.

#### **About the Petersberg Climate Dialogue:**

- This has been hosted by Germany since 2010.
- The Climate Dialogue was originally an initiative of German Chancellor Angela Merkel. It is hosted by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.
- Aim: To provide a forum for informal high-level political discussions, focusing both on international climate negotiations and the advancement of climate action.
- The Dialogue was co-chaired by Germany and the United Kingdom, the incoming Presidency of the 26th Conference of Parties (COP 26) to United Nations Framework Convention on Climate Change (UNFCCC).

#### Source

- 19) Consider the following statements regarding Central Asian Flyway (CAF).
- 1. The Central Asian Flyway (CAF) covers a large continental area of Eurasia between the Arctic and Indian Oceans and the associated island chains.
- 2. Central Asian Waterbirds Flyway Action Plan promotes the conservation of migratory waterbirds and their habitats.
- 3. Rann of Kutch and Marine National Park and Wildlife Sanctuary are the major sites for migratory waterbirds.

Select the correct answer code:

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

Solution: d)

The 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.

The CAF comprises several important migration routes of waterbirds, most of which extend from the northernmost breeding grounds in Siberia to the southernmost non-breeding wintering grounds in West Asia, India, the Maldives and the British Indian Ocean Territory.

#### Source

- 20) Consider the following statements regarding Agriculture residue burning.
  - 1. About 50 per cent of all crop residue burnt in the country are residues of rice crop.
  - 2. National Green Tribunal (NGT) had banned crop residue burning in some states.
  - 3. The primary thrust of Air (Prevention and Control of Pollution) Act 1981 is to reduce industrial and automobile-related pollution and does not deal with burning of biomass and crop residue.

Which of the above statements is/are correct?

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

Solution: a)

About 50 per cent of all crop residue burnt in the country are residues of rice crop.

The primary thrust of the 1981 Air (Prevention and Control of Pollution) Act is on industrial and automobile-related pollution. But this doesn't mean it can't be used for burning of biomass and crop residue. Indeed, in December 2015, the ministry of environment, forests and climate change used Section 18(1)(b) of this legislation to issue directions for Delhi and NCR (National Capital Region), covering burning of agricultural waste, crop residues and biomass. Plus, there is the Environment Protection Act of 1986.

Ministry of Agriculture & Farmers Welfare has formulated the "National Policy for Management of Crop Residues (NPMCR), 2014" and circulated to all States/UTs, to ensure prevention of burning of crop residues, by incentivizing purchase of modern machineries to minimize left-over crop residue in the field, in situ conservation and mixing of residue in soil to increase soil fertility, multiple uses of crop residue, formulation of fodder pellets and briquettes."

National Green Tribunal (NGT) had banned crop residue burning in the states of Rajasthan, Uttar Pradesh, Haryana and Punjab.

#### Source Source

- 21) Consider the following statements regarding International Treaty of Plant Genetic Resources for Food and Agriculture (ITPGRFA).
  - 1. It is a comprehensive international agreement for ensuring food security through the conservation, exchange and sustainable use of the world's Plant Genetic Resources for Food and Agriculture.
  - 2. It aims to ensure that recipients share benefits they derive from the use of the plant genetic materials with the countries where they have been originated.
  - 3. It is not mandatory to ratify the treaty for accessing Plant Genetic materials.

Which of the above statements is/are correct?

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

Solution: c)

The International Treaty on Plant Genetic Resources for Food and Agriculture was adopted by the Thirty-First Session of the Conference of the Food and Agriculture Organization of the United Nations on 3 November 2001. It is also known as Seed Treaty as it is a comprehensive international agreement for ensuring food security through the conservation, exchange and sustainable use of the world's Plant Genetic Resources for Food and Agriculture (PGRFA).

#### The Treaty aims at:

- recognizing the enormous contribution of farmers to the diversity of crops that feed the world;
- establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials:
- ensuring that recipients share benefits they derive from the use of these genetic materials with the countries where they have been originated.

#### **Main Provisions:**

**Multilateral system:** The treaty puts 64 of our most important crops – crops that together account for 80 percent of the food we derive from plants – into an easily accessible global pool of genetic resources that is freely available to potential users in the Treaty's ratifying nations for some uses.

Access and benefit sharing: The Treaty facilitates access to the genetic materials of the 64 crops in the Multilateral System for research, breeding and training for food and agriculture. Those who access the materials must be from the Treaty's ratifying nations and they must agree to use the materials totally for research, breeding and training for food and agriculture. The Treaty prevents the recipients of genetic resources from claiming intellectual property rights over those resources in the form in which they received them.

- 22) When coal is burned, it releases a number of airborne toxins and pollutants like
  - 1. Mercury
  - 2. Lead
  - 3. Sulfur dioxide
  - 4. Nitrogen oxides

Select the correct answer code:

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

Solution: d)

When coal is burned it releases a number of airborne toxins and pollutants. They include Carbon dioxide, mercury, lead, sulfur dioxide, nitrogen oxides, particulates, and various other heavy metals. Health impacts can range from asthma and breathing difficulties, to brain damage, heart problems, cancer, neurological disorders, and premature death.

#### Source

- 23) Consider the following statements regarding Asiatic lions.
  - 1. The world's only abode for Asiatic Lion is the Gir National Park and Wildlife Sanctuary in Gujarat.
  - 2. It is listed in Schedule I of Wildlife (Protection) Act 1972 and in Appendix I of CITES.

3. It is listed as Critically Endangered on IUCN Red List.

Which of the above statements is/are correct?

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

Solution: a)

Asiatic lions were once distributed upto the state of West Bengal in east and Rewa in Madhya Pradesh, in central India. At present Gir National Park and Wildlife Sanctuary is the only abode of the Asiatic lion. The last surviving population of the Asiatic lions is a compact tract of dry deciduous forest and open grassy scrublands in southwestern part of Saurashtra region of Gujarat.

#### Listed in Schedule I of Wildlife (Protection) Act 1972, in Appendix I of CITES and as Endangered on IUCN Red List

An outbreak of Babesiosis caused by a protozoan parasite had caused the death of several lions in Gujarat's Gir National Park. 24 lions had died in the same range of Gir National Park in September 2018 due to a combination of Babesiosis disease and canine distemper virus (CDV).

#### Source

- 24) 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 ninemonth breeding season and for feeding and moulting.



Source

- 25) 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

- 26) The first multilateral bloc to declare climate emergency is
  - a) ASEAN
  - b) BIMSTEC
  - c) European Union (EU)
  - d) 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.

- 27) 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?

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

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

- 28) Consider the following statements regarding Desert locusts.
- 1. Desert locusts usually breed in the dry areas around Ethiopia, Somalia, Eritrea along the eastern coast of Africa.
- 2. Locusts are known to be passive flyers and always wait for very strong windy conditions and follow the wind.
- 3. Historically, locust control has involved spraying of organo-phospate pesticides on the night resting places of the locusts.

Which of the above statements is/are correct?

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

Solution: b)

Desert locusts (Schistocerca gregaria), which belong to the family of grasshoppers, **normally live and breed in semi-arid or desert regions**. For laying eggs, they require bare ground, which is rarely found in areas with dense vegetation. So, they can breed in Rajasthan but not in the Indo-Gangetic plains or Godavari and Cauvery delta.

But green vegetation is required for hopper development. Hopper is the stage between the nymph that is hatched from the eggs, and the winged adult moth. Such cover isn't widespread enough in the deserts to allow growth of large populations of locusts.

As individuals, or in small isolated groups, locusts are not very dangerous. But when they grow into large populations their behaviour changes, they transform from 'solitary phase' into 'gregarious phase', and start forming 'swarms'. A single swarm can contain 40 to 80 million adults in one square km, and these can travel up to 150 km a day.

Large-scale breeding happens only when conditions turn very favourable in their natural habitat, desert or semi-arid regions. Good rains can sometimes generate just enough green vegetation that is conducive to egglaying as well as hopper development.

This is what seems to have happened this year. These locusts usually breed in the dry areas around Ethiopia, Somalia, Eritrea along the eastern coast of Africa, a region known as the Horn of Africa. Other breeding grounds are the adjoining Asian regions in Yemen, Oman, southern Iran, and in Pakistan's Balochistan and Khyber Pakhtunkhwa provinces. Many of these areas received unusually good rains in March and April, and that resulted

in large-scale breeding and hopper development. These locusts started arriving in Rajasthan around the first fortnight of April, much ahead of the normal July-October normal.

#### When July-October is the normal time, how did they arrive so early?

The answer to this question probably lies in the **unusual cyclonic storms of 2018 in the Arabian Sea**. Cyclonic storms Mekunu and Luban had struck Oman and Yemen respectively that year. Heavy rains had transformed uninhabited desert tracts into large lake where the locust swarms breed.

Apart from the search for food, their movement has been aided by **westerly winds** that were, this time, further strengthened by the low pressure area created by Cyclone Amphan in the Bay of Bengal. Locusts are known to be passive flyers, and generally follow the wind. But **they do not take off in very strong windy conditions.** 

Historically, locust control has involved spraying of **organo-phospate pesticides** on the night resting places of the locusts

Source

- 29) Consider the following statements regarding Heatwaves.
- 1. Meteorologists declare a heatwave event when the maximum day temperature in any location crosses 40 degrees Celsius.
  - 2. Any location that shows a departure of over 6 degrees from normal, it is a severe heatwave condition.
  - 3. A heatwave spell generally lasts for a month.
  - 4. Not all parts of India experience heatwave conditions.

Which of the above statements is/are correct?

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

Solution: c)

Rajasthan, Delhi, Uttar Pradesh, Madhya Pradesh, and Maharashtra have been **experiencing severe to very severe heatwave conditions**.

#### What is a heatwave and when is it declared?

Heatwaves occur over India between March and June. Meteorologists declare a heatwave event when the maximum (day) temperature for a location in the plains crosses 40 degrees Celsius. Over the hills, the threshold temperature is 30 degrees Celsius. When the day temperature jumps by 4 to 5 degrees above the normal maximum temperature of a location, it is declared as a heatwave.

For example, if the normal maximum temperature for a location in the plains on a given day should be 40 degrees but records 45 degrees, then that location is experiencing a heatwave. Alternatively, any location where maximum temperature crosses 45 degrees or shows a departure of over 6 degrees from normal, it is a severe heatwave condition.

#### How long can a heatwave spell last?

A heatwave spell generally lasts for a minimum of four days. On some occasions, it can extend up to seven or ten days. The longest recorded heatwave spell, in recent years, was between 18 – 31 May 2015. This spell had severely affected parts of West Bengal along with Odisha, Andhra Pradesh, and Telangana. A similar spell in 2014 was reported during June 2 – June 11.

The **current heatwave spell commenced on May 22** and is likely to continue till May 29. Heatwave conditions occurring in May have been observed to last longer, as the season reaches its peak this month. Whereas those reported in June often die down sooner, often due to the onset of Southwest monsoon over the location or in its neighbourhood.

#### Does all of India experience heatwave conditions?

**No. Heatwaves are common over the Core Heatwave Zone (CHZ)** — Rajasthan, Punjab, Haryana, Chandigarh, Delhi, West Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Orissa, Vidarbha in Maharashtra, parts of Gangetic West Bengal, Coastal Andhra Pradesh and Telangana, as categorised by India Meteorological Department.

