

Prelims Refresher Programme: Day 51 (Test-17)

QUESTION 1:

With reference to 5G, consider the following statements:

1. It has a low latency rate.
2. It has a wider area in the frequency spectrum.
3. It works under a millimetre-wave spectrum.

Which of the statements given above are correct?

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

Answer: (d)

Explanation

Fifth Generation:

- 5G is the fifth generation cellular technology that apart from increasing the downloading and uploading speeds over the mobile network, also reduces the latency i.e. the time taken by a network to respond. **Hence, statement 1 is correct.**
- 5G will provide download speed of 1 Gbps, which is at least 100 times the existing data speeds.
- It also increases energy efficiency and offers more stable network connections.
- 5G will have a wider area in the frequency spectrum (range of frequencies) that will ensure no network congestion. **Hence, statement 2 is correct.**
- The standards for the usage of 5G are defined and driven by the 3rd Generation Partnership Project.
- Its deployment will happen with the auction of the millimetre-wave spectrum i.e. the frequency range of 28–100 GHz. **Hence, statement 3 is correct.**

Applications:

- High-Speed mobile network
- Entertainment and multimedia
- Internet of Things
- Smart cities
- Smart farming
- Telemedicine services
- Controlling of critical infrastructure and vehicles.
- Industrial applications

Advantages:

- 5G is expected to offer enhanced mobile broadband that can meet high coverage requirements.
- It will offer very high upload and download speed.
- 5G can diversify services and has the potential to demonstrate spectral efficiency.
- High data speed of 5G Network might help cloud systems to stream software updates, music, and navigation data.
- 5G will help to incorporate Artificial Intelligence (AI) in our daily lives.
- It will also facilitate the ecosystem for the Internet of Things (IoT).
- It will help in digital growth of the country that will result in the rise of GDP and employment generation in the country.

QUESTION 2:

'TOI 700 d' often seen in the news is related to:

- (a) A microbial species
- (b) Earth-Size Planet
- (c) Satellite for Internet connectivity
- (d) A super computer

Answer: (b)

Explanation

TOI 700 d

- The National Aeronautics and Space Administration (NASA) has reported the discovery of an Earth-size planet, named TOI 700 d. **Hence, option (b) is correct.**
- The planet was found by NASA's Transiting Exoplanet Survey Satellite (TESS) mission, which was launched in 2018.
- With TOI 700 d, TESS has discovered its first Earth-size planet in its star's habitable zone.
- The star, TOI 700, is an 'M dwarf' located just over 100 light-years away in the southern constellation Dorado. It is roughly 40% of the Sun's mass and size, and has about half its surface temperature.

Habitable Zone

- A habitable zone, also called the 'Goldilocks zone' is the area around a star where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets.
 - Earth is in the Sun's Goldilocks zone. If Earth were where the dwarf planet Pluto is, all its water would freeze; on the other hand, if Earth were where Mercury is, all its water would boil off.
- Goldilock Zone is always defined with reference to a particular star. It can be different for different stars.

QUESTION 3:

Which of the following are the likely reasons for the earth's magnetic field given by the scientists?

1. Heat arising from the earth's inner core.
2. Motion of charges in the molten outer core.

Select the correct answer using the code given below:

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

Answer: (c)

Explanation

A bar magnet always points roughly in a north-south direction when freely suspended.

- This is due to the earth's magnetism.
- It is to be noted that the origin of the earth's magnetism is still not very clear to scientists.
- It is, however, believed that the motion of charges (causing currents) in the molten outer core creates the magnetic field. **Hence, statement 2 is correct.**
- Geologists think that these currents are caused by the earth's motion.
- Another likely source of earth's magnetism may be heat arising from the earth's inner core. **Hence, statement 1 is correct.**

- This heat may be the cause of convection currents in the molten outer core.
- The motion of ions and electrons in this molten material would produce a magnetic field. It is probably such convection currents in combination with the rotational effects of the earth that produce the earth's magnetic field.
- The earth behaves as if it contained a short bar magnet inclined at a small angle to its axis of rotation, with the south pole of the magnet in the northern hemisphere.
- At a particular place on the earth, the magnetic north is not usually in the direction of the geographic north.
- The angle between the two directions is called the declination. Mariners and others who use compasses must allow for declination in determining the true north.
- The angle, which a freely suspended bar magnet makes with the horizontal, is called the dip of the place. Thus, on the equator, the value of the dip is zero and that on the poles are 90° .

QUESTION 4:

With reference to the Interstellar Space, consider the following statements:

1. It is the place where the sun's constant flow of material and magnetic field stop affecting its surroundings.
2. NASA's Voyager 2 is the first human-made object to enter interstellar space.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation

Scientists define the beginning of interstellar space as the place where the sun's constant flow of material and magnetic field stop affecting its surroundings. **Hence, statement 1 is correct.**

- This place is called the heliopause. It marks the end of a region created by our sun that is called the heliosphere.
- How would we know when we've arrived in interstellar space?
 - Inside the heliosphere, the solar particles are hot but less concentrated. Outside of the bubble, they are much colder but more concentrated.
 - In interstellar space, there would be an increase of "cold" particles. There would also be a magnetic field that does not originate from our sun.
- In the summer of 2012, a NASA spacecraft named Voyager 1 became the first human-made object to enter interstellar space. **Hence, statement 2 is NOT correct.**
- What is Voyager 2?
 - NASA's Voyager 2 is the second spacecraft to enter interstellar space. On Dec. 10, 2018, the spacecraft joined, Voyager 1—as the only human-made objects to enter the space between the stars.

QUESTION 5:

With reference to project Manav, consider the following statements:

1. Its aim is to create a unified database of molecular network of all the tissues in the human body.
2. The project would utilise large biological community, both students and scientists, for extracting and adding the information from scientific literature.



Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

A human atlas initiative named Manav has been launched by the Department of Biotechnology (DBT) and Persistent Systems, a biotechnology company.

- The aim is to create a unified database of molecular networks of all the tissues in the human body and to derive a holistic picture of working of the human body. **Hence, statement 1 is correct.**
- In this public-private venture, DBT and Persistent Systems will invest `13 crore and `7 crore respectively.
- There is already a similar Human Cell Atlas project (launched in the year 2016), which is a collaborative effort between the world-leading scientists, to generate data pertaining to cellular and molecular activities of various cell types in the body in both its normal and disease state using techniques such as single cell genomics.
- The Indian project, on the other hand, depends on the knowledge already available in scientific literature to derive information on cellular networks.

About the Project:

- This mega project will collate and integrate molecular information on human tissues and organs that currently remain in research articles in an unstructured and disorganised form.
- The project would utilise a large biological community, both students and scientists, for extracting and adding the information from scientific literature at the level of cells and organs. **Hence, statement 2 is correct.**
- The database, that would get created, would eventually help researchers identify gaps in current knowledge and help in future projects in diagnostics and disease biology.
- Also, the information gathered in the project will help scientists to understand the differential molecular factors which vary between diseased states vis-a-vis a healthy state of an organ.
- The project will be executed by the Indian Institute of Science Education and Research (IISER) and the National Center for Cell Sciences (NCCS) based in Pune.
 - While the institutes will train students, the technology platform and data management will be provided by the private partner.
 - IISER is an autonomous institution established by the Ministry of Human Resource Development. NCCS is an autonomous organisation aided by the Department of Biotechnology, Ministry of Science and Technology.

QUESTION 6:

With reference to the recently launched PUNCH mission, which of the following is correct?

- (a) It aims to understand the transition of particles from the Sun's outer corona to the solar wind.
- (b) It aims to provide impetus to cryogenics in GSLV systems.
- (c) It is studying the possibilities of inhabiting Mars' surface.
- (d) It aims to develop hypersonic anti satellite missiles.

Answer: (a)

Explanation



A solar physicist from Indian Institute of Astrophysics is a co-investigator of NASA's **PUNCH mission**.

- PUNCH, which stands for “Polarimeter to Unify the Corona and Heliosphere,” is focused on understanding the transition of particles from the Sun’s outer corona to the solar wind that fills interplanetary space. **Hence, option (a) is correct.**
- PUNCH will consist of a constellation of four suitcase- sized microsats that will orbit the Earth and study how the corona, which is the atmosphere of the Sun, connects with the interplanetary medium.
- The mission will also image and track the solar wind and coronal mass ejections, which are huge masses of plasma that get thrown out of the Sun’s atmosphere. The coronal mass ejections can affect and drive space weather events near the Earth.
- There is also a plan to observe the Sun using joint observations from PUNCH and Indian mission Aditya, which is underway. India is planning to send up its own satellite Aditya-L1 with an aim to study the Sun’s corona. The mission is expected to be launched in the year 2022.
- Corona: It is the outermost region of the Sun’s atmosphere, consisting of plasma (hot ionized gas).
- Solar Wind: It is the constant stream of solar coronal material that flows off the sun.
- Interplanetary Medium: It refers to thinly scattered matter that exists between the planets and other bodies of the solar system, as well as the forces (e.g., magnetic and electric) that pervade this region of space. The material components of the interplanetary medium consist of neutral hydrogen, plasma gas comprising electrically charged particles from the Sun, cosmic rays, and dust particles.

QUESTION 7:

Consider the following statements about LTE and VoLTE:

1. VoLTE supports data usage and voice call together while LTE does not.
2. VoLTE is better for battery life of the device as compared to LTE.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

Voice over Long-Term Evolution (VoLTE) is a standard for high-speed wireless communication for mobile phones and data terminals.

- They are recognized as the industry-agreed progression of voice services across mobile networks, deploying LTE radio access technology.
- Under the earlier Long Term Evolution (LTE), the infrastructure of telecom players only allows transmission of data while voice calls are routed to their older 2G or 3G networks.
- Thus, under LTE, one cannot access the 4G data services while on a call. **Hence, statement 1 is correct.**
- On the other hand, VoLTE, a technology update to the LTE protocol, allows voice calls to be ‘packaged’ and carried through LTE networks.

Applications:

- It is a mix of telecom technology delivering much higher data speeds on more extensive connectivity, using much lower power, with extended battery life, and emitting less radiation.
- It is also designed to be a network for the Internet of Things (IoT).
- The technology used: In order to support a huge number of devices, many of which require longer battery life, and further, the 5G network will be building off the LTE Advanced Pro platform.



- Better battery life as battery consumption due to switching and searching for a network from 4G to 3G to place a call is not required under VoLTE. **Hence, statement 2 is correct.**

QUESTION 8:

Which of the following statements correctly defines 'Biologics'?

- (a) They are medicines made from living cells through highly complex manufacturing processes.
- (b) They are inorganic chemical compounds which mimic organic compounds once they are inside a living being.
- (c) They are artificial prosthetic organs made from tissue culture.
- (d) They are computers which can mimic a human brain.

Answer: (a)

Explanation

Biologics are medicines made from living cells through highly complex manufacturing processes and must be handled and administered under carefully monitored conditions. In contrast to most drugs that are chemically synthesized and their structure is known, most biologics are complex mixtures that are not easily identified or characterized.

- Biologic drugs are manufactured by genetically engineered living cells, making them miniature factories that produce the desired molecules (proteins). Even minor changes in their environment can alter the proteins, these cells are engineered to produce. **Hence, option (a) is correct.**

QUESTION 9:

With reference to Vyom Mitra, which of the following is correct?