Several recent studies indicate that CHZ experience more than six heatwave days per year during these four months. Many places in the northwest and cities along south eastern coast report eight heatwave days per season. However, the regions in the extreme north, northeast and southwestern India are lesser prone to heatwaves.

#### Has cyclone Amphan influenced the current heatwave?

Since the event of severe heat has emerged immediately after the passing of Cyclone Amphan, experts confirm its role in leading to the present heatwave spell. **Cyclone Amphan**, which was a massive Super Storm covering 700 kms, managed to drag maximum moisture from over the Bay of Bengal, entire South Peninsula, parts of Central India and to some extent, even from the Arabian Sea.

All the moisture, that was otherwise built during the thunderstorm and rainfall, got gradually depleted from over vast areas as the storm advanced towards West Bengal and Bangladesh between May 16 and 20. It has now triggered dry north-westerly winds to blow over Rajasthan, Madhya Pradesh, Uttar Pradesh and Maharashtra causing severe heatwave.

#### Source

- 30) 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

- 31) 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.



# 3. Government Schemes and Programmes

- 1) Which of the following are the Components of Sagarmala Programme.
  - 1. Port Modernization & New Port Development
  - 2. Port-linked Industrialization
  - 3. Coastal Community Development
  - 4. Coastal Shipping & Inland Waterways Transport

Select the correct answer code:

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

Solution: d)

The Sagarmala programme is the flagship programme of the Ministry of Shipping to promote port-led development in the country through harnessing India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes.

Implementation of these projects are being done by the Central Line Ministries, State Governments / Maritime Boards and SPVs preferably through the private sector and through the Public Private Participation (PPP) wherever feasible.

Components of Sagarmala Programme are:

- **Port Modernization & New Port Development**: De-bottlenecking and capacity expansion of existing ports and development of new greenfield ports
- Port Connectivity Enhancement: Enhancing the connectivity of the ports to the hinterland, optimizing
  cost and time of cargo movement through multi-modal logistics solutions including domestic waterways
  (inland water transport and coastal shipping)
- **Port-linked Industrialization**: Developing port-proximate industrial clusters and Coastal Economic Zones to reduce logistics cost and time of EXIM and domestic cargo
- **Coastal Community Development**: Promoting sustainable development of coastal communities through skill development & livelihood generation activities, fisheries development, coastal tourism etc.
- **Coastal Shipping & Inland Waterways Transport**: Impetus to move cargo through the sustainable and environment-friendly coastal and inland waterways mode.

#### Vision of Sagarmala Programme

 Reducing the cost of transporting domestic cargo through optimizing modal mix

 Optimizing time/cost of EXIM container movement Reduction of logistics cost for EXIM and domestic trade with minimal infrastructure investment

- Lowering logistics cost of bulk commodities by locating future industrial capacities near the coast
- Improving export competitiveness by developing port proximate discrete manufacturing clusters
- 2) Farmer Producer Organisations (FPOs) could undertake which of the following activities:
  - 1. Dissemination of technology and innovations
  - 2. Brand building, Packaging, Labeling and Standardization
  - 3. Participation in commodity exchanges

4. Export

Select the correct answer code:

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

Solution: d)

The primary producers have skill and expertise in producing. However, they generally need support for marketing of what they produce. The FPO will basically bridge this gap.

In brief, the FPO could undertake the following activities:

- a. Procurement of inputs
- b. Disseminating market information
- c. Dissemination of technology and innovations
- d. Facilitating finance for inputs
- e. Aggregation and storage of produce
- f. Primary processing like drying, cleaning and grading
- g. Brand building, Packaging, Labeling and Standardization
- h. Quality control
- i. Marketing to institutional buyers
- j. Participation in commodity exchanges
- k. Export
- 3) Consider the following statements.
- 1. Eat Right Movement was launched by World Health Organisation (WHO) which aims to cut down salt/sugar and oil consumption by 30% in three years.
- 2. Eat Right Movement is aligned with the India's flagship public health programmes such as POSHAN Abhiyaan and Swachh Bharat Mission.
- 3. FSSAI has prescribed a limit for Total Polar Compounds (TPC) at 25% in cooking oil to avoid the harmful effects of reused cooking oil.

Which of the above statements is/are correct?

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

Solution: b)

Eat Right Movement was launched by the Food Safety and Standards Authority of India (FSSAI).

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

It also aims to engage and enable citizens to improve their health and well-being by making the right food choices.

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.

FSSAI has put in place robust regulatory measures under three major pillars: Eat Safe, Eat Health and Eat Sustainably for the programme.

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

4) Promotion of Digital Transactions including Digital Payments, is the responsibility of

a) RBI

- b) Ministry of Finance
- c) National Payments Corporation of India (NPCI)
- d) Ministry of Electronics & Information Technology (MeitY)

Solution: d)

The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. "Faceless, Paperless, Cashless" is one of professed role of Digital India. Promotion of digital payments has been accorded highest priority by the Government of India to bring each and every segment of our country under the formal fold of digital payment services. The Vision is to provide facility of seamless digital payment to all citizens of India in a convenient, easy, affordable, quick and secured manner.

Ministry of Electronics & Information Technology (MeitY) has been entrusted with the responsibility of leading this initiative on "Promotion of Digital Transactions including Digital Payments". MeitY is working on various strategies, ideation with multiple stakeholders including Banks, Central Ministries/Departments and States, to create an ecosystem to enable digital payments across the country.

MeitY is working on strengthening of Digital Payment infrastructure and creating awareness through promotions of digital payments with all the stakeholders to achieve Government's vision of making citizens of this country digitally empowered.

#### Source

- 5) Which of the following Boards are under the Ministry of Commerce and Industry.
  - 1. Coffee Board of India
  - 2. Spices Board India
  - 3. National Jute Board
  - 4. Tobacco Board of India

Select the correct answer code:

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

Solution: b)

National Jute Board is governed by National Jute Board Act-2008, as framed by the Ministry of Textiles, Govt. of India and enacted by the Parliament on February 12, 2009.

Tea Board India also comes under the Ministry of Commerce and Industry.

#### Source

- 6) Consider the following statements regarding Ethanol-blending in petrol in India.
  - 1. Ethanol-blending in petrol has risen nearly tenfold in the last six years.
  - 2. The government aims to achieve 10% blending percentage of ethanol in petrol by 2022.
- 3. Setting up of 2G Bio-refineries can help reduce crop burning by converting agricultural residues to ethanol.

Which of the above statements is/are correct?

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

Solution: d)

Ethanol-blending in petrol had risen to a record 6.2% in 2019, rising nearly tenfold in six years.

The government aims to achieve 10% blending percentage of ethanol in petrol by 2022 to cut dependence on energy import, promote the use of environment-friendly fuel and boost the agriculture sector.

"Ethanol blending percentage as on 17th June 2019 has increased to 6.20% as compared to 0.67% in supply year 2012-13,"

The government has been exploring an alternate route of encouraging production of second generation (2G) ethanol from biomass and other wastes to bridge the supply gap for ethanol blending programme.

"Setting up of 2G Bio-refineries will help reduce crop burning by converting agricultural residues to ethanol which will help in reducing pollution and ensure a cleaner environment.

#### Source

- 7) Consider the following statements.
- 1. Contribution by corporates to PM-CARES Fund and Chief Minister's Relief Fund will be considered as social welfare spending under the Companies Act, 2013.
- 2. According to Companies Act, 2013, every company having net worth of at least ₹500 crore, turnover of ₹1,000 crore or more, or a minimum net profit of ₹5 crore during the immediate preceding financial year has to make CSR expenditure.

Which of the above statements is/are correct?

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

Solution: b)

The Ministry of Corporate Affairs has issued an FAQ on what qualifies as contribution towards CSR activities of the corporates in their fight against Covid-19.

The FAQ clarifies that contribution made towards the PM Care fund qualifies as CSR, funds given to Chief Minister's Relief Fund does not qualify as CSR. 'Chief Minister's Relief Fund' or 'State Relief Fund for COVID-19' is not included in Schedule VII of the Companies Act, 2013 and therefore any contribution to such funds shall not qualify as admissible CSR expenditure.

Among other expenditures that are considered as CSR include contributions made to state disaster management authority to fight against Covid-19, spending on Covid-19 related activities like preventive health care and sanitation and any ex-gratia paid to temporary/casual workers over and above their daily wages.

However, the ministry clarified that daily wages to workers is part of moral/humanitarian/contractual obligation of employers and can't be considered as CSR spend.

The PM CARE fund was established to receive contributions from those who wanted to do their bit in combating the Coronavirus pandemic.

As per the MCA circular, Schedule 7 of the Companies Act, 2013, contribution to any fund set up by the central government for socio-economic development and relief qualifies as CSR expenditure.

Under Section 135 of the Companies Act, 2013, every company having net worth of at least ₹500 crore, turnover of ₹1,000 crore or more, or a minimum net profit of ₹5 crore during the immediate preceding financial year has to make CSR expenditure.

#### Source Source

- 8) Consider the following statements regarding Phase-III of Pradhan Mantri Gram Sadak Yojana (PMGSY).
- 1. The Phase-III of PMGSY aims at consolidation of 1 lakh 25 thousand Kilometers through Routes and Major Rural Links that connect habitations to Gramin Agricultural Markets, Higher Secondary Schools and Hospitals.
  - 2. The scheme has used waste plastic and cold mix technology to build major portion of roads.
  - 3. The project is funded both by the Centre and States.

Which of the above statements is/are correct?

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

Solution: d)

The Phase-III of PMGSY aims at consolidation of 1 lakh 25 thousand Kilometers through Routes and Major Rural Links that connect habitations to Gramin Agricultural Markets, Higher Secondary Schools and Hospitals with an estimated cost of 80 thousand 250 crore rupees for the period 2019-20 to 2024-25.

The funding pattern for the scheme will be 60:40 between Centre and the States. For North-East and the Himalayan States the ratio will be 90:10.

A road length of 36 thousand 63 Kilometres has been constructed using green technologies, a major portion of which includes Waste plastic and cold mix technology.

#### Source

- 9) Consider the following statements regarding VidyaDaan 2.0
  - 1. It is a national programme launched by the ministry of human resource development to develop and contribute e-learning content.
  - 2. The content will be used on the DIKSHA app to help millions of children across the country to continue their learning anytime and anywhere.
  - 3. Contributions can be made only by the subject experts.

Which of the above statements is/are correct?

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

Solution: a)

The ministry of human resource development launched the national programme VidyaDaan 2.0 for inviting elearning content contribution.

It is a common national programme to develop and contribute e-learning content and a chance to be recognized nationally. The content will be used on DIKSHA app to help millions of children across the country to continue their learning anytime and anywhere.

The programme has been launched due to the increasing requirement for e-learning content for students (both school and higher education) especially in the backdrop of the situation arising out of Covid-19 and also due to the urgent need to integrate digital education with schooling to augment learning.

The DIKSHA platform of MHRD has been operating since September 2017 with over 30 states/ UTs leveraging it for augmenting teaching and learning processes.

Contributions can be made by educationists, subject experts, schools, colleges, Universities, institutes, government and non-government organisations, individuals.

#### Source

- 10) Consider the following statements regarding Swamitva Yojana.
- 1. Swamitva Yojana is meant to create a record of land ownership in rural areas using modern technology like the use of drones.
- 2. Property card for every property in the village will be prepared by states and be given to property owners.
  - 3. The scheme is piloted by the Panchayati Raj ministry.

Which of the above statements is/are correct?

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

Solution: d)

Prime Minister Narendra Modi recently launched 'Swamitva Yojana' or Ownership Scheme to map residential land ownership in the rural sector using modern technology like the use of drones. The scheme aimed to revolutionise property record maintenance in India was launched on the Panchayati Raj Diwas.

- 1. Swamitva Yojana is meant to create a **record of land ownership in rural areas** using modern technology.
- 2. The scheme is piloted by the Panchayati Raj ministry of the Union government.
- 3. The need for this Yojana was felt since several villagers in the rural areas don't have papers proving ownership of their land. In most states, survey and measurement of the populated areas in the villages has not been done for the purpose of attestation/verification of properties.
- 4. Swamitva Yojana is aimed to fill the above gap to **provide ownership rights** to people in the villages.
- 5. The residential land in villages will be measured **using drones** to create a non-disputable record. It is the latest technology for surveying and measuring of land.
- 6. The scheme will be carried out in close coordination with the Central Panchayati Raj ministry, Survey of India, Panchayati Raj departments and Revenue departments of various states.
- 7. **Property card for every property in the village** will be prepared by states using accurate measurements delivered by drone-mapping. These cards will be given to property owners and will be recognised by the land revenue records department.
- 8. The delivery of property rights through an official document will enable villagers to access bank finance using their property as collateral.

The property records for a village will also be maintained at the Panchayat level, allowing for the collection of associated taxes from the owners.

- 11) Consider the following statements regarding Food Safety Mitra (FSM).
- 1. In a bid to improve the ease of doing business, Food Safety and Standards Authority of India (FSSAI) launched the scheme Food Safety Mitra (FSM).
- 2. The scheme will mainly support large scale food businesses in compliance to the food safety laws. Which of the above statements is/are correct?
  - a) 1 only
  - b) 2 only
  - c) Both 1 and 2

d) Neither 1 nor 2

Solution: a)

In a bid to improve the ease of doing business, apex food regulator Food Safety and Standards Authority of India (FSSAI) launched a scheme --Food Safety Mitra (FSM). The scheme will support small and medium scale food businesses in compliance to the food safety laws.

FSSAI has said that the scheme will lead to improved ease of doing business by creating a transparent and organized ecosystem supporting food businesses wherein food businesses will be able to get trained service providers at fair prices - lowering the costs of compliance.

"Apart from strengthening food safety, this scheme would also create new employment opportunities for youth, particularly with food and nutrition background.

A Food Safety Mitra is an individual professional certified by FSSAI who assists in compliances related to FSS Act, Rules and regulations with three avatars viz. Digital Mitra, Trainer Mitra and Hygiene Mitra depending upon their respective roles and responsibilities.

#### Source

- 12) The Happiness curriculum in the government schools, recently seen in news is one of the flagship schemes of which state
  - a) Tamil Nadu
  - b) Gujarat
  - c) Delhi
  - d) Uttar Pradesh

Solution: c)

The happiness curriculum is one of the flagship schemes of the Delhi government in the education sector launched in July 2018 in all government schools.

The objectives of this curriculum include developing self-awareness and mindfulness, inculcating skills of critical thinking and inquiry, enabling learners to communicate effectively and helping learners to apply life skills to deal with stressful and conflicting situations around them.

#### Source

- 13) Consider the following statements regarding open-ended procurement policy.
- 1. The main aim of open-ended procurement policy is to help farmers get remunerative price and prevent distress sale.
- 2. If any producer/farmer gets better price in comparison to MSP, he/she is free to sell his/her produce in open market.

Which of the above statements is/are incorrect?

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

Solution: d)

The procurement policy of Government of India (GOI) is open ended, under which paddy and wheat offered by farmers all over the country within the stipulated period (conforming to specifications prescribed in advance by GOI) are purchased for Central Pool at Minimum Support Price (MSP) by Food Corporation of India (FCI)/State

Governments/State Government Agencies to help farmers get remunerative price and prevent distress cell. However, if any producer/farmer gets better price in comparison to MSP, he/she is free to sell his/her produce in open market. Coarse grains are procured at MSP by State Government as per the procurement plan prepared in consultation with FCI and approved by the Central Government.

A Price Support Scheme (PSS) for procurement of oilseeds, pulses and cotton is implemented by Department of Agriculture Cooperation and Farmers Welfare (DAC&FW) through Central Nodal Agencies at the Minimum Support Price (MSP) declared by the Government subject to certain conditions being met by the State Governments. Losses, if any, are reimbursed by the Government of India to the Central Nodal Agencies. Market Intervention Scheme (MIS) is implemented to protect the growers of crops not covered under MSP scheme from making distress sale.

#### Source

- 14) Consider the following statements regarding District Mineral Foundation (DMF).
- 1. District Mineral Foundation (DMF) was instituted under the Mines and Minerals (Development and Regulation) (MMDR) Amendment Act 2015.
- 2. District Mineral Foundation (DMF) is a trust set up as a non-profit body, in all districts to work for the interest and benefit of persons and areas affected by mining related operations.
  - 3. It is funded through the contributions from miners.
- 4. The various state DMF rules and the Pradhan Mantri Khanij Khestra Kalyan Yojana (PMKKKY) guidelines stipulate Education, Health and Livelihood and skill development as "high priority" issues for DMFs. Which of the above statements is/are correct?
  - a) 1, 2, 3
  - b) 2, 3, 4
  - c) 1, 3, 4
  - d) 1, 2, 3, 4

Solution: c)

DMFs were instituted under the Mines and Minerals (Development and Regulation) (MMDR) Amendment Act 2015.

District Mineral Foundation (DMF) is a trust set up as a non-profit body, in those districts affected by the mining works, to work for the interest and benefit of persons and areas affected by mining related operations. It is funded through the contributions from miners.

Jurisdiction: Its manner of operation comes under the jurisdiction of the relevant State Government.

The various state DMF rules and the Pradhan Mantri Khanij Khestra Kalyan Yojana (PMKKKY) guidelines stipulate some "high priority" issues for DMFs, including:

Drinking water.

Health

Women and child welfare.

Education

Livelihood and skill development.

Welfare of aged and disabled.

Sanitation

Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY):

The programme is meant to provide for the welfare of areas and people affected by mining related operations, using the funds generated by District Mineral Foundations (DMFs).

### Source

15) Consider the following statements regarding Coalition for Disaster Resilient Infrastructure (CDRI).

- 1. Coalition for Disaster Resilient Infrastructure is an international coalition of countries, United Nations (UN) agencies, multilateral development banks, the private sector, and academic institutions, that aims to promote disaster-resiliant infrastructure.
  - 2. It was launched by the Indian Prime Minister Narendra Modi at the 2019 UN Climate Action Summit.
- 3. CDRI will provide member countries technical support and capacity development, research and knowledge management, and encourage investment in disaster resilient infrastructure systems. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1, 3
  - c) 2, 3
  - d) 1, 2, 3

Solution: d)

The Coalition for Disaster Resilient Infrastructure (CDRI) is an international coalition of countries, United Nations (UN) agencies, multilateral development banks, the private sector, and academic institutions, that aims to promote disaster-resiliant infrastructure. Its objective is to promote research and knowledge sharing in the fields of infrastructure risk management, standards, financing, and recovery mechanisms. It was launched by the Indian Prime Minister Narendra Modi at the 2019 UN Climate Action Summit in September 2019.

CDRI's initial focus is on developing disaster-resilience in ecological, social, and economic infrastructure. It aims to achieve substantial changes in member countries' policy frameworks and future infrastructure investments, along with a major decrease in the economic losses suffered due to disasters.

#### Source

- 16) Consider the following statements regarding PRIASoft.
- 1. PRIASoft is a centralized Accounting Software intended for use by all the three levels of Panchayati Raj namely Zilla, Block and Village Panchayat.
- 2. PRIASoft aims to keep track of all the Receipts and Expenditure of the Panchayati Raj Institutions. Which of the above statements is/are correct?
  - a) 1 only
  - b) 2 only
  - c) Both 1 and 2
  - d) Neither 1 nor 2

Solution: c)

PRIASoft aims to keep track of all the in-flow (Receipts) and out- flow (Expenditure) of the Panchayati Raj Institutions. The Application facilitate better financial management of Panchayati Raj Institutions (PRIs) by bringing about transparency and accountability in the maintenance of accounts thereby leading to better credibility and ultimately strengthening of PRIs. It is a centralized Accounting Software intended for use by all the three levels of Panchayati Raj namely Zilla, Block and Village Panchayat. Apart from making the process of accounting simple and easy (necessarily due to lack of trained manpower at this level), it ensures a better financial management, transparency and accountability at the Panchayat level.

- 17) Consider the following statements about eSamvad portal, sometimes seen in news.
  - a) A platform for NGOs and Civil Societies to interact with the Ministry of Health and Family Welfare.
  - b) India's first Government-to-Business (G2B) portal which aims at transforming and developing a conducive business environment in the country.
  - c) It is a government services portal to inform the citizens about various government services under various ministries and government entities.
  - d) A platform for NGOs and Civil Societies to interact with the Ministry of Women & Child Development.

Solution: d)

eSamvad is an initiative of the Ministry of Women and Child Development to provide a platform for NGOs and civil society to interact with the Ministry on relevant subjects.

#### Source

- 18) Consider the following statements regarding 'Samudrayaan' project.
  - 1. It is a pilot project of the Ministry of Earth Sciences for deep ocean mining for rare minerals.
  - 2. It proposes to send humans into the deep sea in a submersible vehicle for ocean studies.
  - 3. The project has been undertaken by ISRO.

Which of the above statements is/are correct?

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

Solution: c)

#### Samudrayaan:

It is a pilot project of the Ministry of Earth Sciences for deep ocean mining for rare minerals.

It proposes to send men into the deep sea in a submersible vehicle for ocean studies.

The project is expected to become a reality by 2021-22.

The project has been undertaken by the National Institute of Ocean Technology (NIOT).

#### Source

- 19) Consider the following statements regarding Sabka Vishwas Legacy Dispute Resolution Scheme (SVLDRS-2019).
- 1. Sabka Vishwas (Legacy Dispute Resolution) Scheme was unveiled in the Budget 2019-20 with the objective of settling pending disputes of service tax and central excise.
- 2. It provides a one-time window to eligible persons to declare their tax dues and pay the same and be free of any other consequences under the law.

Which of the above statements is/are correct?

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

Solution: c)

Finance Minister Nirmala Sitharaman had unveiled the Sabka Vishwas (Legacy Dispute Resolution) Scheme, 2019, in the Budget 2019-20 with the objective of settling pending disputes of service tax and central excise. The Sabka Vishwas Scheme, which became operational on September 1, 2019, provides a one-time window to eligible persons to declare their tax dues and pay the same in accordance with the provisions.

The finance ministry received around 189,000 applications under the Sabka Vishwas (Legacy Dispute Resolution Scheme) 2019, which kicked off in September 2019 and concluded on January 15 2020.

- 20) Consider the following statements regarding Aadi Mahotsav 2019.
- 1. Aadi Mahotsav is a joint initiative of Ministry of Culture and TRIFED (Tribal Cooperative Marketing Development Federation of India).

- 2. The Mahotsav apart from exotic handicrafts also showcased the electronic and digital skills of the tribals.
- 3. Aadi Mahotsav in major cities has proved to be a boon for tribal artisans as this eliminates the middle man and provides direct access to large market.