- (a) It is a virtual assistant programme to help in rocket propulsion.
- (b) It is a robot to be used in the test flight of Gaganyaan mission.
- (c) It is a flight substitute system in GSLV.
- (d) It is the name of the Indian space station to be developed soon.

Answer: (b)

Explanation

Recently, Indian Space Research Organisation (ISRO) unveiled its first humanoid astronaut named Vyom Mitra who will ride to space in the first test flight of the human space mission, Gaganyaan. **Hence, option (b) is correct.**

- She is half-humanoid and her body stops at the torso and has no legs. She is capable of switching panel operations, performing Environment Control and Life Support Systems (ECLSS) functions, conversations with the astronauts, recognising them and solving their queries. The humanoid can detect and give out warnings if the environment changes within the cabin.
- She will simulate the human functions required for space before real astronauts take off before August 2022. She will be sent in a space capsule around the end of 2020 or early 2021 to study how astronauts respond to living outside earth in controlled zero-gravity conditions.

QUESTION 10:

With reference to H9N2 virus, consider the following statements;

1. It is spread through bats and venomous animals.
2. H9N2 is a subtype of influenza A virus, which causes human influenza as well as bird flu.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

About H9N2 Virus:

- H9N2 avian influenza viruses have become globally widespread in poultry over the last two decades and represent a genuine threat both to the global poultry industry but also humans through their high rates of zoonotic infection and pandemic potential.
- H9N2 viruses are generally hyperendemic in affected countries and have been found in poultry in many new regions in recent years.
- Influenza A viruses are members of the Orthomyxoviridae family and contain a segmented, negative-sense RNA genome encoding 10 core proteins and a variable number of accessory proteins.
- H9N2 is a subtype of influenza A virus, which causes human influenza as well as bird flu. **Hence, statement 2 is correct.**
- The H9N2 subtype was isolated for the first time in Wisconsin, US in 1966 from turkey flocks.
- H9N2 viruses are found worldwide in wild birds and are endemic in poultry in many areas. **Hence, statement 1 is NOT correct.**

Cases of Human Infection:

- H9N2 virus infections in humans are rare, but likely under-reported due to typically mild symptoms of the infections.
- Cases of human infection have been observed in Hong Kong, China, Bangladesh, Pakistan, and Egypt. The first case globally was reported from Hong Kong in 1998.

Emerging Threat:

- H9N2 viruses could potentially play a major role in the emergence of the next influenza pandemic.
- According to the World Health Organization (WHO), with avian influenza viruses circulating in poultry, there is a risk for sporadic infection and small clusters of human cases due to exposure to infected poultry or contaminated environments.

QUESTION 11:

With reference to the Doing Business Report 2019, consider the following statements:

1. China is the only economy to make into the 10 top most improved list for the second consecutive year.
2. South-East Asia has been the region with the highest number of reforms each year since 2012.
3. This report is published by the International Monetary Fund.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

The World Bank's Doing Business Report 2019 ranks 190 economies based on how easy it is to do business



there, taking into account trading regulations, property rights, contract enforcement, investment laws, the availability of credit and a number of other factors. **Hence, statement 3 is NOT correct.**

- Djibouti and India are the only economies to make into the 10 top most improved list for the second consecutive year. **Hence, statement 1 is NOT correct.**
- Sub-Saharan Africa has been the region with the highest number of reforms each year since 2012. **Hence, statement 2 is NOT correct.**
- The report helped inspire the Human Capital Index (HCI), which was launched at the 2018 Annual Meetings in the World Bank Bali, Indonesia.
- Like Doing Business Report, the HCI is based on the idea that, regardless of how complex an area may be, with solid research and methodology, it can be measured.

QUESTION 12:

Consumer Price Index is used as which of the following?

1. As a macroeconomic indicator of inflation
2. As a tool to monitor price stability
3. As deflator in the national accounts

Select the correct answer using the code given below:

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

Answer: (d)

Explanation

Consumer Price Indices (CPI) measure changes over time in the general level of prices of goods and services that households acquire for the purpose of consumption.

- CPI is widely used as a macroeconomic indicator of inflation, as a tool by governments and central banks for inflation targeting and for monitoring price stability, and as a deflator in the national accounts. **Hence, option (d) is correct.**
- CPI is also used for indexing dearness allowance to employees for increase in prices.
- The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation has revised the Base Year of the Consumer Price Index (CPI) from 2010=100 to 2012=100 with effect from the release of indices for the month of January, 2015.

QUESTION 13:

Which of the following best describes the 'gig economy'?

- (a) Full-time employees of Zomato working on the company's payroll.
- (b) Freelance Copywriter associated with a publishing house.
- (c) More than 3 generations of a family working as government employees.
- (d) Group of people holding more than 90 percent of the wealth of a country.

Answer: (b)

Explanation

It is 'a labour market characterised by the prevalence of short-term contracts or freelance work, as opposed to permanent jobs'.

- In the gig economy, instead of a regular wage, workers get paid for the 'gigs' they do, such as a food

delivery, a car journey or freelance writing.

- Full-time employees of Zomato are in the organised sector and not a part of the gig economy, whereas a food delivery person which is not a permanent staff is a part of gig economy.
- A gig economy undermines the traditional economy of full-time workers who rarely change positions and instead focus on a lifetime career.

QUESTION 14:

Which of the following countries is the largest producer of milk in the world?

- (a) United States of America
- (b) India
- (c) Brazil
- (d) China

Answer: (b)

Explanation

India ranks first in milk production, accounting for 20 percent of the world's total production. **Hence, option (b) is correct.**

- Milk production in India has been increasing steadily over the years and has increased from 55.6 million tonnes in 1991-92 to 176.3 million tonnes in 2017-18, at an average annual growth rate of 4.5 percent.

QUESTION 15:

Consider the following statements:

1. The main objective of the Monetary Policy Committee (MPC) is to determine policy interest rate, required to achieve the inflation target.
2. MPC is headed by the Union Finance Minister.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation

The Monetary Policy Committee (MPC) constituted by the Central Government under Section 45ZB of the Reserve Bank of India Act, 1934, determines the policy interest rate required to achieve the inflation target. **Hence, statement 1 is correct.**

- The Reserve Bank's Monetary Policy Department (MPD) assists the MPC in formulating the monetary policy.
- MPC is headed by the Governor of RBI and not the Union Finance Minister. **Hence, statement 2 is NOT correct.**

QUESTION 16:

Which of the following are the sources of Non-Tax revenue for the government?

1. Dividends from RBI
2. Interest receipts on loans

3. Receipts from offshore oilfields
4. User charges and fees levied by various Ministries
5. Disinvestment receipt

Select the correct answer using the code given below:

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

Answer: (d)

Explanation

Non-tax revenue (NTR) is a key component of revenue receipts of the government.

Non-tax revenue Components:

- NTR comprises dividends from RBI, banks, financial institutions and other public sector enterprises.
 - Another major component of NTR is interest receipts on loans. Interest is mostly received from states which have taken loan from the Union Government, earlier.
 - Other NTR receipts include telecom receipts, receipts from offshore oilfields, user charges and fees levied by various Ministries/Departments for services provided by them, disinvestment receipts etc.
- Hence, option (d) is correct.**

QUESTION 17:

Which of the following constitute the largest component of the Centre's revenue expenditure?

- (a) Government subsidies
- (b) Capital outlay
- (c) Finance Commission grants
- (d) Interest payments

Answer: (d)

Explanation

Interest payments constitute the largest component of the Centre's revenue expenditure. Interest payment expenditure was kept at `5,87,570 crore in 2018-19 Revised Estimate of Financial year (RE).

Hence, option (d) is correct.

- The expenditure on major subsidies on Food, Fertilizer and Petroleum remains the second significant component of revenue expenditure. In 2019-20 Budget Estimate of (BE), expenditure on account of subsidies is expected to be `3,01,694 crore.
- The Finance Commission grants are given to the State Governments under the statutory provisions under Article 275(1) of the Constitution.
- Capital expenditure of the Government is budgeted at `3,38,569 crore in BE of 2019-20 which reflects a growth of 6.9 per cent over RE of 2018-19.

QUESTION 18:

The recent slowdown in the world economy and the Emerging Market and Developing Economies (EMDEs) in particular has been majorly attributed to which of the following?

1. US-China trade war
2. Tight credit policy in China
3. Rising crude oil prices

4. Normalization of monetary policy in advanced economies

Select the correct answer using the code given below:

- (a) 1, 2 and 3 only
- (b) 1 and 2 only
- (c) 1, 2 and 4 only
- (d) 1, 2, 3 and 4

Answer: (d)

Explanation

According to OECD, the global economy will see its weakest growth since the 2008-2009 financial crisis in 2019-2020, slowing from 3.6% last year to 2.9% this year before a predicted 3.0% in 2020.

- The slowdown in the world economy and Emerging Market and Developing Economies (EMDEs) in particular is mainly due to US-China trade tensions; tighter credit policies in China; normalization of monetary policy in the advanced economies, and rising crude oil prices. **Hence, option (d) is correct.**

QUESTION 19:

Which one of the following statements is correct?

- (a) Nominal Effective Exchange Rate is an unadjusted weighted average rate at which one country's currency exchanges for a single foreign currency.
- (b) Nominal Effective Exchange Rate is an unadjusted weighted average rate at which one country's currency exchanges for a basket of multiple foreign currencies.
- (c) Nominal Effective Exchange Rate is the weighted average of nominal exchange rates adjusted for relative price differential between the domestic and foreign countries.
- (d) Nominal Effective Exchange Rate is the simple average of nominal exchange rates adjusted for relative price differential between the domestic and foreign countries.

Answer: (b)

Explanation

The Nominal Effective Exchange Rate (NEER) is an unadjusted weighted average rate at which one country's currency exchanges for a basket of multiple foreign currencies. **Hence, option (b) is correct.**

- In economics, the NEER is an indicator of a country's international competitiveness in terms of the foreign exchange (Forex) market. Forex traders sometimes refer to the NEER as the trade-weighted currency index.
- The real effective exchange rate (REER) is the weighted average of nominal exchange rates adjusted for relative price differential between the domestic and foreign countries.

QUESTION 20:

The amount by which a government's total expenditure exceeds its total revenue, excluding interest payments on its debt is called?

- (a) Primary deficit
- (b) Fiscal deficit
- (c) Revenue deficit
- (d) Budget deficit

Answer: (a)

Explanation



Primary deficit: It is the amount by which a government's total expenditure exceeds its total revenue, excluding interest payments on its debt. **Hence, option (a) is correct.**

- Budget deficit = total expenditure – total receipts
- Revenue deficit = revenue expenditure – revenue receipts
- Fiscal Deficit = total expenditure – total receipts except borrowings
- Primary Deficit = Fiscal deficit- interest payments

QUESTION 21:

If the relationship between per capita consumption and per capita national income shows a high elasticity of consumption then what does it imply?

- (a) The growth rate of consumption per capita is more than that of per capita income.
- (b) The growth rate of consumption per capita is almost the same as that of per capita income.
- (c) The growth rate of consumption per capita is less than that of per capita income.
- (d) The growth rate of consumption per capita is volatile in comparison to that of per capita income.

Answer: (b)

Explanation

When the relationship between per capita consumption and per capita national income shows a very high elasticity of consumption, it implies that the growth rate of consumption per capita is almost the same as that of per capita income. **Hence, option (b) is correct.**

QUESTION 22:

Consider the following statements:

1. Non-debt receipts of the central government comprise of tax revenue, non-tax revenue and government liabilities.
2. Debt receipts mostly consist of market borrowings and recovery of loans.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

The receipts of the Central government can broadly be divided into non-debt and debt receipts.