Which of the above statements is/are correct?

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

Solution: c)

The annual Aadi Mahotsav- National Tribal Festival was held at INA Dilli Haat in New Delhi.

The festival is being organized by Union Ministry of Tribal Affairs in association with TRIFED (Tribal Cooperative Marketing Development Federation of India Ltd.).

The theme of the 2019 Aadi Mahotsav is: "A Celebration of the Spirit of Tribal Culture, Craft, Cuisine and Commerce".

The Mahotsav is displaying the rich digital commerce and e-commerce being promoted by Tribes India. The Aadi Mahotsav is an effort to take tribal commerce to the next level of digital and electronic transactions. The Mahotsav apart from exotic handicrafts is also showcasing the electronic and digital skills of the tribals as a special attraction.

TRIFED an organisation of Ministry of Tribal Affairs has started a concept of organising "Aadi Mahotsav – National Tribal Festival" to provide direct market access to the tribal master-craftsmen and women in large metros and State capitals.

The concept of organising Aadi Mahotsav in major cities has proved to be a boon for tribal artisans by eliminating the middle man and providing direct access to large markets, otherwise impossible to reach for them.

#### Source

- 21) Consider the following statements regarding Vandhe Bharat mission.
- 1. Vandhe Bharat mission is the massive repatriation operation by the Indian government to bring back stranded Indians in different parts of the world in the wake of the coronavirus crisis.
  - 2. 'Operation Samudra Setu' was carried out as part of Vandhe Bharat mission.

Which of the above statements is/are incorrect?

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

Solution: d)

Vandhe Bharat mission is the massive repatriation operation planned by the Indian government to bring back stranded Indians in different parts of the world in the wake of the coronavirus crisis.

India had dispatched four Naval ships as part of the first phase of Vande Bharat mission. The Navy has named its evacuation effort 'Operation Samudra Setu'.

- 22) Consider the following statements regarding 'Mission Parivar Vikas'.
- 1. Mission Parivar Vikas is a family planning programme aimed at stabilising population growth in all the states of the country.

- 2. The objective of the mission is to accelerate access to high quality family planning choices based on information, reliable services and supplies within a rights-based framework.
  - 3. The goal is to reduce the Total Fertility Rate and to bring it to 2.1 by 2025.

Which of the above statements is/are correct?

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

Solution: c)

The Union Ministry of Health and Family Welfare launched Mission Parivar Vikas for improved family planning services in 145 High Focus districts in seven states. The objective of mission is to accelerate access to high quality family planning choices based on information, reliable services and supplies within a rights-based framework. The goal is to reduce the Total Fertility Rate and to bring it to 2.1 by 2025 in these districts.

These districts are located in the seven high focus states of Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand and Assam.

They are having the highest total fertility rates and constitute 44% of the country's population.

Source

- 23) SAANS campaign, sometimes seen in news is related to
  - a) Reducing child mortality due to pneumonia
  - b) Improve the overall quality of life of children through early detection of birth defects
  - c) Prevention of anaemia among under-5 children
  - d) 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.

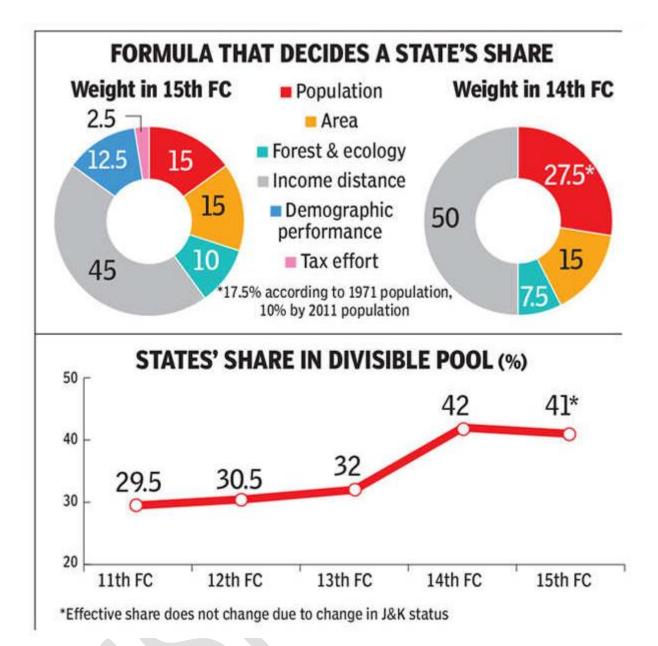
Source

- 24) The 15<sup>th</sup> Finance Commission has reduced the weight in which of the following criteria compared to the 14<sup>th</sup> Finance Commission, for devolution of funds to states.
  - 1. Population
  - 2. Forest and Ecology
  - 3. Income distance
  - 4. Geographical area

Select the correct answer code:

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

Solution: b)



The 15th Finance Commission has used the 2011 Census as the sole criteria for population but has **reduced the** weight for population to 15% from the earlier 27.5%. While retaining the 15% assigned to geographical area, it has enhanced the focus on forest and ecology from 7.5% to 10%.

It has also **reduced the weight of income distance** (how much lower or higher than the national average a state is) from 50% to 45% to provide higher devolution to the states with lower per capita income. Demographic performance and tax effort have been brought in as parameters to reward the states performing better on both these counts.

# Source

25) The 15<sup>th</sup> Finance Commission recommended which of the following grants to be provided to states.

- 1. Revenue deficit grants
- 2. Grants to local bodies
- 3. Disaster management grants

Select the correct answer code:

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

d) 1, 3

Solution: c)

In 2020-21, the following grants will be provided to states: (i) revenue deficit grants, (ii) grants to local bodies, and (iii) disaster management grants. The Commission has also proposed a framework for sector-specific and performance-based grants.

**Revenue deficit grants:** In 2020-21, 14 states are estimated to have an aggregate revenue deficit of Rs 74,340 crore post-devolution. The Commission recommended revenue deficit grants for these states.

**Grants to local bodies:** The total grants to local bodies for 2020-21 has been fixed at Rs 90,000 crore, of which Rs 60,750 crore is recommended for rural local bodies (67.5%) and Rs 29,250 crore for urban local bodies (32.5%). The grants will be divided between states based on population and area in the ratio 90:10. The grants will be made available to all three tiers of Panchayat- village, block, and district.

**Disaster risk management:** The Commission recommended setting up National and State Disaster Management Funds (NDMF and SDMF) for the promotion of local-level mitigation activities. The Commission has recommended retaining the existing cost-sharing patterns between the centre and states to fund the SDMF (new) and the SDRF (existing). The cost-sharing pattern between centre and states is (i) 75:25 for all states, and (ii) 90:10 for north-eastern and Himalayan states.

#### Source

- 26) Consider the following statements regarding Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
- 1. The Act grants legal recognition to the rights of traditional forest dwelling communities, partially correcting the injustice caused by the forest laws.
- 2. 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.
  - 3. The act provides rehabilitation in case of illegal eviction or forced displacement.

Which of the above statements is/are correct?

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

Solution: c)

The Mizoram government had 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:**

- **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.
- Use rights —to minor forest produce (also including ownership), to grazing areas, to pastoralist routes, etc.
- **Relief and development rights** –to rehabilitation in case of illegal eviction or forced displacement; and to basic amenities, subject to restrictions for forest protection.

• Forest management rights –to protect forests and wildlife.

Eligibility to get rights under the Act is confined to those who "primarily reside in forests" and who depend on forests and forest land for a livelihood. Further, either the claimant must be a member of the Scheduled Tribes scheduled in that area or must have been residing in the forest for 75 years.

- 27) Consider the following statements regarding Essential Commodities Act.
- 1. The Essential Commodities Act is an act of Parliament of India which was established to ensure the delivery of certain commodities or products, the supply of which if obstructed owing to hoarding or blackmarketing would affect the normal life of the people.
- 2. The states can include new commodities as and when the need arises, and only the centre can take them off the list once the situation improves.
- 3. The list of items under the Act include drugs, fertilisers, pulses and edible oils, Raw jute and jute textile and petroleum and petroleum products.

Which of the above statements is/are correct?

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

Solution: b)

**Department of Consumer Affairs** administers 'The Essential Commodities Act, 1955 (EC Act)' and 'Prevention of Blackmarketing and Maintenance of Supplies of Essential Commodities Act, 1980 (PBMMSEC Act)'.

The Essential Commodities Act is an act of Parliament of India which was established to ensure the delivery of certain commodities or products, the supply of which if obstructed owing to hoarding or blackmarketing would affect the normal life of the people.

Additionally, the government can also fix the **maximum retail price (MRP)** of any packaged product that it declares an "essential commodity".

The Centre can include new commodities as and when the need arises, and take them off the list once the situation improves.

The Central Government is consistently following the policy of removing all unnecessary restrictions on movement of goods across the State boundaries as part of the process of globalization simultaneously with the pruning of the list of essential commodities under the said Act to promote consumer interest and free trade.

The act empowers Central and State Governments concurrently to control production, supply and distribution of certain commodities in view of rising pricing. When difference arise between Centre and States, the act specifies that the Centre will prevail.

At present, the commodities scheduled under the EC Act, 1955 as essential.

- Drugs;
- Fertilizer, whether inorganic, organic or mixed;
- Foodstuffs, including edible oilseeds and oils;
- Hank yarn made wholly from cotton;
- Petroleum and petroleum products;
- Raw jute and jute textile;
- seeds of food-crops and seeds of fruits and vegetables;
  - o seeds of cattle fodder; and
  - jute seeds;
  - o cotton seed

#### Source Source

- 28) 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) 1, 2, 3
- d) 2, 3

Solution: c)

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 Mattritav 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

- 29) Consider the following statements regarding Epidemic Diseases Act, 1897.
- 1. Epidemic Diseases Act, 1897 was introduced to tackle the epidemic of bubonic plague that had spread in the erstwhile Bombay Presidency in the 1890s.
- 2. The law is meant for containment of epidemics by providing special powers that are required for the implementation of containment measures to control the spread of the disease.
- 3. Bal Gangadhar Tilak in his newspapers Kesari and Mahratta had praised about the Act and handling of the plague epidemic.

Which of the above statements is/are correct?

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

Solution: a)

#### History of the 1897 Epidemic Diseases Act

The colonial government introduced the Act to tackle the epidemic of bubonic plague that had spread in the erstwhile Bombay Presidency in the 1890s.

Using powers conferred by the Act, colonies authorities would search suspected plague cases in homes and among passengers, with forcible segregations, evacuations, and demolitions of infected places. Historians have criticised the Act for its potential for abuse.

In 1897, the year the law was enforced, freedom fighter Bal Gangadhar Tilak was punished with 18 months' rigorous imprisonment after his newspapers Kesari and Mahratta admonished imperial authorities for their handling of the plague epidemic.

#### **Provisions of the 1897 Epidemic Diseases Act**

- The Act, which consists of four sections, aims to provide "for the better prevention of the spread of Dangerous Epidemic Diseases."
- Section 2 empowers state governments/UTs to take special measures and formulate regulations for containing the outbreak. It reads:
- "Power to take special measures and prescribe regulations as to dangerous epidemic disease."

#### **Examples of implementation**

- In 2018, the district collector of Gujarat's Vadodara issued a notification under the Act declaring the Khedkarmsiya village in Waghodia taluka as cholera-affected after 31 persons complained of symptoms of the disease.
- In 2015, to deal with malaria and dengue in Chandigarh, the Act was implemented and controlling officers were instructed to ensure the issuance of notices and challans of Rs 500 to offenders.
- In 2009, to tackle the swine flu outbreak in Pune, Section 2 powers were used to open screening centres in civic hospitals across the city, and swine flu was declared a notifiable disease.

# Source

30) Which of the following are correctly matched?

- 1. ePathshala: It provides access to digital textbooks for all classes and also provides graded learning materials.
  - 2. SWAYAM: Provide High Quality Educational Channels through DTH (Direct to Home).
  - 3. SWAYAM PRABHA: National online education platform.

Select the correct answer code:

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

Solution: b)

The **ePathshala**, a joint initiative of Ministry of Human Resource Development (MHRD), Govt. of India and National Council of Educational Research and Training (NCERT) has been developed for showcasing and disseminating **all educational e-resources** including textbooks, audio, video, periodicals, and a variety of other print and non-print materials for Students, Teachers, Parents, researchers and educators. It provides access to digital textbooks for all classes, graded learning materials and enables participation in exhibitions, contests, festivals, workshops, etc.

**SWAYAM Prabha** is an initiative of the Ministry of Human Resources Development to provide **32 High Quality Educational Channels through DTH (Direct to Home)** across the length and breadth of the country on 24X7 basis. It has curriculum-based course content covering diverse disciplines. This is primarily aimed at making quality learning resources accessible to remote areas where internet availability is still a challenge. The DTH channels are using the GSAT-15 satellite for programme telecasts.

SWAYAM (Study Webs of Active–Learning for Young Aspiring Minds) is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. This is done through an indigenous developed IT platform that facilitates hosting of all the courses taught in classrooms to be accessed by anyone, anywhere at any time. All the courses are interactive, prepared by the best teachers in the country and <a href="https://www.insightsonindia.com">www.insightsonindia.com</a>
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# 4. Science and Technology

- 1) Consider the following statements about Black Holes
  - 1. Most Black holes are formed from the remnants of a large star that dies in a supernova explosion.
  - 2. Black holes were predicted by Einstein's theory of general relativity.
  - 3. Scientists can directly observe black holes with telescopes that detect x-rays, light, or other forms of electromagnetic radiation.

Which of the above statements is/are correct?

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

Solution: a)

The idea of an object in space so massive and dense that light could not escape it has been around for centuries. Most famously, black holes were predicted by Einstein's theory of general relativity, which showed that when a massive star dies, it leaves behind a small, dense remnant core.

Scientists can't directly observe black holes with telescopes that detect x-rays, light, or other forms of electromagnetic radiation. We can, however, infer the presence of black holes and study them by detecting their effect on other matter nearby. If a black hole passes through a cloud of interstellar matter, for example, it will draw matter inward in a process known as accretion. A similar process can occur if a normal star passes close to a black hole. In this case, the black hole can tear the star apart as it pulls it toward itself. As the attracted matter accelerates and heats up, it emits x-rays that radiate into space. Recent discoveries offer some tantalizing evidence that black holes have a dramatic influence on the neighborhoods around them - emitting powerful gamma ray bursts, devouring nearby stars, and spurring the growth of new stars in some areas while stalling it in others.

Most black holes form from the remnants of a large star that dies in a supernova explosion.

#### Source

- 2) Consider the following statements regarding winter-grade diesel.
- 1. The Indian Oil Corporation Limited (IOCL) introduced a special winter-grade diesel which does not lose its fluidity even in extreme winter conditions such as minus 30-degree celsius.
  - 2. This winter-grade diesel does not meet BIS specification of BS-VI grade.
- 3. Regular diesel fuel contains paraffin wax, which at low temperature thickens and hinders the flow of fuel in the car engine.

Which of the above statements is/are correct?

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

Solution: b)

Motorists in high-altitude areas face the problem of freezing of diesel in their vehicles when winter temperatures drop to as low as minus 30-degree celsius.

The government launched the supply of special winter-grade diesel for high altitude Ladakh, which faces sub-zero temperatures during the winter months.

The winter-grade diesel has been developed by the Indian Oil Corporation Limited (IOCL) with a low pour-point of -33 degree Celsius, which does not lose its fluidity function even in extreme winter conditions.

This winter-grade diesel also meets BIS specification of BS-VI grade and was successfully produced and certified for the first time by the Panipat Refinery.

Source

- 3) Ruhdaar, recently seen in news is a
  - a) Quantum computer
  - b) Arsenic-resistant rice
  - c) lithium sulphur battery
  - d) Mechanical Ventilator

Solution: d)

A team of engineering students from IIT Bombay, NIT Srinagar, and Islamic University of Science & Technology (IUST), Awantipora, Pulwama, Jammu, and Kashmir has come up together and developed a low-cost ventilator named 'Ruhdaar' using locally available material to fight against COVID19.

- 4) Which of the following are the major Zoonotic Diseases
  - 1. Zika Virus
  - 2. Japanese Encephalitis
  - 3. Rabies
  - 4. Foot-and-mouth disease
  - 5. Brucellosis

Select the correct answer code:

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

Solution: c)

A zoonosis (plural zoonoses, or zoonotic diseases) is an infectious disease caused by a pathogen (an infectious agent, such as a bacterium, virus, parasite or prion) that has jumped from an animal (usually a vertebrate) to a human.

Some of the major Zoonotic Diseases are:

Anthrax

Bird flu

Brucellosis

Ebola

Japanese encephalitis

Kyasanur Forest disease

Leptospirosis

Middle East respiratory syndrome

Nipah virus infection

Rabies

Severe acute respiratory syndrome

Zika fever

Humans are only extremely rarely infected by foot-and-mouth disease virus.

5) In India, the National Technology Day is celebrated on account of

- a) Commemorate the discovery of the 'Raman Effect'
- b) To spread the importance of Science and Technology in everyday life
- c) Birth anniversary of Vikram Sarabhai the stalwart of Indian science
- d) To mark the day on which India test-fired its first nuclear bombs

Solution: d)

May 11 is National Technology Day, celebrated to mark the day on which India successfully test-fired its first nuclear bombs in 1998.

#### Source

- 6) Consider the following statements regarding Pneumonia.
  - 1. Pneumonia is a form of acute respiratory infection that affects the lungs.
  - 2. Pneumonia is the single largest infectious cause of death in children worldwide.
  - 3. Pneumonia is caused by viruses, bacteria and fungi.
  - 4. Pneumonia is only preventable and not treatable.

Which of the above statements is/are correct?

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

Solution: c)

The World Health Organisation (WHO) identifies pneumonia is the single largest cause of death in children worldwide.

Every year, it kills an estimated 1.4 million children under the age of five years, accounting for 18% of all deaths of children under five years old worldwide, according to the WHO. This, despite pneumonia being preventable and treatable.

Infectious agents may include bacteria, viruses and fungi.

Streptococcus pneumoniae is the most common cause of bacterial pneumonia in children, and Haemophilus influenzae type b (Hib) is the second most common cause of bacterial pneumonia. Respiratory syncytial virus is the most common viral cause of pneumonia.

Air sacs in an infected individual's lungs (alveoli) become inflamed due to deposits of fluid and pus, making it painful and difficult for them to breathe.

Children and the elderly above the age of 65 years are especially vulnerable.

- 7) Which of the following are the applications of Nanobots
  - 1. Targeted drug-delivery
  - 2. Unblock blood vessels in heart
  - 3. Taking biopsies in inaccessible areas of the body

Select the correct answer code:

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

Solution: b)

Scientists are exploring the use of nanobots for a number of healthcare uses, not only for **fighting cancer**, but also to **unblock blood vessels in hard to reach areas**, **taking biopsies or measuring the level of certain chemicals in otherwise inaccessible areas of the body**. A nanobot is a device typically ranging from 0.1-10 micrometres (a micrometre is one millionth of a metre), roughly the size of a red blood cell or smaller. This is too small to add a traditional robotic element like a motor, computer chip or camera.

#### Source

- 8) Which of the following are the major factors responsible for the spread of Zoonotic diseases.
  - 1. Direct contact with animals
  - 2. Through contamination of air
  - 3. Through vectors like mosquitoes and ticks
  - 4. Drinking raw, unpasteurized milk or contaminated water

Select the correct answer code:

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

Solution: d)

#### How are zoonotic diseases transmitted?

**Direct contact with animals** is the easiest way for diseases to spread from animals to humans, such as through petting, handling or getting bitten or scratched by an animal. People who work in the livestock industry or in animal care industries (zoos or aquariums, for instance) are more susceptible to exposure to zoonotic diseases because they're often in direct contact with animals. Domestic pets can also be a direct source of exposure, as can wild animals that come in contact with hunters.

Spending time in areas where animals live can lead to **indirect exposure** to zoonotic disease agents through **contact with water or surfaces that infected animals have also come in contact with**. Some zoonotic germs can even **contaminate the air we breathe**. Hantaviruses, for instance, are a family of viruses spread by rodents, but rarely through direct contact. Instead, the viruses are more often spread in aerosolized bits of the rodent's infected fecal matter. For example, people sweeping out their sheds after a long period of time may inhale dust contaminated with infected fecal particles from mice.

Zoonotic diseases can also be transferred from animals to humans through insects that act as a "middle-man," or vectors for the disease-causing agent. Ticks, for example, transfer bloodborne pathogens, such as the bacteria that causes Lyme disease, from an infected animal to other animals and humans. Mosquitoes and fleas are also common vectors for zoonotic diseases, such as the Zika virus (transmitted by mosquitoes) and the bacterium that causes plague (transmitted by fleas).

People can also catch zoonotic diseases through **consuming contaminated food**. Eating undercooked meat or eggs, or eating unwashed produce that's contaminated with animal feces can lead to illness from germs carried by an animal. Drinking raw, unpasteurized milk or contaminated water can also cause zoonotic diseases to spread to humans.

- 9) Phage therapy, sometimes seen in news is related to
  - a) Efficient diagnosis of rare genetic diseases
  - b) Treatment for cardiovascular disease and diabetes
  - c) Treatment for people suffering from antibiotic-resistant infections
  - d) Treatment for people suffering from mental disorder

Solution: c)

Phage therapy is a treatment for people suffering from chronic or antibiotic-resistant infections.

Phage therapy or viral phage therapy is the therapeutic use of bacteriophages to treat pathogenic bacterial infections. Bacteriophages, known as phages, are a form of viruses. Phages attach to bacterial cells, and inject a viral genome into the cell. The viral genome effectively replaces the bacterial genome, halting the bacterial infection.

#### Source Source

- 10) Consider the following statements about Earth BioGenome Project (EBP).
  - 1. It is an initiative that aims to sequence and catalog the genomes of all of Earth's eukaryotic species.
  - 2. The initiative would produce an open DNA database of biological information that provides a platform for scientific research and supports environmental and conservation initiatives.
  - 3. It was launched by U.S National Institutes of Health (NIH).

Which of the above statements is/are correct?

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

Solution: c)

International biologists have launched Earth BioGenome Project (EBP), an initiative that aims to sequence and catalog the genomes of all of Earth's currently described eukaryotic species over a period of ten years. The initiative would produce an open DNA database of biological information that provides a platform for scientific research and supports environmental and conservation initiatives.

#### Source

- 11) Consider the following statements regarding Torrefaction technology.
  - 1. Torrefaction is a Swedish technology that converts rice stubble into bio-manure.
  - 2. The technology involves heating up straw, grass, saw mill residue and wood biomass under very high temperature.