- The non-debt receipts comprise of tax revenue, non-tax revenue, recovery of loans, and disinvestment receipts. **Hence, statement 1 is NOT correct.**
- Debt receipts mostly consist of market borrowings and other liabilities, which the government is obliged to repay in the future. **Hence, statement 2 is NOT correct.**

QUESTION 23:

With reference to Goods and Services Tax (GST) Council, consider the following statements:

1. Prime Minister of India is the chairperson of GST Council.
2. It doesn't have any representation from the states.
3. It is a constitutional body.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

With the Constitution (One Hundred and First Amendment) Act 2016, the government has introduced Goods and Services Tax (GST) in the country.

- As per Article 279A (1) of the amended Constitution, the GST Council is constituted by the President. **Hence, statement 3 is correct.**
- As per Article 279A of the amended Constitution, the GST Council will be a joint forum of the Centre and the States. This Council shall consist of the following members, namely:
 - The Union Finance Minister as its Chairperson. **Hence, statement 1 is NOT correct.**
 - The Union Minister of State in charge of Revenue or Finance.
 - The Minister in charge of Finance or Taxation or any other Minister nominated by each State Government. **Hence, statement 2 is NOT correct.**

QUESTION 24:

With reference to provisions under Model Contract Farming Act 2018, consider the following statements:

1. Contract farming is to be kept outside the ambit of APMC Act.
2. It is not only a promotional Act but also binding in nature.
3. Contracted produce is to be covered under crop/ livestock insurance in operation.

Which of the statements given above are correct?

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

Answer: (c)

Explanation

With a view to integrate farmers with bulk purchasers including exporters, agro-based industries etc. for better price realization through mitigation of market and price risks to the farmers and ensuring smooth agro raw material supply to agro-based industries, Union Finance Minister in the Budget for 2017-18 announced preparation of a "Model Contract Farming Act" and circulation of the same to the States for its adoption.

- Farmers Producer Organizations (FPOs) have a major role in promoting Contract Farming and Services Contract. On behalf of farmers, they can enter into an agreement with the sponsor.
- Salient features of Model Contract Farming Act 2018 are:
 - It is a promotional and facilitative Act and not regulatory in its structure. **Hence, statement 2 is NOT correct.**
 - The Act lays special emphasis on protecting the interests of the farmers, considering them as the weaker of the two parties entering into a contract.
 - In addition to contract farming, services contracts all along the value chain including pre-production, production and post-production have also been included.
 - Contracted produce is to be covered under crop / livestock insurance in operation. **Hence, statement 3 is correct.**



- Contract farming to be outside the ambit of APMC Act. **Hence, statement 1 is correct.**
- No permanent structure can be developed on farmers' land/premises.

QUESTION 25:

What is a Plain Vanilla bond?

- (a) It is the simplest form of an asset or financial instrument. There are no frills and it can be applied to categories such as options or bonds.
- (b) It describes rupee-denominated borrowings issued by Indian entities in overseas markets.
- (c) It is an instrument issued by a registered foreign institutional investor (FII) to an overseas investor for investment.
- (d) None of these

Answer: (a)

Explanation

Plain vanilla describes the simplest form of an asset or financial instrument. There are no frills, no extras, and it can be applied to categories such as options or bonds. Plain vanilla can also be used to describe more generalized financial concepts such as trading strategies or modes of thinking in economics.

- Masala bonds are bonds issued outside India but denominated in Indian Rupees, rather than the local currency. Masala is an Indian word and it means spices. The term was used by the International Finance Corporation (IFC) to evoke the culture and cuisine of India.
- A participatory note, commonly known as a P-note or PN, is an instrument issued by a registered foreign institutional investor (FII) to an overseas investor who wishes to invest in Indian stock markets without registering themselves with the market regulator, the Securities and Exchange Board of India (SEBI).

QUESTION 26:

Consider the following statements:

1. Red soils are poor in lime, magnesia, phosphates, nitrogen and humus.
2. The forest soils are very rich in humus but are deficient in potash, phosphorus and lime.

Which of the statements given above are correct?

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

Answer: (c)

Explanation

Red Soils:

- Most of the red soils have come into existence due to weathering of ancient crystalline and metamorphic rocks.
- The main parent rocks are acid granites and gneisses, quartzitic and feldspathic.
- These soils are spread on almost the whole of Tamil Nadu, parts of Karnataka, south-east of Maharashtra, eastern part of Andhra Pradesh and Madhya Pradesh, Chhattisgarh, Orissa and Chhota Nagpur in Jharkhand.
- The red soils are poor in lime, magnesia, phosphate, nitrogen and humus but are fairly rich in potash. **Hence, statement 1 is correct.**

Laterite Soils:

- They are mainly found on the summits of Western Ghats, Eastern Ghats, Rajmahal Hills, Vindhyas, Satpuras and Malwa Plateau.
- The laterite soil is formed under conditions of high temperature and heavy rainfall with alternate wet and dry periods.
- Laterite soils are mainly found in Kerala, Karnataka, Chota Nagpur region of Jharkhand, Orissa and Assam.

Forest and Mountain Soils:

- These soils are heterogeneous in nature and their character changes with parent rocks, ground-configuration and climate.
- In the Himalayan region, such soils are mainly found in valley basins, depressions and less steeply inclined slopes.
- The forest soils are very rich in humus but are deficient in potash, phosphorus and lime. **Hence, statement 2 is correct.**
- Therefore, they require a good deal of fertilizers for high yields.

QUESTION 27:

Consider the following statements:

1. In 1994, the World Conference on Natural Disaster Reduction adopted the Yokohama strategy.
2. The Sendai Framework for Disaster Risk Reduction 2015-2030, is the successor instrument to the Hyogo Framework.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

Organisations related to Disaster Management Framework at Global level:

- In 1994 the World Conference on Natural Disaster Reduction was held in Yokohama, Japan. The conference adopted the Yokohama strategy and declared the decade 1990-2000 as the International Decade for Natural Disaster Reduction (IDNDR). **Hence, statement 1 is correct.**
- United Nations Office for Disaster Risk Reduction (UNISDR) is the successor to the secretariat of IDNDR and was created in 1999 to implement the UN Disaster Risk Reduction strategy.
- The Hyogo Framework for Action (HFA) is a 10-year plan (2005-2015) to make the world safer from natural hazards. Priorities such as Disaster risk reduction, identification, assessment through legal and policy frameworks, disaster preparedness and use of innovation was adopted.
- The Sendai Framework for Disaster Risk Reduction (2015-2030), is the successor instrument to the Hyogo Framework. **Hence, statement 2 is correct.**
 - It is a non-binding agreement, which the signatory nations, including India, will attempt to comply with on a voluntary basis.
- There are three international agreements within the context of the post- 2015 development agenda. These are:
 1. The Sendai Framework.
 2. Sustainable Development Goals 2015-2030.

3. The Paris agreement (COP 21) on Climate Change.

- These three agreements recognize the desired outcomes in Disaster Risk Reduction as a product of interconnected social and economic processes, which overlap across the agendas of the three agreements.

QUESTION 28:

Which of the following factors help in the conservation of soil?

1. Constructing Dams
2. Strip Cropping
3. Terracing and Contour Bunding

Select the correct answer using the code given below:

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

Answer: (d)

Explanation

Soil Conservation:

z It includes all those measures which help in protecting the soil from erosion and exhaustion.

z Over-grazing and shifting cultivation in many parts of India have affected the natural cover of land and given rise to extensive erosion.

z It should be regulated and controlled by educating villagers about the consequences.

z Contour bunding, Contour terracing, regulated forestry, controlled grazing, cover cropping, mixed farming and crop rotation are some of the remedial measures which are often adopted to reduce soil erosion.

Some methods for conserving soil are:

1. Constructing Dams: Soil erosion by rivers can be avoided by constructing dams across the rivers. This checks the speed of water and saves soil from erosion.
2. Strip Cropping: Crops may be cultivated in alternate strips, parallel to one another.
 - Some strips ripen at different times of the year and are harvested at intervals. This ensures that at no time of the year the entire area is left bare or exposed.
 - The tall growing crops act as windbreaks and the strips which are often parallel help in increasing water absorption by the soil by slowing down runoff.
3. Terracing and Contour Bunding: It is very effective and one of the oldest methods of soil conservation. Hill slope is cut into a number of terraces having horizontal top and steep slopes on the back and front.
 - It involves the construction of banks along the contours. It promotes absorption of water by the soil and saves soil from erosion. **Hence, statement 1, 2 and 3 all are correct.**

QUESTION 29:

Consider the following statements regarding climate change :

1. The annual mean surface air temperature rise is expected to range between 1.7–2 °C and the seasons may get warmer by around 2°C towards 2030's.
2. Climate Change Performance Index (CCPI) is based on parameters such as GHG Emissions, Renewable Energy, Energy Use and Climate Policy only.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

India and Climate Change:

- Significant climatic anomalies are projected over Indian region in terms of temperature, precipitation, storms, cyclones, sea-level rise and coastal inundation.
- An all-round warming over the India subcontinent associated with the increasing greenhouse gas scenario.
- The annual mean surface air temperature rise is expected to range between 1.7-2°C and the seasons may get warmer by around 2oC towards 2030's. **Hence, statement 1 is correct.**
- The variability of seasonal mean temperature may be more in winter months.
- The warming in night temperatures is expected to be more over south peninsula, central and northern India, whereas that of day time warming is expected to be more over central and northern India.
- The Climate Change Performance Index (CCPI) is an independent monitoring tool for tracking the climate protection performance of 57 countries and the EU.
- It aims to enhance transparency in international climate politics and enables comparison of climate protection efforts and progress made by individual countries.
- The CCPI assesses each country's performance which is released annually after analysing four parameters:
 - GHG Emissions (40% of the overall ranking),
 - Renewable Energy (20%),
 - Energy Use (20%)
 - Climate Policy (20%). **Hence, statement 2 is correct.**
- India has been ranked 11th out of 56 nations & the European Union (EU) at the 2019 Climate Change Performance Index (CCPI), which was published by Germanwatch, the New Climate Institute and the Climate Action Network.
- The CCPI analysis shows that India has improved its standing by 3 places compared to the 2018 report.

QUESTION 30:

Consider the following statements:

1. The Third National Wildlife Action Plan (WAP- 3) has adopted a landscape approach in conservation of all uncultivated flora and undomesticated fauna.
2. India has over 20% of the total geographical area under effective wildlife conservation.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

India and Biodiversity Conservation:

- The protected area network in India has been used as a tool to manage natural resources for biodiversity conservation and for the well-being of resource-dependent populations.
- India has over 20% of the total geographical area under effective wildlife conservation. **Hence, statement 2 is correct.**
- Protected Areas (PAs) are clearly defined geographical space, recognized, dedicated and managed through legal and other effective means to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

Status of the PA Network in India (July 2017):

1. Protected Area Number Total Area (sq.Km)
2. Total Protected Areas 7,64,162,024
3. Wildlife Sanctuaries 5,43,118,917
4. National Parks 10,340,500
5. Conservation Reserves 732,547
6. Community Reserves 4,560

(Source: ENVIS Centre on Wildlife & Protected Areas, Wildlife Institute of India, MOEFCC)

Third National Wildlife Action Plan (2017-2031):

- It is based on the premise that essential ecological processes that are governed, supported or strongly moderated by ecosystems, are essential for food production, health and other aspects of human survival and sustainable development.
- Maintenance of these ecosystems which can be termed as 'Life Support Systems'.
- The Third Wildlife Action Plan (WAP-3) has adopted a landscape approach in conservation of all uncultivated flora and undomesticated fauna that has ecological value to mankind irrespective of where they occur. **Hence, statement 1 is correct.**
- Landscape Approach: It is about balancing competing land use demands in a way that is best for human well-being and the environment. It means creating solutions that consider food and livelihoods, finance, rights, restoration and progress towards climate and development goals.
- The WAP-3 calls for the integration of various site-specific strategies climate change adaptation (CCA), climate change mitigation (CCM) and Disaster risk reduction (DRR).

QUESTION 31:

Which of the following factors were responsible behind Bombay emerging as a cotton textile centre during the pre-independence era?

1. Proximity to cotton producing areas.
2. Availability of capital.
3. Abundant Labour.
4. Easier imports from England.

Select the correct answer using the code below:

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1, 2 and 4 only
- (d) 1, 2, 3 and 4

Answer: (d)

Explanation

In 1854, the first modern cotton mill was established in Mumbai. This city had several advantages as a cotton textile manufacturing centre:

- It was very close to the cotton producing areas of Gujarat and Maharashtra.
- Raw cotton used to be brought to Mumbai port to be transported to England. Therefore, cotton was available in Mumbai city itself.
- Mumbai even then was the financial centre and the capital needed to start an industry was available there.
- As a large town, providing employment opportunities attracted labour in large numbers. Hence, cheap and abundant labour too was available locally.
- The machinery required for a cotton textile mill could be directly imported from England. **Hence, option (d) is correct.**
- By 1947, the number of mills in India went up to 423 but the scenario changed after partition, and this industry suffered a major recession.
- This was due to the fact that most of the good quality cotton growing areas had gone to West Pakistan and India was left with 409 mills and only 29 percent of the cotton producing area.

QUESTION 32:

Consider the following statements:

1. Western temperate cyclones help in the success of Rabi crops.
2. Aus, Aman and Boro are the pre-monsoon showers occurring in south India.
3. Watermelon and muskmelon are the crops of the Zaid season.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

Cropping Pattern:

India has three cropping seasons – rabi, kharif and zaid

Rabi Crops:

- Rabi crops are sown in winter from October to December and harvested in summer from April to June.
- Some of the important rabi crops are wheat, barley, peas, gram and mustard. Though, these crops are grown in large parts of India, states from the north and north- western parts such as Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Uttar Pradesh are important for the production of wheat and other rabi crops.
- Availability of precipitation during winter months due to the western temperate cyclones helps in the success of these crops. **Hence, statement 1 is correct.**
- However, the success of the Green Revolution in Punjab, Haryana, western Uttar Pradesh and parts of Rajasthan has also been an important factor in the growth of the above mentioned rabi crops.

Kharif Crops:

- Kharif crops are grown with the onset of monsoon in different parts of the country and these are harvested in September-October.

- Important crops grown during this season are paddy, maize, jowar, bajra, tur (arhar), moong, urad, cotton, jute, groundnut and soybean.
- Some of the most important rice growing regions are Assam, West Bengal, coastal regions of Odisha, Andhra Pradesh, Telangana, Tamil Nadu, Kerala and Maharashtra, particularly the (Konkan coast) along with Uttar Pradesh and Bihar.
- In states like Assam, West Bengal and Odisha, three crops of paddy are grown in a year. These are Aus, Aman and Boro. **Hence, statement 2 is NOT correct.**

Zaid Crops:

- In between the rabi and the kharif seasons, there is a short season during the summer months known as the Zaid season.
- Some of the crops produced during 'zaid' are watermelon, muskmelon, cucumber, vegetables and fodder crops. **Hence, statement 3 is correct.**

Pre-Monsoon Showers Name:

- The pre-monsoon showers are called by various names:
 - Tea showers in Assam.
 - Mango showers in Kerala and coastal areas of Karnataka as they help in the early ripening of mangoes.
 - Cherry Blossoms/Coffee showers in Kerala and nearby areas.

QUESTION 33:

Consider the following statements:

1. The northern slopes of the Himalayas carry a thicker vegetation as compared to southern slopes.
2. The temperate forests are called Sholas in the Nilgiris, Anaimalai and Palani hills.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

Montane Forests

- In mountainous areas, the decrease in temperature with increasing altitude leads to a corresponding change in natural vegetation.
- Mountain forests can be classified into two types, the northern mountain forests and the southern mountain forests.
- The Himalayan ranges show a succession of vegetation from the tropical to the tundra, which change with the altitude.
- Deciduous forests are found in the foothills of the Himalayas. It is succeeded by the wet temperate type of forests between an altitude of 1,000-2,000 m. In the higher hill ranges of northeastern India, hilly areas of West Bengal and Uttaranchal, evergreen broadleaf trees such as oak and chestnut are predominant.
- Between 1,500-1,750 m, pine forests are also well-developed in this zone, with Chir Pine as a very useful commercial tree.
- At many places in this zone, temperate grasslands are also found. But in the higher reaches there is a transition to Alpine forests and pastures. Silver firs, junipers, pines, birch and rhododendrons, etc.

occur between 3,000-4,000 m.

- The southern slopes of the Himalayas carry a thicker vegetation cover because of relatively higher precipitation than the drier north-facing slopes. **Hence, statement 1 is NOT correct.**
- At higher altitudes, mosses and lichens form part of the tundra vegetation.
- The southern mountain forests include the forests found in three distinct areas of Peninsular India viz; the Western Ghats, the Vindhyas and the Nilgiris.
- As they are closer to the tropics, vegetation is temperate in the higher regions, and subtropical on the lower regions of the Western Ghats, especially in Kerala, Tamil Nadu and Karnataka.
- The temperate forests are called Sholas in the Nilgiris, Anaimalai and Palani hills. **Hence, statement 2 is correct.**
- Some of the other trees of this forest of economic significance include, magnolia, laurel, cinchona and wattle. Such forests are also found in the Satpura and the Maikal ranges.

QUESTION 34:

Consider the following statements:

1. Australia is the largest producer of Uranium in the world.
2. Rajasthan is the largest onshore crude oil producing state in India.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

Australia has the largest reserves of Uranium in the world. Kazakhstan is the largest producer of Uranium in the world. **Hence, statement 1 is NOT correct.**

- Crude oil production in 2014-15 upto December 2014 is about 28.171 Million Metric Tonne (MMT) by ONGC, OIL and Private/ JV Companies.
- About 68.5% of crude oil is by ONGC and OIL from the nomination regime and remaining 31.5% of crude oil production is by Private/JV companies from the PSC regime.
- In 2014-15, the share of offshore crude oil production was about 50.2%.
- The remaining on shore crude oil production was from 6 States viz.,:
 1. Rajasthan (23.7%). **Hence, statement 2 is correct.**
 2. Gujarat (12.5%)
 3. Assam (12.1%)
 4. Andhra Pradesh (0.7%)
 5. Tamil Nadu (0.6%)
 6. Arunachal Pradesh (0.2%)

QUESTION 35:

Which among the following is a feature of Intensive subsistence farming?

1. Pressure on land due to high population
2. Labour intensive
3. High uses of pesticides and fertilizers

Select the correct answer using the code below:

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

Answer: (d)

Explanation

Intensive Subsistence Farming:

- This type of farming is practised in areas of high population pressure on land.
- It is labour intensive farming, where high doses of biochemical inputs and irrigation are used for obtaining higher production. **Hence, option (d) is correct.**
- Though the 'right of inheritance' leading to the division of land among successive generations has rendered land- holding size uneconomical, the farmers continue to take maximum output from the limited land in the absence of alternative sources of livelihood. Thus, there is enormous pressure on agricultural land.

QUESTION 36:

Consider the following statements:

1. Proximity to sources of Iron and Coal are the only factors in locating Iron and Steel Industry.
2. Gujarat is the second largest bauxite producing state in India.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

Locational Factors Responsible for Iron and Steel Industry

- Iron and Steel Industry uses a large amount of weight losing materials and its localisation is controlled by the availability of raw materials.
- Coal and iron ore are the two basic materials used by the iron and steel industry and on the basis of minimum transportation cost, most of the iron and steel plants are now located at three distinct places viz.
 - I. Near Coal Fields
 - II. Near Iron ore mining centres
 - III. At places between areas of coal and iron mining.
- Another important factor influencing the localisation of iron and steel industry is the availability of market.
- Steel products of an integrated steel plant are quite bulky. Thus, following the theory of minimum transportation cost many centres of iron and steel are located near the market.
- With the increasing popularity of open hearth processes, scrap has become a very important raw material in this industry. About half of the metal now melted in the world's iron and steel furnaces is scrap.
- Thus, in the present day localization of iron and steel industry, each of the three factors viz.,
 - (a) Coal

- (b) Iron ore and
- (c) Market

They all have almost equal significance. **Hence, statement 1 is NOT correct.**

Bauxite:

- By States, Odisha alone accounts for 51% of the country's resources of bauxite ore followed by Andhra Pradesh (16%), Gujarat (9%), Jharkhand (6%), Maharashtra (5%) and Madhya Pradesh & Chhattisgarh (4% each). Major bauxite resources are concentrated in the East Coast bauxite deposits in Odisha and Andhra Pradesh.
- Odisha emerged as the leading producing State of bauxite accounting for about 51% of the total production followed by Gujarat, Jharkhand, Chhattisgarh and Maharashtra (8% each). The remaining was produced by Madhya Pradesh, Goa, Karnataka and Tamil Nadu. **Hence, statement 2 is correct.**

QUESTION 37:

Consider the following statements:

1. Under Wildlife Protection Act, 1972, Schedule I provides protection to both threatened plants and animals.
2. Hazardous and other waste management rules 2019 are issued under Environment Protection Act, 1986.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

Wildlife Protection Act, 1972:

- The Wildlife Protection Act, 1972 is an Act of the Parliament of India enacted for the protection of plants and animal species..
- A number of wild animal and bird species have been listed in various schedules of the Indian Wildlife (Protection) Act, 1972. The act has six schedules. The schedule I to V enlist animals in accordance with the threat to their survival.
- The schedule VI includes specific plant species which need protection. **Hence, statement 1 is NOT correct.**
- An expert committee constituted by the Indian Board of Wildlife considers amendment to the Act, as and when necessary.

Environment (Protection) Act, 1986:

- The Environment (Protection) Act, 1986 authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds.
- It empowers the Central Government to establish authorities charged with the mandate of preventing environmental pollution in all its forms and to tackle specific environmental problems that are peculiar to different parts of the country.
- This act has relaxed the rule of 'Locus Standi' and now due to this even a common citizen can approach the court for the violation of the act. This is subject to the condition that he has given notice of sixty days for the alleged offence.