Which of the above statements is/are correct?

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

Solution: b)

Pollution from stubble burning in winter is the key contributor to the sharp decline in air quality in Delhi. But stubble burning continues unabated. To find a solution to this issue, India is testing a Swedish technology — torrefaction that can convert rice stubble into 'bio-coal'.

The technology involves heating up straw, grass, saw mill residue and wood biomass to 250 degrees Celsius - 350 degrees Celsius. This changes the elements of the biomass into 'coal-like' pellets. These pellets can be used for combustion along with coal for industrial applications like steel and cement production

#### Source

- 12) Consider the following statements regarding Green crackers.
  - 1. Green crackers have the unique property of releasing water vapour and/or air as a dust suppressant and diluent for gaseous emissions.
  - 2. In India, Green crackers were researched and developed by scientists at CSIR-NEERI.
  - 3. In India, fire crackers are regulated by Petroleum & Explosives Safety Organisation (PESO).

Which of the above statements is/are correct?

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

Solution: d)

Green crackers have been named as Safe Water Releaser (SWAS), Safe Thermite Cracker (STAR) and Safe Minimal Aluminium (SAFAL). According to the researchers, the crackers have the unique property of releasing water vapour and/or air as a dust suppressant and diluent for gaseous emissions that match with the performance in sound with traditional conventional crackers. They are designed to have 30% less particulate matter pollution.

Such 'green' crackers were researched and developed by scientists at CSIR-NEERI as per the court's directions.

Source

- 13) Consider the following statements regarding proprietary and open source software.
- 1. Any software that has to be bought or licensed from the creator of the software is called a proprietary software.
- 2. The intellectual property rights of the proprietary software, even if bought or licensed, remains with the creator.
  - 3. Open-source software requires no licensing and need not be bought.

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 Ministry of Electronics and Information Technology announced that it has **released the source code of Aarogya Setu app** to promote transparency and collaboration with the software developer community.

#### Software can be divided into two broad categories, proprietary and open source.

Any software that has to be bought or licensed from the creator of the software is called a proprietary or closed-source software. Examples include Microsoft Windows, Google Earth and Adobe Photoshop. The intellectual property rights of the software, even if bought or licensed, remains with the creator.

Open-source software requires no licensing and need not be bought. Its source code is open for everyone to download, examine, redistribute, and improve upon if they can, with an acknowledgment to the original software coder or the company. Examples of such software are WordPress, VLC Media Player, and the Mozilla browser.

#### What purpose will open-sourcing the server-side code serve?

Any applications or functionalities on mobile phones and other handheld devices need Internet connectivity to run. Sending and processing of such data is done on the server. By having access to the server-side data, individuals can check whether the data provided to the app is flowing directly to the dedicated servers or not. If not, either the discrepancy can be reported or clarifications can be sought from the government.

# 5. International Relations and Organisations

- 1) Consider the following statements regarding United Nations Convention on International Settlement Agreements (UNISA).
- 1. The convention provides uniform framework for enforcing international settlement agreements which results from mediation.
  - 2. India has not yet signed the Convention.
- 3. In order to encourage international commercial arbitration in India, the Government is establishing the New Delhi International Arbitration Centre (NDIAC) as a statutory body.

Which of the above statements is/are correct?

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

Solution: c)

India signed United Nations Convention on International Settlement Agreements (UNISA) also known as Singapore Convention on Mediation.

#### Benefit:

Signing of the Convention will boost the confidence of the investors and shall provide a positive signal to foreign investors about India's commitment to adhere to international practice on Alternative Dispute Resolution (ADR).

#### **Initiatives to promote ADR Mechanisms:**

In order to encourage international commercial arbitration in India, to evolve a comprehensive ecosystem of arbitration the Government is establishing the **New Delhi International Arbitration Centre (NDIAC)** as a statutory body. The **Commercial Courts Act, 2015**, has been further amended and legislative exercise to further amend the **Arbitration and Conciliation Act, 1996**, is currently underway. These initiatives are being taken with a view to encourage the settlement of commercial disputes, domestic and international, in India through ADR Mechanism of Arbitration, Conciliation and Mediation. A new Chapter (IIIA) has been inserted in the Commercial Courts Act, 2015, for mandatory pre-institution mediation and settlement in certain category of cases. Therefore, the provisions of the 'Convention' are in line with the domestic laws and the efforts made to strengthen Alternative Dispute Resolution Mechanisms.

#### **Background:**

The United Nations General Assembly adopted the United Nations Convention on International Settlement Agreements Resulting from Mediation ("the Convention") on 20th December 2018. The General Assembly authorized that the Convention will open for signature at a signing ceremony to be held on 7thAugust 2019 in Singapore and will be known as the "Singapore Convention on Mediation" (the Convention).

The Convention provides a uniform and efficient framework for the enforcement of international settlement agreements resulting from mediation and for allowing parties to invoke such agreements, akin to the framework that the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 1958) (the "New York Convention") provides for arbitral awards. The Convention defines two additional grounds upon which a court may, on its own motion, refuse to grant relief. Those grounds relate to the fact that a dispute would not be capable of settlement by mediation or would be contrary to public policy.

- 2) 2+2 dialogue, sometimes seen in news is held between
  - a) India and Afghanistan
  - b) India and China
  - c) India and US
  - d) India and Russia

Solution: c)

On December 18, 2019 India and United States held security dialogue in Washington. This was their second 2+2 dialogue.

The first 2+2 was held in New Delhi in 2018.

The 2+2 dialogue is the highest-level institutional mechanism between India and USA that brings together the perspectives of the two countries on foreign policy, defence and strategic issues.

#### Source

- 3) Global Nutrition Report, 2020 measures which of the following nutritional targets
  - 1. Anemia among women in reproductive age
  - 2. Stunting among children under-5
  - 3. Exclusive breast feeding
  - 4. Childhood overweight

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: d)

India is among 88 countries that are likely to miss global nutrition targets by 2025, according to the Global Nutrition Report 2020.

In 2012, the World Health Assembly identified six nutrition targets for maternal, infant and young child nutrition to be met by 2025. These require governments to reduce stunting by 40% in children under 5 and prevalence of anaemia by 50% among women in the age group of 19-49 years, ensure 30% reduction in low-birth weight and no increase in childhood overweight, increase the rate of exclusive breastfeeding in the first six months up to at least 50% and reduce and maintain childhood wasting to less than 5%.

According to the Global Nutrition Report 2020, India will miss targets for all four nutritional indicators for which there is data available, i.e. stunting among under-5 children, anaemia among women of reproductive age, childhood overweight and exclusive breastfeeding.

### Source

- 4) COVID-19 Active Response and Expenditure Support Programme (CARES Programme) is the initiative of
  - a) World Bank
  - b) Asian Development Bank
  - c) European Union
  - d) ASEAN

Solution: b)

The Government of India and the Asian Development Bank (ADB) signed a \$1.5 billion loan agreement for the ADB's COVID-19 Active Response and Expenditure Support Programme (CARES Programme).

It will be used to implement (i) COVID-19 containment plan to rapidly ramp up test-track-treatment capacity, and (ii) social protection for the poor, vulnerable, women, and disadvantaged groups to protect more than 800 million people over the next three months.

About ADB's COVID-19 Active Response and Expenditure Support (CARES) Program:

- Started to provide immediate requirements to governments in the face of this global crisis.
- The CARES Programme is provided as the first support to meet the immediate requirements of the government.
- The Program will contribute directly to the improvement of access to health facilities and care, as well as social protection for more than 800 million people.
- The Program is funded through the COVID-19 pandemic response option (CPRO) under ADB's Countercyclical Support Facility.

#### Source

- 5) Global Terrorism Index (GTI) 2019, recently seen in news is released by
  - a) Regional Anti-Terrorist Structure
  - b) North Atlantic Treaty Organisation (NATO)
  - c) Stockholm International Peace Research Institute (SIPRI)
  - d) Institute for Economics and Peace (IEP)

Solution: d)

A report compiled by Niti Aayog has questioned the methodology adopted by an Australian based institute to rank India as the seventh worst terrorism affected country ahead of conflict-ridden countries such as the Democratic Republic of Congo, South Sudan, Sudan, Burkina Faso, Palestine and Lebanon.

The report also questions the opaque funding of the Institute for Economics and Peace (IEP).

India has moved to the seventh position from the previous year's eighth in the annual Global Terrorism Index (GTI) 2019.

The GTI report issued by the IEP is based primarily on the Global Terrorism Database (GTD) collated by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland, besides other sources.

# Source

- 6) Which of the following are recognised as "Three Sisters" by the World Trade Organization's (WTO) Sanitary and Phytosanitary Measures (SPS) Agreement.
  - 1. International Plant Protection Convention (IPPC)
  - 2. Codex Alimentarius Commission
  - 3. Pacific Plant Protection Organization
  - 4. World Organization for Animal Health (OIE)

Select the correct answer code:

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

Solution: b)

The International Plant Protection Convention (IPPC) is one of the "Three Sisters" recognized by the World Trade Organization's (WTO) Sanitary and Phytosanitary Measures (SPS) Agreement, along with the Codex Alimentarius Commission for food safety standards and the World Organization for Animal Health (OIE) for animal health standards.

Source

7) Operation Peace Spring, recently seen in news was conducted by www.insightsonindia.com 57

- a) Saudi Arabia
- b) USA
- c) Turkey
- d) Yemen

Solution: c)

The 2019 Turkish offensive into north-eastern Syria, code-named by Turkey as Operation Peace Spring is the cross-border military operation conducted by the Turkish Armed Forces (TAF) and the Syrian National Army (SNA) against the Syrian Democratic Forces (SDF) and the Syrian Arab Army (SAA) in north-eastern Syria.

- 8) Consider the following statements regarding Indian Ocean Conference.
  - 1. Indian Ocean Conference has been initiated by Indian Ocean Rim Association.
- 2. It is an annual conference that aims to bring together Heads of States/Governments, Ministers, thought leaders, scholars, diplomats, bureaucrats and practitioners from across the region on a single platform.
  - 3. Fishing in the Indian Ocean now accounts for almost 50% of the world's total.

Which of the above statements is/are correct?

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

Solution: b)

Fourth Indian Ocean Conference 2019 was held in Male, capital of Maldives.

Indian Ocean Conference is Initiated by India Foundation along with its partners from Singapore, Sri Lanka and Bangladesh.

It is an annual effort to bring together Heads of States/Governments, Ministers, Thought Leaders, scholars, diplomats, bureaucrats and practitioners from across the region.

Indian Ocean is also rich in natural resources. 40% of the world's offshore oil production takes place in the Indian Ocean basin.

Fishing in the Indian Ocean now accounts for almost 15% of the world's total.

- 9) Which of the following are the member states of Shanghai Co-operation Organisation (SCO).
  - 1. Kazakhstan
  - 2. Kyrgyzstan
  - 3. Uzbekistan
  - 4. Turkmenistan
  - 5. Russia

Select the correct answer code:

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

Solution: a)

Presently, the SCO comprises eight member states, namely the Republic of India, the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan;

- 10) Shahid Beheshti Port, sometimes seen in news is located in
  - a) Yemen
  - b) Oman
  - c) Iran

d) Saudi Arabia

Solution: c)

Chabahar Port is a seaport in Chabahar located in southeastern Iran, on the Gulf of Oman. It serves as Iran's only oceanic port, and consists of two separate ports named Shahid Kalantari and Shahid Beheshti.