- The act debars the Civil courts from having any jurisdiction to entertain any suit or proceeding in respect of an action, direction or order issued by the central government or other statutory authority under this act.
- Under the Environment Protection Act, 1986, the central government is empowered to regulate hazardous material. By the power conferred by the Act Government has issued Hazardous and other waste (Management and TransBoundary Movement, Rules, 2019).
- Under Environment Protection Act, 1986, the central government is empowered to regulate hazardous material and by the power conferred by the act government has issued hazardous and other waste (management and Trans-boundar movement) Rules, 2019. **Hence, statement 2 is correct.**

QUESTION 38:

Consider the following statements with respect to a type of forest found in India:

1. It is found in the areas of the country, where rainfall ranges between 70-100 cm.
2. These forests are found in rainier areas of the Peninsula and the plains of Uttar Pradesh and Bihar.
3. Tendu, palas, amaltas, bel, khair, axlewood, etc. are the common trees of these forests.

Which of the following types of forest in India is referred to in the statements given above?

- (a) Dry Deciduous forests
- (b) Wet Deciduous forests
- (c) Semi Evergreen forests
- (d) Montane forests

Answer: (a)

Explanation

Dry deciduous forest covers vast areas of the country, where rainfall ranges between 70-100 cm. On the wetter margins, it has a transition to the moist deciduous, while on the drier margins to thorn forests.

- These forests are found in rainier areas of the Peninsula and the plains of Uttar Pradesh and Bihar. In the higher rainfall regions of the Peninsular plateau and the northern Indian plain, these forests have a parkland landscape with open stretches in which teak and other trees interspersed with patches of grass are common.
- As the dry season begins, the trees shed their leaves completely and the forest appears like a vast grassland with naked trees all around. Tendu, palas, amaltas, bel, khair, axlewood, etc. are the common trees of these forests. In the western and southern part of Rajasthan, vegetation cover is very scanty due to low rainfall and overgrazing. **Hence, option (a) is correct.**
- The regions which record rainfall between 100-200 cm. are wet deciduous forest. These forests are found in the northeastern states along the foothills of Himalayas, eastern slopes of the Western Ghats and Odisha. Teak, sal, shisham, hurra, mahua, amla, semul, kusum, and sandalwood etc. are the main species of these forests.

QUESTION 39:

With reference to Coastal Regulation Zone (CRZ) Norms 2018, consider the following statements:

1. Pollution treatment facilities are allowed in the area between the high tide line and the low tide line.
2. Coastal Regulation Zone-IV covers the water area between Low Tide Line and 12 nautical miles seaward.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only

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

Answer: (c)

Explanation

The Coastal Regulation Zone (CRZ) Notification, 2018 was based on the recommendations of Shailesh Nayak committee.

Coastal Regulation Zones

- Coastal stretches of seas, bays, estuaries, creeks, rivers, and backwaters were declared as CRZs under coastal zone regulation notification in 1991.
- CRZs have been classified into 4 zones for the purpose of regulation:
 - **CRZ-I:** includes ecologically sensitive areas, where no construction is allowed except activities for atomic power plants, defense.
 - **CRZ-II:** includes designated urban areas that are substantially built up. Construction activities are allowed on the landward side only.
 - **CRZ-III:** includes relatively undisturbed areas, mainly rural areas. No new construction of buildings allowed in this zone except repairing of the existing ones. However, constructions of dwelling units in the plot area lying between 200-500m of the high tide line is allowed.
 - **CRZ-IV:** includes the water area covered between Low Tide Line and 12 nautical miles seaward. Except for fishing and related activities, all actions impugning on the sea and tidal water will be regulated in this zone. Hence, statement 2 is correct.
- Pollution abatement: In order to address pollution in Coastal areas treatment facilities have been made permissible activities in CRZ-I B area (the area between the Low tide line and High tide line) subject to necessary safeguards. **Hence, statement 1 is correct.**

Defense and strategic projects are exempted from regulation.

QUESTION 40:

With reference to South Asia Wildlife Enforcement Network, consider the following statements:

1. Its objective is harmonization and standardization in laws and policies of member countries concerning conservation of wild fauna and flora.
2. India adopted the SAWEN statute and became its member in 2016.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

South Asia Wildlife Enforcement Network (SAWEN):

- In April 2016, the Union Cabinet gave its approval for India adopting the Statute of the South Asia Wildlife Enforcement Network (SAWEN). **Hence, statement 2 is correct.**
- SAWEN, a Regional network of eight countries in South Asia: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
- It aims at working as a strong regional intergovernmental body for combating wildlife crime by attempting common goals and approaches for combating illegal trade in the region.

- SAWEN was formally launched during the Second Meeting of the South Asia Experts Group on Illegal Wildlife Trade held on January 29-30, 2011 in Paro, Bhutan.
- The meeting agreed to an action-oriented work plan, establishment of SAWEN Secretariat to be hosted by the Government of Nepal, governance and operational structure of SAWEN, and the need for strategic collaboration on communications and fund-raising.

Objectives:

- To take initiatives for bringing harmonization and standardization in laws and policies of member countries concerning conservation of fauna and flora. **Hence, statement 1 is correct.**
- To document the trend of poaching and illegal trade, and related threats to the natural biodiversity within and across countries in the region.
- To strengthen institutional responses to combat wildlife crime by promoting research and information sharing, training and capacity building, technical support, sharing experiences and outreach.
- To encourage member countries to prepare and implement their National Action Plans in curbing wildlife crime and to collaborate towards effective implementation.

QUESTION 41:

With reference to the Classical Languages, consider the following statements:

1. Pali language has been given the status of Classical Language.
2. Malayalam is the latest to be added to the list of Classical Language in 2014.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

Status of Classical Language:

In 2004, the Government of India declared that languages that meet certain requirements would be accorded the status of a "Classical Language in India".

The following criteria were laid down to determine the eligibility of languages to be considered for classification as a "Classical Language".

- High antiquity of its early texts/recorded history over a period of 1500–2000 years.
- A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers.
- The literary tradition is original and not borrowed from another speech community.
- The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

Languages so far declared to be Classical language are:

1. Tamil in the year 2004.
2. Telugu in the year 2008.
3. Malayalam in the year 2013.
4. Sanskrit in the year 2005.
5. Kannada in the year 2008.
6. Odia in the year 2014.

The Government has been criticised for not including Pali as a classical language as experts argue that



it fits all the above mentioned criteria. **Hence, statements 1 and 2 are NOT correct.**

QUESTION 42:

Consider the following statements:

1. States are free to adopt the official language of their respective state from the 22 languages mentioned in the 8th Schedule only.
2. Article 343 of the Constitution has provisions for the National Language of the Union government.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

Official Languages of India:

Article 343 (1) of the Constitution of India states that “The Official Language of the Union Government shall be Hindi in Devanagari script.” Official Language Act, 1963:

- This Act declares Hindi in Devanagari script as the official language of the Union. English has been given the status of “subsidiary official language” of the Union.
- The Constitution of India made a provision for each of the Indian states to choose their own official language for communications at the State level.

Note:

- There is no national language of India. Hindi is not a national language. Neither does the Constitution nor any Act defines the national language. **Hence, statement 2 is NOT correct.**
- The Constitution does not specify the official language to be used by the States for the conduct of official function. States are free to adopt it.
- The language to be adopted by the States need not be one of those listed in the Eighth Schedule, and several States have adopted official language which are not listed. **Hence, statement 1 is NOT correct.**

Example:

- Tripura-Kokborok (belongs to Sino-Tibetan family)
- Puducherry - French
- Mizoram-Mizo

QUESTION 43:

Consider the following statements:

1. The walled city of Jaipur is the latest to be included in the list of World Heritage Sites of India.
2. Jaipur city has been established and built in the light of Vedic architecture.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

The Pink city, Jaipur (Rajasthan), was declared a UNESCO World Heritage Site in 2019. The decision was taken at the 43rd session of the UNESCO World Heritage Committee (WHC) taking place in the city of Baku, Azerbaijan, from 30th June-10th July, 2019. **Hence, statement 1 is correct.**

The city was nominated for its value of being an exemplary development in town planning and architecture that demonstrates an amalgamation and important exchange of ideas in the late medieval period.

- The walled city of Jaipur, in India's north-western state of Rajasthan was founded in 1727 by Sawai Jai Singh II.
- Unlike other cities in the region located in hilly terrain, Jaipur was established on the plain and built according to a grid plan interpreted in the light of Vedic architecture. **Hence, statement 2 is correct.**
- The city's urban planning shows an exchange of ideas from ancient Hindu and early modern Mughal as well as Western cultures.
- The grid plan is a model that prevails in the West, while the organization of the different city sectors (chowkis) refers to traditional Hindu concepts.

QUESTION 44:

Consider the following statements:

1. Buddhacharita, biography of the Buddha by Ashvaghosha is a work in Pali language.
2. Sutta Pitaka contains discourses on philosophy and metaphysics.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

Sanskrit was the preferred language of the courts in ancient period, it got an impetus in the Gupta period, who employed many great poets, dramatists and scholars of various subjects. In this period Sanskrit became the preferred language of communication of cultured and educated people.

- In the later Kushana period, several major Sanskrit scholars received patronage. For example, Ashvagosha wrote Buddhacharita, which elucidates the biography of Buddha. **Hence, statement 1 is NOT correct.**
 - During the post-Vedic period, apart from Sanskrit, literature was also composed in Prakrit and Pali.
- Prakrit is a term which is loosely attached to any language from the standard one, i.e. Sanskrit.
- Pali is usually used to indicate the archaic or old form of Prakrit and it combines several existing dialects.
 - The Buddhist literature can be divided into Canonical and Non-canonical works. The Canonical literature consists of 'Triptikas' or baskets (of knowledge).
- Vinaya Pitaka, which covers the rules and regulations, which should be followed by the Buddhist monks.
- The Sutta Pitaka contains dialogues and speeches of the Buddha that deal with morality and righteous dharma. **Hence, statement 2 is NOT correct.**
- Lastly, the Abhidhamma Pitaka that concentrates on philosophy and metaphysics. It also contains discussions on various topics like ethics, theory of knowledge and psychology.

QUESTION 45:

Consider the following statements:

1. Important Jain learning centers were Valabhi and Kalinga.
2. The Kannada language was popular among the Jain monks.
3. Jain works can also be found in Tamil language in the Sangam age.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

Apart from writing in Prakrit and Ardha Magadhi, Jain monks wrote in many other languages depending on the era, region and the patrons who supported them.

- They wrote in Tamil during the Sangam Age in south India. They also wrote in Sanskrit, Shauraseni, Gujarati, and Marathi. **Hence, statement 3 is correct.**
 - Universities of Valabhi and Kalinga were important centers of learning for Jains before they declined. **Hence, statement 1 is correct.**
- Jain Agamas: They are sacred texts and are said to be the teachings of the Jain tirthankaras. They are said to be originally compiled by the Gandharas who were immediate disciples of Mahavira.
- The present Angas were re-compiled in a council of monks of Svetambaras sect held in Vallabhi (Gujarat) during mid-5th century AD.
 - Between the 9th-12th centuries, Jain monks wrote extensively in Kannada. The three gems of Kannada literature Pampa, Ponna and Ranna are the famous writers related to Jainism. **Hence, statement 2 is correct.**

QUESTION 46:

Theyyam is a folk theatre of:

- (a) Tamil Nadu
- (b) Kerala
- (c) Karnataka
- (d) Andhra Pradesh

Answer: (b)

Explanation

Theyyam:

- Theyyams are performed in Kerala. It is similar to a practice in Karnataka, called Bhuta Kola. **Hence, option (b) is correct.**
- It is an open theatre and is performed in front of the local temples to mainly honour the spirit of the ancestors besides gods.
- Themes of Vaishnavism, Shaktism and Shaivism are now common. The actors wear elaborate headgear and colourful costumes.