- 11) Consider the following statements regarding Ashgabat agreement.
- 1. The Ashgabat agreement is a multimodal transport agreement for creating an international transport and transit corridor facilitating transportation of goods between Central Asia and Persian Gulf.
- 2. The objective of the agreement is to synchronize with other transport corridors within the region including the International North–South Transport Corridor (INSTC).
  - 3. India formally joined the agreement in 2010.

Which of the above statements is/are correct?

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

Solution: a)

The Ashgabat agreement is a multimodal transport agreement between the governments of Kazakhstan, Uzbekistan, Turkmenistan, Iran, India and Oman for creating an international transport and transit corridor facilitating transportation of goods between Central Asia and the Persian Gulf. The agreement came into force in April 2016. Ashgabat in Turkmenistan is the depository state for the agreement.

Pakistan has also joined the Agreement from November 2016. India formally joined in February 2018.

The objective of this agreement is to enhance connectivity within Eurasian region and synchronize it with other transport corridors within that region including the International North–South Transport Corridor (INSTC).

- 12) Consider the following statements regarding United Nations Peacekeeping.
  - 1. United Nations Peacekeeping helps countries torn by conflict create conditions for lasting peace.
- 2. Its first mission involved the establishment of the UN Truce Supervision Organization (UNTSO), which served to observe and maintain ceasefire during the 1948 Arab-Israeli War.
  - 3. UN Peacekeeping is guided by the principle of complete Non-use of force.

Which of the above statements is/are correct?

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

Solution: c)

United Nations Peacekeeping was created in 1948. Its **first mission involved the establishment of the UN Truce Supervision Organization (UNTSO)**, which served to observe and maintain ceasefire during the 1948 Arab-Israeli War.

United Nations Peacekeeping helps countries torn by conflict create conditions for lasting peace. Peacekeeping has proven to be one of the most effective tools available to the UN to assist host countries navigate the difficult path from conflict to peace.

UN Peacekeeping is guided by three basic principles:

- Consent of the parties.
- Impartiality

Non-use of force except in self-defence and defence of the mandate.

#### Source

- 13) Consider the following statements about Special 301 Report.
  - 1. It is prepared annually by the World Bank.
  - 2. The Report includes a list of "Priority Foreign Countries", "Priority Watch List" and a "Watch List" countries which are judged on the basis of intellectual property laws.

Which of the above statements is/are correct?

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

Solution: b)

The Special 301 Report is prepared annually by the Office of the United States Trade Representative (USTR) that identifies trade barriers to United States companies and products due to the intellectual property laws, such as copyright, patents and trademarks, in other countries.

The annual Special 301 Report includes a list of "Priority Foreign Countries", that are judged to have inadequate intellectual property laws; these countries may be subject to sanctions. In addition, the report contains a "Priority Watch List" and a "Watch List", containing countries whose intellectual property regimes are deemed of concern.

#### Source

- 14) Consider the following statements regarding Cape Town Agreement, sometimes seen in news.
- 1. Cape Town Agreement was adopted by the United Nations Convention on the Law of the Sea (UNCLOS) to help combat illegal, unregulated and unreported (IUU) fishing.
  - 2. It seeks to introduce mandatory safety measures for fishing vessels.
  - 3. India was the first country to sign and ratify the agreement.

Which of the above statements is/are correct?

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

Solution: b)

India, ranked third in fisheries, is yet to ratify a global regulatory regime adopted by the International Maritime Organization (IMO) for safety of fishing vessels.

Cape Town Agreement seeks to introduce mandatory safety measures for fishing vessels of 24 metres and over in length.

The Cape Town Agreement was adopted by the IMO in 2012 to help combat illegal, unregulated and unreported (IUU) fishing.

The treaty will enter into force 12 months after at least 22 nations, with an aggregate 3,600 fishing vessels of 24 metres and over in length operating on the high seas, have expressed their consent to be bound by it. The Cape Town Agreement includes mandatory international requirements for stability and associated seaworthiness, machinery and electrical installations, life-saving appliances, communications equipment and fire protection, as well as fishing vessel construction. It is aimed at facilitating better control of fishing vessel safety by flag, port and coastal states.

- 15) Consider the following statements about United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).
  - 1. It is the regional development arm of the United Nations for the Asia-Pacific region, established in 2010.
  - 2. It is the largest United Nations body serving the Asia-Pacific region.
  - 3. India is the founder member of UNESCAP.

Which of the above statements is/are correct?

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

Solution: b)

The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) is the regional development arm of the United Nations for the Asia-Pacific region.

ESCAP is the most comprehensive of the United Nations five regional commissions, and the largest United Nations body serving the Asia-Pacific region.

Established in 1947 with its headquarters in Bangkok, Thailand, ESCAP works to overcome some of the region's greatest challenges by providing results-oriented projects, technical assistance and capacity building to member States.

India, founder member of UNESCAP, has been closely involved and played a prominent role in its deliberations from its initial years.

#### Source

- 16) Consider the following statements regarding Asia-Pacific Economic Cooperation (APEC).
- 1. Asia-Pacific Economic Cooperation (APEC) is an inter-governmental forum for Pacific Rim member economies that promotes free trade throughout the Asia-Pacific region.
- 2. APEC is recognized as one of the highest-level multilateral blocs and oldest forums in the Asia-Pacific region.
  - 3. China, Russia and India are the members of APEC.

Which of the above statements is/are correct?

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

Solution: b)

Asia-Pacific Economic Cooperation (APEC) is an inter-governmental forum for 21 Pacific Rim member economies that promotes free trade throughout the Asia-Pacific region.

**Headquartered in Singapore**, the APEC is recognized as **one of the highest-level multilateral blocs** and oldest forums in the Asia-Pacific region, and exerts a significant global influence.

**India has requested membership in APEC,** and received initial support from the United States, Japan, Australia and Papua New Guinea.

17) Consider the following statements regarding Coalition for Disaster Resilient Infrastructure (CDRI).

- 1. Coalition for Disaster Resilient Infrastructure (CDRI) is an international coalition of countries, United Nations (UN) agencies, multilateral development banks, the private sector, and academic institutions, that aims to promote disaster-resiliant infrastructure.
  - 2. It was launched at the 2019 UN Climate Action Summit.
- 3. It aims to achieve substantial changes in member countries' policy frameworks and future infrastructure investments.

Which of the above statements is/are correct?

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

Solution: d)

#### CDRI:

Launched by Prime Minter Narendra Modi in September 2019 at the UN Secretary-General's Climate Action Summit in New York, US.

A platform where knowledge is generated and exchanged on different aspects of disaster and climate resilience of infrastructure.

It will create a mechanism to assist countries to upgrade their capacities and practices, with regard to infrastructure development in accordance with their risk context and economic needs.

- 18) Global Report on Internal Displacement (GRID 2020), recently in news is released by
  - a) Internal Displacement Monitoring Centre
  - b) International Displacement Research Centre
  - c) International Labour Organisation
  - d) Amnesty International

Solution: a)

Nearly five million people were displaced in India in 2019 — the highest in the world so far — according to a recent report from the **Internal Displacement Monitoring Centre (IDMC)**, titled 'The Global Report on Internal Displacement (GRID 2020)'.



# 6. Polity

- 1) Consider the following statements regarding Curative petition.
  - 1. The concept of Curative petition was evolved by the Supreme Court of India.
- 2. A curative petition can be entertained if the petitioner establishes there was a violation of the principles of natural justice.
- 3. The Review petition is filed after the Curative petition to ensure there is no miscarriage of justice. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1, 3
  - c) 2, 3
  - d) 1, 2, 3

Solution: a)

A curative petition may be filed after a review plea against the final conviction is dismissed. It is meant to ensure there is no miscarriage of justice, and to prevent abuse of process. A curative petition is usually decided by judges in chamber, unless a specific request for an open-court hearing is allowed.

Every curative petition is decided on the basis of principles laid down by the Supreme Court in Rupa Ashok Hurra Vs Ashok Hurra & another, 2002.

The court ruled that a curative petition can be entertained if the petitioner establishes there was a violation of the principles of natural justice, and that he was not heard by the court before passing an order. It will also be admitted where a judge failed to disclose facts that raise the apprehension of bias.

The SC has held that curative petitions must be rare rather than regular, and be entertained with circumspection.

A curative petition must be accompanied by certification by a senior advocate, pointing out substantial grounds for entertaining it. It must be first circulated to a bench of the three senior-most judges, and the judges who passed the concerned judgment, if available. Only when a majority of the judges conclude that the matter needs hearing should it be listed — as far as possible, before the same Bench.

"It shall be open to the Bench at any stage of consideration of the curative petition to ask a senior counsel to assist it as amicus curiae. In the event of the Bench holding at any stage that the petition is without any merit and vexatious, it may impose exemplary costs on the petitioner," the court had held.

Source

# 7. History, Art and Culture

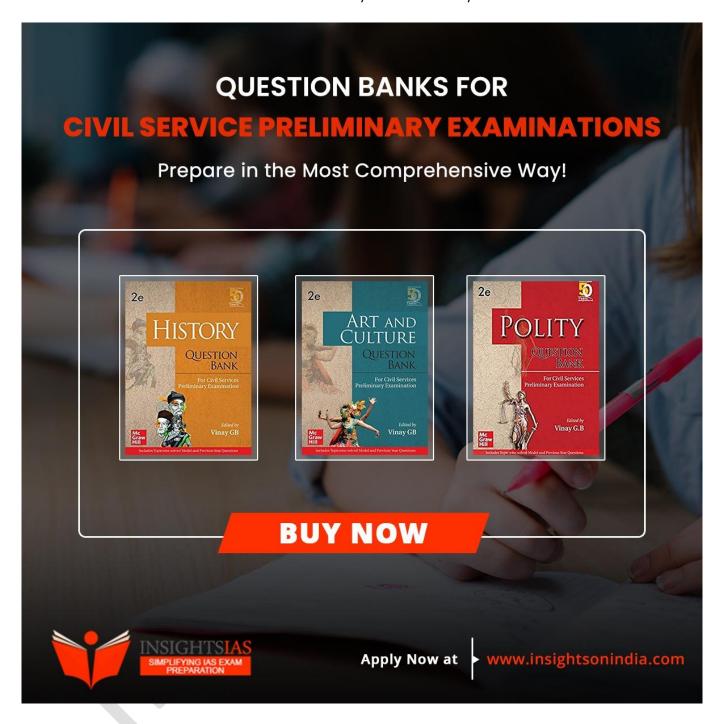
- 1) Consider the following statements regarding Kartarpur Sahib pilgrim corridor.
- 1. It is a visa-free border crossing and secure corridor, connecting the Gurdwara Darbar Sahib in Pakistan to the border with India.
  - 2. The gurdwara in Kartarpur stands on the bank of the river Ravi.
- 3. The place holds significance because the first guru of Sikhism, Guru Nanak was born in Kartarpur. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1 only
  - c) 2, 3
  - d) 1, 3

Solution: a)

The Kartarpur Corridor is a visa-free border crossing and secure corridor, connecting the Gurdwara Darbar Sahib in Pakistan to the border with India.

The gurdwara in Kartarpur stands on the bank of the Ravi, about 120 km northeast of Lahore.

It was here that Guru Nanak assembled a Sikh community and lived for 18 years until his death in 1539.