QUESTION 47:

Consider the following statements:

1. Hindi language in its present form has developed from apabhramsa language.
2. First book to be written in Hindi was Pritviraj Raso.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

Several different trends emerged in the medieval period, which affected the languages, and dialects that emerged. The major change was the emergence of Persian as the writing of the Delhi Sultanate and Mughal courts.

- Hindi as we know it today evolved between 7th and 14th century from Apabhramsa, which evolved from Prakrit. **Hence, statement 1 is correct.**
- The language got its biggest boost with the Bhakti movement, which shunned the use of Sanskrit as it was the language of the Brahmins and common people did not use it. Hence, they started writing in the language of the people and the twelfth century onwards we see a sharp rise in regional languages like Bengali, Hindi, Marathi, Gujarati, etc.
- For a long time, Hindi literature was in the shadow of its Sanskrit antecedents, but Prithviraj Raso was the first Hindi book and it documents the life and challenges faced by Prithviraj Chauhan. **Hence, statement 2 is correct.**

QUESTION 48:

Consider the following statements:

1. It flourished on the banks of the river Yamuna in the period between 1st and 3rd centuries B.C.
2. The sculptures of this school were influenced by the stories and images of all three religions of the time – Buddhism, Hinduism and Jainism.

Which of the following School of Art has been referred to in the statements above?

- (a) Mathura
- (b) Gandhara
- (c) Amravati
- (d) Sarnath

Answer: (a)

Explanation

The Mathura School of Art flourished on the banks of the river Yamuna in the period between 1st and 3rd centuries B.C. The sculptures of the Mathura School were influenced by the stories and images of all three religions of the time – Buddhism, Hinduism and Jainism. **Hence, option (a) is correct.**

- The images were modelled on the earlier Yaksha images found during the Mauryan period. The Mathura School showed a striking use of symbolism in the images. The Hindu Gods were represented using their avayudhas. For example, Shiva is shown through linga and mukhalinga.
 - Similarly, the halo around the head of Buddha is larger than in Gandhara School and decorated with geometrical patterns.
- Buddha is shown to be surrounded by two Bodhisattva – Padmapani holding a lotus and Vajrapani holding a thunderbolt Vaishnava (mainly Vishnu and his various forms) and Shaiva (mainly the lingam and mukhalingam) faiths are also found at Mathura but Buddhist images are found in large numbers.

- It may be noted that the images of Vishnu and Shiva are represented by their ayudhas (weapons). There is boldness in carving the large images, the volume of the images is projected out of the picture plane, the faces are round and smiling, heaviness in the sculptural volume is reduced to relaxed flesh.

The garments of the body are clearly visible and they cover the left shoulder. Images of the Buddha, Yakshas, Yakshinis, Shaivite and Vaishnavite deities and portrait statues are profusely sculpted.

QUESTION 49:

With reference to Ellora caves, consider the following statements:

1. Most of the caves are dedicated to themes of Brahmanism.
2. The Kailash temple at Ellora was developed under the patronage of Guptas.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation

Ellora caves are another important site of cave architecture. It's located nearly 100 Kms away from Ajanta caves in the Sahyadri range of Maharashtra. It is a group of 34 caves – 17 Brahmanical, 12 Buddhist and 5 Jain.

- Caves 1–12: Buddhist
- Caves 13–29: Hindu
- Caves 30–34: Jain (Digambara sect) **Hence, statement 1 is correct.**

These set of caves were developed during the period between the 5th and 11th centuries A.D. (newer as compared to Ajanta Caves) by various guilds from Vidarbha, Karnataka and Tamil Nadu. Hence, the caves reflect a natural diversity in terms of theme and architectural styles.

Some of the prominent caves in Ellora are:

- Cave No. 10 is a Buddhist Chaitya cave known as Vishwakarma Cave or carpenter's cave. Buddha is seated in Vyakhyana Mudra here and Bodhi tree is carved at his back. Cave No. 14 is themed "Ravan ki khai". Cave No. 15 is Dashavatar temple. Cave No. 16 is Kailash temple dedicated to Lord Shiva. It was developed under the patronage of Rashtrakuta king Krishna I and was carved out of a monolith, and even has a courtyard. In Cave No. 16, there is also a sculpture on the wall of Kailash temple depicting Ravana shaking Mount Kailash. It is considered one of the masterpieces of Indian sculpture.
- The famous Kailasa temple at Ellora is in a class by itself because it is a rock-cut temple complex, which in many respects resembles the various rathas at Mahabalipuram. This temple was constructed during the reign of the Rashtrakuta King Krishna and belongs to the middle of the 8th century A.D. The carvers at Ellora cut three trenches down into the rock and then began to carve the rock from the top downwards. **Hence, statement 2 is NOT correct.**
- Even though it is carved on the model of a structural temple, the Kailashnath temple is a rock-cut shrine within a rectangular court. The different parts of the temple are the entrance portico, the vimana and the mandapa as well as a pillared shrine to Shiva's bull, Nandi. Both inside as well as outside the temple, there are beautiful, graceful and dignified sculptural decorations, largely pertaining to the theme of Shiva and Parvati, Sita's abduction and Ravana shaking the mountain.

QUESTION 50:

Consider the following statements:

1. This temple belongs to the stage of Gupta temple architecture in which flat roofs were replaced by shikharas.
2. It is one of the first temples in which Guptas introduced Panchayatana style of temple making.

Which of the following temples is referred to in the statements given above?

- (a) Dashavatara temple at Deogarh
- (b) Parvati temple at Nachana kuthara
- (c) Ter temple at Sholapur
- (d) Maniyar Math at Rajgir

Answer: (a)

Explanation

- **First Stage of Gupta Temple Architecture:** The temples of this stage were square in shape with flat roofs. The portico was developed on shallow pillars and the entire structure was built on low platforms. Example: Temple No. 17 at Sanchi.
- **Second stage of Gupta Temple Architecture:** The temples built during this phase continued most of the features of the earlier phase. However, the platforms were higher or upraised. Some instances of two-storied temples have also been found. Another important addition of this phase was a covered ambulatory passageway around the sanctum sanctorum or garbhagriha. The passageway was used as a pradakshina path. Example: Parvati temple at Nachana kuthara in Madhya Pradesh.
- **Third Stage of Gupta Temple Architecture:** This stage saw the emergence of shikharas in place of a flat roof. However, they were still quite low and almost square, i.e. curvilinear. Panchayatan style of temple making was introduced. In the Panchayatan style of temple making, there were four subsidiary shrines along with the temple of the principal deity. The main temple was square with an elongated mandap in front of it, giving it a rectangular shape. The subsidiary shrines were placed opposite to each other on either side of the mandap, giving the ground plan a crucified shape. Example: Dashavatar temple at Deogarh (U.P.), Durga temple at Aihole (Karnataka), etc. **Hence, option (a) is correct.**
- **Fourth Stage of Gupta Temple Architecture:** The temples of this stage were almost similar, except the main shrine became more rectangular. Example: Ter temple at Sholapur.
- **Fifth Stage of Gupta Temple Architecture:** In this stage, there was the introduction of circular temples with shallow rectangular projections. Rest of the features of the previous stage continued. Example: Maniyar Math at Rajgir.

QUESTION 51:

With reference to Bureau of Indian Standards Act, consider the following statements:

1. It provides for hallmarking of precious metal articles only.
2. There is a provision for recall of the products that do not conform to the relevant Indian Standard.

Which of the statements given above is/are correct?

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

Answer: (b)

Explanation

- **Bureau of Indian Standards Act (BIS)** allows multiple types of simplified conformity assessment

schemes including self-declaration of conformity.

- BIS act provides enabling provisions for making hallmarking of precious metal articles and many other products such as hardwares and electronics. **Hence, statement 1 is not correct.**
- There is a provision for repair or recall, of the products (bearing Standard Mark) that do not conform to the relevant Indian Standard. **Hence, statement 2 is correct.**

QUESTION 52:

Consider the following statements regarding 'Smallpox':

1. It is a non-contagious disease caused by the Variola Virus.
2. India has completely eradicated the smallpox in 2019.

Which of the statements given above is/are correct ?

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

Answer: (d)

Explanation

- **Smallpox is a contagious disease** caused by the Variola Virus (VARV). **Hence, statement 1 is not correct.**
 - It transmits through the droplets released from coughing, sneezing, and face to face contact with an infected person.
- One of the deadliest diseases known to mankind, it is also the only one to have been eradicated by vaccination.
- **In 1980, this was declared as completely eradicated worldwide** after the global immunization campaign led by the **World Health Organization (WHO)** with the help of the smallpox vaccine.
 - India was declared free of smallpox in the year 1977. **Hence, statement 2 is not correct.**
- **Vaccine:** The first effective vaccine was discovered by Edward Jenner in 1796.

QUESTION 53:

With reference to the powers of Governor, consider the following statements:

1. Governor has the discretion to summon, dissolve and prorogue the state legislative assembly.
2. Article 163 of the Constitution limits the discretionary power of the Governor.

Which of the statements given above is/are correct ?

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

Answer: (b)

Explanation

- Article 174 of the Constitution authorizes the Governor to summon, dissolve and prorogue the state legislative assembly.
 - However, the Governor can exercise the above only as per Article 163 of the Constitution which says that the **Governor acts on the aid and advice of the Council of Ministers** headed by the Chief Minister. **Hence, statement 1 is not correct.**

- Article 163 (1) essentially limits any discretionary power of the Governor only to cases where the Constitution expressly specifies that the Governor must act on his own and apply an independent mind.
 - The Governor can exercise his discretionary power under Article 174, when the chief minister has lost the support of the House and his strength is debatable. **Hence, statement 2 is correct.**

QUESTION 54:

Which of the following space probes are related to Mars?

1. Al Amal
2. Tianwen-1
3. Phobos
4. Perseverance

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 4 only
- (c) 1, 2 and 4 only
- (d) 1, 2, 3, 4

Answer: (c)

Explanation

- The United Arab Emirates (UAE) Mars Mission or 'Hope' or Al Amal is one of three missions launching to Mars in 2020.
- Other two probes to Mars to be launched in 2020, belong to the USA and China.
 - **China** will be launching an ambitious mission to **Mars, Tianwen-1**.
 - **NASA's Mars rover, Perseverance**, with instruments to search for chemical signs of past life, is scheduled to launch on 30th July 2020.
- Phobos is one of the two moons of Mars, another is named as Deimos. They both were discovered by Asaph Hall in August 1877. Hence, statement 3 is not correct.
- **Thus, only 1, 2 and 4 space probes are related to Mars. Hence, option C is correct.**

QUESTION 55:

With reference to 'Dare to Dream 2.0', consider the following statements:

1. It is an innovation contest launched by Indian Space Research Organisation (ISRO) under Atmanirbhar Bharat.
2. It aims to promote the innovators and startups for innovation in defence and aerospace technologies.

Which of the statements given above is/are correct ?

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

Answer: (b)

Explanation

- The **Defence Research and Development Organisation (DRDO)** has launched an innovation contest 'Dare to Dream 2.0' on the 5th death anniversary of former President Dr. APJ Abdul Kalam. **Hence, statement 1 is not correct.**

- The 'Dare to Dream 2.0' is an open challenge to promote the innovators and startups of the country, for innovation in defence and aerospace technologies in the country after the call of Atmanirbhar Bharat. **Hence, statement 2 is correct.**
- Award money, up to Rs.10 lakh for startup and Rs. 5 lakh to individual category, will be given to the winners.

QUESTION 56:

With reference to "National Education Policy (NEP), 2020", consider the following statements:

1. It will bring the uncovered age group of 3-6 years under school curriculum.
2. Teaching up to at least Grade 5 to be in mother tongue/regional language.

Which of the statements given above is/are correct ?

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

Answer: (c)

Explanation

The Union Cabinet has approved the new National Education Policy (NEP), 2020 with an aim to introduce several changes in the Indian education system - from the school to college level.

Salient Feature of New National Education Policy 2020:

- Universalization of education from preschool to secondary level with 100% Gross Enrolment Ratio (GER) in school education by 2030.
- To bring 2 crore out of school children back into the mainstream through an open schooling system.
- The current 10+2 system is to be replaced by a **new 5+3+3+4 curricular structure** corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively.
- It will **bring the uncovered age group of 3-6 years under school curriculum**, which has been recognized globally as the crucial stage for development of mental faculties of a child. **Hence, statement 1 is correct.**
- It will also have 12 years of schooling with three years of Anganwadi/ pre schooling.
- School governance is set to change, with a new accreditation framework and an independent authority to regulate both public and private schools.
- Emphasis on Foundational Literacy and Numeracy, no rigid separation between academic streams, extracurricular, vocational streams in schools.
- Vocational Education to start from Class 6 with Internships.
- Teaching up to at least **Grade 5 to be in mother tongue/regional language**. No language will be imposed on any student. **Hence, statement 2 is correct.**
- Assessment reforms with 360 degree Holistic Progress Card, tracking Student Progress for achieving Learning Outcomes
- A new and comprehensive National Curriculum Framework for Teacher Education (NCFTE) 2021, will be formulated by the National Council for Teacher Education (NCTE) in consultation with National Council of Educational Research and Training (NCERT).
- By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.

QUESTION 57:

Consider the following statements:

1. Ammonia reduces the amount of oxygen in water.
2. Ingestion of water having ammonia is not harmful for human beings.

Which of the statements given above is/are correct ?

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

Answer: (a)

Explanation

- **Ammonia** occurs naturally in the environment from the breakdown of organic waste matter, and may also find its way to ground and surface water sources through industrial effluents, contamination by sewage or through agricultural runoff.
 - It is a colourless gas and is used as an industrial chemical in the production of fertilisers, plastics, synthetic fibres, dyes and other products.
 - Ammonia **reduces the amount of oxygen in water** as it is transformed to oxidised forms of nitrogen. Hence, it also increases **Biochemical oxygen demand (BOD)**. Hence, **statement 1 is correct**.
- If the concentration of ammonia in water is above 1 ppm it is toxic to fishes.
- In humans, **long term ingestion of water having ammonia levels of 1 ppm or above may cause damage to internal organs**. Hence, **statement 2 is not correct**.
 - As per the **Bureau of Indian Standards (BIS)**, the acceptable maximum limit of ammonia in drinking water is **0.5 parts per million (ppm)**.

QUESTION 58:

Consider the following statements with reference to 'International Covenant on Civil and Political Rights (ICCPR)':

1. The ICCPR is a key international human rights treaty that provides a range of protections for civil and political rights.
2. The UN Human Rights Council monitors the implementation of ICCPR.
3. India is yet to sign the ICCPR convention.

Which of the statements given above is/are correct ?

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

Answer: (a)

Explanation

- The **International Covenant on Civil and Political Rights (ICCPR)** is a key international human rights treaty, providing a range of protections for civil and political rights. Hence, **statement 1 is correct**.
- The ICCPR, together with the Universal Declaration of Human Rights and the International Covenant on Economic Social and Cultural Rights, are considered the International Bill of Human Rights.
- The Bill influences the decisions and actions of Government, State and Non-State actors to make economic, social and cultural rights a top-priority in the formation and implementation of national, regional and international policy and law.
- The **UN Human Rights Committee** is tasked with **monitoring** how countries implement the



International Covenant on Civil and Political Rights (ICCPR) 1976, which under Article 21 guarantees the right to peaceful assembly. **Hence, statement 2 is not correct.**

- The United Nations Human Rights Council (UNHRC) is a United Nations body whose mission is to promote and protect human rights around the world. It should not be confused with the UN Human Rights Committee.
- India is a **state party to the International Covenant on Civil and Political Rights (ICCPR)**. **Hence, statement 3 is not correct.**
 - The right to protest, to publicly question and force the government to answer, is a fundamental political right of the people that flows directly from a democratic reading of Article 19 of the Constitution of India.

QUESTION 59:

The Milk Fortification Project of the National Dairy Development Board (NDDB) aims to address the deficiency of:

- (a) Protein
- (b) Vitamin
- (c) Calcium
- (d) Phosphorus

Answer: (b)

Explanation

- **The Milk Fortification Project** of National Dairy Development Board (NDDB) is intended to address **vitamin deficiency** in consumers. **Hence, option B is correct.**
- The project was launched by the NDDB in collaboration with World Bank and Tata Trusts, as a pilot project on 5th September, 2017. It has seen significant progress in the past two years.
- The project aims to process about two million tonnes of fortified milk, reaching around 30 million consumers.
- It is financed by the **South Asia Food and Nutrition Security Initiative (SAFANSI)**, administered by the **World Bank**.

QUESTION 60:

With reference to Asian Infrastructure Investment Bank (AIIB), consider the following statements:

1. India is a founding member of AIIB.
2. It is headquartered in Shanghai.
3. Non-Sovereign entities can also become a member.

Which of the above statement(s) is/are correct?

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

Answer: (b)

Explanation

- **Asian Infrastructure Investment Bank (AIIB)** is established by the AIIB Articles of Agreement (entered into force Dec. 25, 2015) which is a multilateral treaty. The Parties (57 founding members) to agreement comprise the Membership of the Bank.
 - **India is a founding member of the bank.** It is also its second-largest shareholder (with 7.62%



voting shares) after China (26.06%). **Hence, statement 1 is correct.**

- It is **headquartered in Beijing** and began its operations in January 2016. **Hence, statement 2 is not correct.**
- Unlike other multilateral development banks like the World Bank, the **AIIB allows for non-sovereign entities** (like sovereign wealth funds) to apply for AIIB membership, assuming their home country is a member. **Hence, statement 3 is correct.**

QUESTION 61:

Consider the following statements regarding Habeas Corpus:

1. The court can issue an order to a person who has detained another person, to produce the detainee before it.
2. Both the Supreme Court and High courts under Article 32 can issue the writ of habeas corpus.
3. The writ of habeas corpus can only be issued against private individuals.

Which of the statements given above is/are correct ?

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

Answer: (a)

Explanation

- **Habeas Corpus** is a Latin term which literally means ‘**to have the body of**’. Under this the **court can issue an order to a person** who has detained another person, to produce the body of the latter (detainee) before it. The court then examines the cause and legality of detention. **Hence, statement 1 is correct.**
- The **Supreme Court under Article 32** and the **High courts under Article 226** of the Constitution can issue the writs of **habeas corpus**, mandamus, prohibition, certiorari and quo-warranto. **Hence, statement 2 is not correct.**
- The writ of **habeas corpus can be issued against both** public authorities as well as private individuals. **Hence, statement 3 is not correct.**
- The writ, on the other hand, is not issued where the:
 - detention is lawful,
 - the proceeding is for contempt of a legislature or a court,
 - detention is by a competent court, and
 - detention is outside the jurisdiction of the court.

QUESTION 62:

With reference to Purchasing Managers Index (PMI), consider the following statements:

1. PMI is an indicator of business activity in the manufacturing sector only.
2. The PMI is usually released bi-annually.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

- **Purchasing Managers Index (PMI)** is an indicator of business activity in the **manufacturing and services sectors**. Hence, **statement 1 is not correct**.
- The PMI is usually **released at the start of every month**. It is, therefore, considered a good leading indicator of economic activity. Hence, **statement 2 is not correct**.
- PMI provides information about current and future business conditions to company decision-makers, analysts, and investors. As the official data on industrial output, manufacturing and GDP growth comes much later, PMI helps to make informed decisions at an earlier stage.

QUESTION 63:

With reference to 'Bal Gangadhar Tilak', consider the following statements:

1. The Indian National Congress (INC) was headed by Tilak when the Lucknow Pact was signed in 1916.
2. He founded the Deccan Education Society in 1884.

Which of the statements given above is/are correct ?

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

Answer: (c)

Explanation

Contribution of Bal Gangadhar Tilak to Indian Struggle for Independence:

- One of the earliest and the most vocal proponents of complete independence or swarajya (self-rule).
- Along with **Lala Lajpat Rai and Bipin Chandra Pal**, he was part of the Lal-Bal-Pal trio of leaders with extremist outlooks.
- Indian Home Rule Movement was started in 1916, it is believed to have set the stage for the independence movement under the leadership of Annie Besant and Bal Gangadhar Tilak for the educated English speaking upper class Indians.
 - The All India Home Rule League was founded by Tilak in April 1916 at Belgaum.
 - It worked in Maharashtra (except Bombay), the Central Provinces, Karnataka and Berar.
- **Lucknow Pact (1916)** was signed between the **INC headed by Tilak** and All-India Muslim League led by Muhammad Ali Jinnah for hindu-muslim unity in nationalist struggle. Hence, **statement 2 is correct**.
 - Started newspapers namely, Kesari (Marathi) and Mahratta (English) and wrote books namely, Gita Rhasya and Arctic Home of the Vedas.
- Social Contribution:
 - Founder of the **Deccan Education Society (1884)** along with his associate Gopal Ganesh Agarkar and others. Hence, **statement 2 is correct**.
 - Popularised the Ganesh Chaturthi festival in the Maharashtra region.
 - Propounded the celebration of Shiv Jayanti on the birth anniversary of the monarch Chhatrapati Shivaji.
 - Devout Hindu and used Hindu scriptures to rouse people to fight oppression.

QUESTION 64:

With reference to Electronic Vaccine Intelligence Network (eVIN), consider the following statements:



1. Its objective is to augment the Universal Immunization Programme.
2. It is implemented by the WHO in India.
3. It monitors the supply chain of Covid response material.

Which of the above statements is/are correct?

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

Answer: (b)

Explanation

- eVIN aims to support the Government of India's Universal Immunization Programme by providing real-time information on vaccine stocks and flows, and storage temperatures across all cold chain points in these states. **Hence, statement 1 is correct.**
- It is an indigenous technology platform digitizes vaccine stocks and monitors the temperature of the cold chain through a smartphone application. **Hence, statement 2 is not correct.**
- It is being used by the State/UT governments in India to monitor the supply chain of Covid response material. **Hence, statement 3 is correct.**

QUESTION 65:

The 'Demo-2 mission' was recently seen in the news, was launched by?

- (a) National Aeronautics and Space Administration (NASA)
- (b) Indian Space Research Organisation (ISRO)
- (c) China National Space Administration (CNSA)
- (d) European Space Agency (ESA)

Answer: (a)

Explanation

- **National Aeronautics and Space Administration (NASA)** and **SpaceX** have launched the Demo-2 mission on 30th May, 2020 from the Kennedy Space Center in Cape Canaveral, Florida, USA.
- Demo-2 Mission will send astronauts to the International Space Station (ISS). This was a demonstration mission to show SpaceX's ability to ferry astronauts to the space station and back safely. **Hence, option A is correct.**

QUESTION 66:

With reference to Cooperatives in India, consider the following statements:

1. The term Cooperatives was added in the Constitution through the 97th Constitutional Amendment Act in 2011.
2. It is a fundamental right of citizens to form cooperatives.