# 8. States

1) Consider the following pairs:

**GI Product** State

1. Shahi Litchi

West Bengal 2. Kadaknath chicken meat Madhya Pradesh

3. Etikoppaka toys

Telangana 4. Adilabad dokra Telangana

Select the correct answer code:

a) 1. 3

b) 1, 2, 4

c) 2, 4

d) 2, 3, 4

Solution: c)

Shahi Litchi - Bihar Kadaknath chicken meat - Madhya Pradesh Etikoppaka toys – Andhra Pradesh

Adilabad dokra - Telangana

- 2) Consider the following statements regarding Chak-Hao.
  - 1. Chak-Hao is a scented glutinous rice which has been in cultivation in Manipur.
- 2. The rice is known for very short cooking time due to the presence of a fibrous bran layer and higher crude fibre content.
  - 3. Recently Chak-Hao bagged the Geogrphical Indication (GI) tag.

Which of the above statements is/are correct?

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

Solution: b)

Chak-Hao, the black rice of Manipur bagged the Geogrphical Indication (GI) tag.

The application for Chak-Hao was filed by the Consortium of Producers of Chak-Hao (Black Rice), Manipur and was facilitated by the Department of Agriculture, Government of Manipur and the North Eastern Regional Agricultural Marketing Corporation Limited (NERAMAC).

Chak-Hao, a scented glutinous rice which has been in cultivation in Manipur over centuries, is characterised by its special aroma. It is normally eaten during community feasts and is served as Chak-Hao kheer.

Chak-Hao has also been used by traditional medical practitioners as part of traditional medicine. According to the GI application filed, this rice takes the longest cooking time of 40-45 minutes due to the presence of a fibrous bran layer and higher crude fibre content.

At present, the traditional system of Chak-Hao cultivation is practised in some pockets of Manipur. Direct sowing of pre-soaked seeds and also transplantation of rice seedlings raised in nurseries in puddled fields are widely practised in the State's wetlands.



#### Source

- 3) Consider the following statements regarding production of maize in India.
- 1. India is one of the major Maize producing countries in the world and has been self-sufficient in its produce.
  - 2. In India, Maize is grown throughout the year, but is predominantly a kharif crop.
- 3. Major Maize growing states in India are Karnataka, Telangana, Maharashtra and Andhra Pradesh. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 1, 3
  - c) 2, 3
  - d) 1, 2, 3

Solution: c)

In India, Maize is grown throughout the year. It is predominantly a kharif crop with 85 per cent of the area under cultivation in the season. Maize is the third most important cereal crop in India after rice and wheat. It accounts for around 10 per cent of total food grain production in the country. In addition to staple food for human being and quality feed for animals, maize serves as a basic raw material as an ingredient to thousands of industrial products that includes starch, oil, protein, alcoholic beverages, food sweeteners, pharmaceutical, cosmetic, film, textile, gum, package and paper industries etc.

Major maize growing states in India are Karnataka, Madhya Pradesh, Bihar, Tamil Nadu, Telangana, Maharashtra and Andhra Pradesh.

India has allowed imports of 1 lakh tonne of maize during 2019-20 under tariff rate quota (TRQ) system.

Although the area sown under maize in the kharif season is good, there are concerns about the crop size due to lingering risks from the **fall army worm (FAW) pest** and skewed rainfall.

Source Source

- 4) Consider the following statements.
- 1. In India, 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) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Solution: a)

#### 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

- 5) 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 incorrect?

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

Solution: b)

**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.
- CMB 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.
- 6) Consider the following statements regarding Coal Sector in India.
- 1. Coal Mines (Special Provisions) Act, 2015 permits the Government to auction coal mines to the private sector for both captive and Commercial purposes.
  - 2. Coal Mines (Special Provisions) Act, 2015 extends to the whole of India.
  - 3. India allows 100% FDI in coal sector.

Which of the above statements is/are incorrect?

- a) 1 only
- b) 2 only
- c) 3 only
- d) None of the above

Solution: d)

The objective of Coal Mines (Special Provisions) Act, 2015 is to empower the government to allocate the coal mines on the basis of competitive bidding to ensure continuity in coal mining operations and promote optimum utilisation of coal resources.

The Coal Mines (Special Provisions) Act, 2015, permits the government to **auction coal mines to the private sector** for **captive and commercial purposes**. The government has auctioned 24 coal blocks to private companies till March 2019, and will be further auctioning coal blocks for commercial mining by both Indian and foreign companies.

This act extends to the whole of India.

Source Source





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# 9. Maps / Places

- 1) Manesar, Pimpri-Chinchwad and Sriperumbudur are considered as the hubs in India for
  - a) Mobile Manufacturing
  - b) International Finance
  - c) Animal Husbandry
  - d) Automobile

Solution: d)

#### Source

2) Which of the following pairs are correctly matched

Tunnel	Location
1. Atal Tunnel	Uttarakhand
2. Zoji La Tunnel	Ladakh

3. Sela Tunnel Arunachal Pradesh

Select the correct answer code:

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

Solution: b)

Atal Tunnel (previously known as Rohtang Tunnel), named after India's former Prime Minister Atal Bihari Vajpayee, is a highway tunnel being built under the Rohtang Pass in the eastern Pir Panjal range of the Himalayas on the Leh-Manali Highway. At 8.8 km length, the tunnel will be one of the longest road tunnels in India and is expected to reduce the distance between Manali and Keylong by about 46 km. It is located in Himachal Pradesh.

Zoji La Tunnel is a 14.2 km long road tunnel under Zoji La pass on the Himalayas between Sonmarg and Drass town of Kargil district of the Indian Union Territory Of Ladakh, currently under construction.

Sela Tunnel is an upcoming road tunnel project in Sela Pass and is a step toward ensuring all-weather connectivity between Guwahati in Assam and Tawang in Arunachal Pradesh.

- 3) Thwaites Glacier, recently seen in news is located in
  - a) South America
  - b) Iceland
  - c) Svalbard
  - d) Antarctica

Solution: d)

In the Antarctic floats a massive glacier, roughly the size of Britain, whose melting has been a cause of alarm for scientists over the years. Now, a new study has pinned the cause of the melting to the presence of warm water at a vital point beneath the glacier.

Called the Thwaites Glacier, it is 120 km wide at its broadest, fast-moving and melting fast over the years. Because of its size (1.9 lakh square km), it contains enough water to raise the world sea level by more than half a metre.

**Thwaites is important for Antarctica** as it slows the ice behind it from freely flowing into the ocean. Because of the risk it faces — and poses — **Thwaites is often called the Doomsday Glacier.** 

### Source

- 4) Rojava, sometimes seen in news is located in
  - a) Turkey
  - b) Iran
  - c) Syria
  - d) Israel

Solution: c)

Rojava, is a de facto autonomous region in northeastern Syria.

The Syrian Kurdish region, Rojava, is now run by a semi-autonomous Kurdish government, and its militias People's Protection Units (YPG) are guarding the borders. The YGP was the dominant player in the U.S.-backed Syrian Democratic Forces (SDF) that destroyed the IS "caliphate".

#### Source

- 5) Arrange the following Islands from West to East.
  - 1. Sumatra Island
  - 2. Sulawesi Island
  - 3. Java Island

Select the correct answer code:

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

Solution: c)

Quite often Islands of Indonesia are into the news.

Indonesia is an archipelagic country located in Southeast Asia, lying between the Indian Ocean and the Pacific Ocean. It comprises five main islands: **Sumatra, Java, Borneo** (known as Kalimantan in Indonesia), **Sulawesi,** 



# 10. Miscellaneous

- 1) Consider the following statements.
  - 1. According to WHO, No country in the southeast Asia region have successfully controlled Hepatitis B.
- 2. Hepatitis B is said to be controlled when the disease prevalence is reduced to less than 10% among children less than five years of age.
- 3. In India, a nation-wide Hepatitis B vaccine was introduced in the Universal Immunisation Programme. Which of the above statements is/are correct?
  - a) 1, 2
  - b) 2, 3
  - c) 3 only
  - d) 1, 2, 3

Solution: c)

On September 3, 2019 Bangladesh, Bhutan, Nepal and Thailand became the first four countries in the World Health Organization's southeast Asia region to have successfully controlled hepatitis B.

The virus is said to be controlled when the disease prevalence is reduced to less than 1% among children less than five years of age.

Despite the introduction of hepatitis B vaccine in the Universal Immunisation Programme in 2002 and scaling-up nationwide in 2011, about one million people in India become chronically infected with the virus every year.

- 2) Consider the following statements about Universal Health Coverage (UHC).
  - 1. It means free coverage for all possible health interventions, regardless of the cost.
  - 2. UHC includes population-based services such as public health campaigns and controlling mosquito breeding grounds.
  - 3. Achieving UHC is one of the key targets of the 2030 Agenda for Sustainable Development.

Which of the above statements is/are correct?

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

Solution: c)

UHC means that all individuals and communities receive the health services they need without suffering financial hardship. It includes the full spectrum of essential, quality health services, from health promotion to prevention, treatment, rehabilitation, and palliative care.

Achieving UHC is one of the targets the nations of the world set when adopting the Sustainable Development Goals in 2015.

There are many things that are not included in the scope of UHC:

- UHC does not mean free coverage for all possible health interventions, regardless of the cost, as no country can provide all services free of charge on a sustainable basis.
- UHC is not just about health financing. It encompasses all components of the health system: health service delivery systems, the health workforce, health facilities and communications networks, health technologies, information systems, quality assurance mechanisms, and governance and legislation.
- UHC is not only about ensuring a minimum package of health services, but also about ensuring a
  progressive expansion of coverage of health services and financial protection as more resources become
  available.
- UHC is not only about individual treatment services, but also includes population-based services such as public health campaigns, adding fluoride to water, controlling mosquito breeding grounds, and so on.

- 3) Which of the following laws provide safeguards and penalties against chemical disasters in India.
  - 1. Environment Protection Act, 1986
  - 2. Public Liability Insurance Act, 1991
  - 3. National Environment Appellate Authority Act, 1997
  - 4. National Green Tribunal Act, 2010

Select the correct answer code:

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

Solution: d)

Soon after the Bhopal gas tragedy, the government passed a series of laws regulating the environment and prescribing and specifying safeguards and penalties. Some of these laws were:

- 1. **Bhopal Gas Leak (Processing of Claims) Act, 1985**, which gives powers to the central government to secure the claims arising out of or connected with the Bhopal gas tragedy. Under the provisions of this Act, such claims are dealt with speedily and equitably.
- 2. The **Environment Protection Act, 1986**, which gives powers to the central government to undertake measures for improving the environment and set standards and inspect industrial units.
- 3. The **Public Liability Insurance Act, 1991**, which is an insurance meant to provide relief to persons affected by accidents that occur while handling hazardous substances.
- 4. The **National Environment Appellate Authority Act, 1997**, under which the National Environment Appellate Authority can hear appeals regarding the restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards under the Environment (Protection) Act, 1986.
- 5. **National Green Tribunal, 2010**, provides for the establishment of a National Green Tribunal for effective and expeditious disposal of cases related to environmental protection and conservation of forests.

According to PRS Legislative, any incident similar to the Bhopal gas tragedy will be tried in the National Green Tribunal and most likely under the provisions of the Environment (Protection) Act, 1986. "...if an offence is committed by a company, every person directly in charge and responsible will be deemed guilty, unless he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such an offence," PRS states.