Which of the statements given above is/are correct ?

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

Answer: (c)

Explanation

Provisions of Indian Constitution related to Cooperatives:

- The Constitution (**97th Amendment**) Act, 2011 added a new Part IXB right after Part IXA (Municipals) regarding the cooperatives working in India. **Hence, statement 1 is correct.**
- The word “cooperatives” was added after “unions and associations” in Article 19(1)(c) under Part III of the Constitution. This enables all the citizens to form cooperatives by giving it the status of fundamental right of citizens. **Hence, statement 2 is correct.**
- A new Article 43B was added in the Directive Principles of State Policy (Part IV) regarding the “promotion of cooperative societies”.

QUESTION 67:

Which of the following countries shares the land boundary with Lebanon?

1. Syria
2. Israel
3. Cyprus
4. Jordan

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 and 4 only
- (d) 1, 2 and 3

Answer: (a)

Explanation



- Recently, a massive explosion took place in Beirut, capital of Lebanon.
- Lebanon is a country in Western Asia, **bordered by Syria to the north and east and Israel to the south**, while **Cyprus lies west across the Mediterranean Sea**. It does not share a border with Jordan. **Hence, option A is correct.**

QUESTION 68:

With reference to Globally Important Agricultural Heritage Systems (GIAHS), consider the following statements:

1. GIAHS was started by the FAO to safeguard and support the world's agricultural heritage systems.
2. Kuttanad below-sea level farming system in India has been recognised as a GIAHS.
3. There are two recognised GIAHS sites in India.

Which of the statements given above is/are correct ?

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

Answer: (a)

Explanation

- **Globally Important Agricultural Heritage Systems (GIAHS)** was started by the FAO to safeguard and support the world's agricultural heritage systems. **Hence, statement 1 is correct.**
 - GIAHS are outstanding landscapes of aesthetic beauty that combine agricultural biodiversity, resilient ecosystems and a valuable cultural heritage.
- The **Kuttanad below-sea level farming system** has been recognised by the Food and Agriculture Organisation of the United Nations (FAO) as a Globally Important Agricultural Heritage System (GIAHS). **Hence, statement 2 is correct.**
 - It is unique as it practices rice cultivation below sea level.
- There are **three recognised GIAHS sites in India.**
 - Pampore Saffron Heritage of Kashmir.
 - Koraput Traditional Agriculture of Odisha.
 - Kuttanad Below Sea Level Farming System of Kerala. **Hence, statement 3 is not correct.**

QUESTION 69:

'Bru community' was recently in the news, in which geographical area?

- (a) Nilgiri
- (b) Lushai hills
- (c) Satpura hills
- (d) Andaman and Nicobar islands

Answer: (b)

Explanation

- **Bru or Reang** is a community indigenous to Northeast India, living mostly in Tripura, Mizoram and Assam. In Tripura, they are recognised as a Particularly Vulnerable Tribal Group.
- In **Mizoram (lushai hills)**, they have been targeted by groups that do not consider them indigenous to the state. In 1997, following ethnic clashes, nearly 37,000 Brus fled Mamit, Kolasib and Lunglei districts of Mizoram and were accommodated in relief camps in Tripura.

QUESTION 70:

According to the India Meteorological Department, Long Period Average refers to average rainfall recorded during?

- (a) April to July

- (b) April to August
- (c) June to August
- (d) June to September

Answer: (d)

Explanation

- According to the **India Meteorological Department (IMD)** rainfall in the “second half of the monsoon” is likely to be 104% of the Long Period Average (LPA).
- This falls within the “normal” range of rainfall.
- **Long Period Average (LPA):** It is the average rainfall recorded during the months from **June to September**, calculated during the 50-year period, and is kept as a benchmark while forecasting the quantitative rainfall for the monsoon season every year. **Hence, option D is correct.**

QUESTION 71:

Which of the following is a positive sign of economic recovery in India:

1. Increase in Goods and Services Tax (GST) collections
2. Increase in railway freight traffic
3. Decrease in petrol consumption
4. Increase in power demand

Select the correct answer using the code given below:

- (a) 1 and 3 only
- (b) 3 and 4 only
- (c) 1, 2 and 4
- (d) 1, 2, 3 and 4

Answer: (c)

Explanation

- Recently, the **Confederation of Indian Industries (CII)** has said that there are **early signs of a V-shaped recovery** in the economy in the immediate aftermath of the lockdown due to Covid-19 pandemic.
- The positive recovery has been predicted based on the increase in Goods and Services Tax (GST) collections, railway freight traffic, petrol consumption, peak power demand and electronic toll collections.
 - The **Decrease in petrol consumption is a sign of slowing down of the economy** as it leads to decline in overall consumption. **Hence, option C is correct.**
- There are also expectations of a **bumper harvest** in the wake of a normal monsoon.

QUESTION 72:

With reference to Tiger census report 2018, consider the following statements:

1. Madhya Pradesh has the highest number of tigers.
2. There has been a decline in tiger population in Chhattisgarh.

Which of the statements given above is/are correct?

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

Answer: (c)

Explanation

- According to Tiger Census 2018 Madhya Pradesh has the highest number of tigers at 526, closely followed by Karnataka (524) and Uttarakhand (442). **Hence, statement 1 is correct.**
- The Northeast has suffered losses in population. Further, the number of tigers in Chhattisgarh, Jharkhand and Odisha has steadily declined, which is a matter of concern.
- Chhattisgarh is the only state out of the 20 tiger-bearing states where the 2018- census counted 19 tigers, significantly fewer than the 46 of 2014. **Hence, statement 2 is correct.**
 - Out of 50 tiger reserves in the country, three reserves - Mizoram's Dampa reserve, Bengal's Buxa reserve and Jharkhand's Palamau reserve - have no tigers left.

QUESTION 73:

Consider the following statements:

1. Hepatitis is also caused due to the antibodies produced in a human body.
2. India has been declared free from hepatitis B in 2018.

Which of the statements given above is/are correct ?

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

Answer: (a)

Explanation

- The word hepatitis refers to any **inflammation of the liver** — the irritation or swelling of the liver cells from any cause.
- It can be acute (inflammation of the liver that presents with sickness — jaundice, fever, vomiting) or chronic (inflammation of the liver that lasts more than six months, but essentially showing no symptoms).
- Usually caused by a group of viruses known as the **“hepatotropic”** (liver directed) viruses, including A, B, C, D and E.
 - Other viruses may also cause it, such as the varicella virus that causes chicken pox. SARS-CoV-2, the virus causing Covid-19 may injure the liver, too.
 - Other causes include drugs and alcohol abuse, fat buildup in the liver (fatty liver hepatitis) or an **autoimmune process** in which a **person's body makes antibodies that attack the liver** (autoimmune hepatitis). **Hence, statement 1 is correct.**
- In India, 40 million people are chronically infected with Hepatitis B virus and 6 to 12 million with Hepatitis C virus.
 - In 2018, the government launched the **National Viral Hepatitis Program**. The program is the largest program for Hepatitis B and C diagnosis and treatment in the world. India is not declared free from hepatitis B in 2018. **Hence, statement 2 is not correct.**
 - In 2016, many governments across the globe adopted WHO's global strategy which aims at eliminating viral hepatitis by 2030.
 - 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.

QUESTION 74:

With reference to Foreign Direct Investment (FDI), consider the following statements:

1. FDI does not provide the investor with control over the business.

2. The 100% FDI is permitted under automatic route in the aviation sector.

Which of the statements given above is/are correct ?

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

Answer: (d)

Explanation

- **Foreign Direct Investment (FDI)** is an investment made by a firm or individual in one country into business interests located in another country.
 - Generally, FDI takes place when an investor establishes **foreign business operations or acquires foreign** business assets, including **establishing ownership or controlling interest in a foreign company. Hence, statement 1 is not correct.**
 - It is different from **Foreign Portfolio Investment (FPI)** where the foreign entity merely buys equity shares of a company. **FPI does not provide the investor with control over the business.**
- Routes through which India gets FDI:
 - **Automatic Route:** In this, the foreign entity does not require the prior approval of the government or the RBI.
 - **Government route:** In this, the foreign entity has to take the approval of the government.
- As per the present FDI Policy, 100% FDI is permitted in scheduled Air Transport Service/Domestic Scheduled Passenger Airline (**Automatic upto 49% and Government route beyond 49%**).
 - However, for NRIs 100% FDI is permitted under automatic route in Scheduled Air Transport Service/Domestic Scheduled Passenger Airline. **Hence, statement 2 is not correct.**

QUESTION 75:

With reference to Anti-defection law, consider the following statements

1. The anti-defection law is not applied when 2/3rd members of the legislature party decide to merge with another party.
2. The Vice-president is the final authority to decide questions of disqualification of a member of the Upper House.

Which of the above statements is/are correct?

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

Answer: (c)

Explanation

- The **91st Constitutional Amendment of 2003**, pertaining to Anti-Defection law, provided an exception that disqualification on grounds of defection does not apply, if 2/3rd of the members of the legislature party decide to merge with another party. **Hence, statement 1 is correct.**
- The Chairman/Speaker has been given the final authority to decide questions of disqualification of a member of a House under the provisions of the Tenth schedule to the constitution.
 - In case of Rajya Sabha (Upper House), Vice-president is the chairman. Thus, he/she is the final authority regarding matters of defection. **Hence, statement 2 is correct.**

QUESTION 76:

Consider the following statements:

1. Sustainable Development Goals(SDGs) does not deal with the issues of forced labour and modern slavery.
2. India has not ratified the International Labour Organisation's Forced Labour Protocol.

Which of the statements given above is/are correct ?

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

Answer: (b)

Explanation

- **Sustainable Development Goals(SDGs) - Target 8.7** deals with forced labour and modern slavery.
 - **Target 8.7:** Take immediate and effective measures to **eradicate forced labour, end modern slavery** and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms."
 - **Hence, statement 1 is not correct.**
- India, like all other Commonwealth countries in Asia, **had not ratified the International Labour Organisation's 2011 Domestic Workers Convention or the 2014 Forced Labour Protocol.**
 - The 2014 Forced Labour Protocol obligates state parties to provide protection and appropriate remedies, including compensation, to victims of forced labour and to sanction the perpetrators of forced labour.
 - It also obligates state parties to **develop a national policy** and plan of action for the effective and sustained suppression of forced or compulsory labour.
 - **Hence, statement 2 is correct.**

QUESTION 77:

With reference to initiatives under Atal Innovation Mission, consider the following statements:

1. The ARISE programme aims to stimulate innovation in Higher education institutions.
2. AIM-iCREST has been launched in collaboration with the International Labour Organization.

Which of the statements given above is/are correct?

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

Answer: (d)

Explanation

- **Atal Innovation Mission (AIM)** is Government of India's flagship initiative to promote a culture of innovation and entrepreneurship in the country. Major Initiatives:
 - **Atal Tinkering Labs:** Creating problem solving mindset across schools in India.
 - **Atal Incubation Centers:** Fostering world class startups and adding a new dimension to the incubator model.
 - **Mentor India Campaign:** A national mentor network in collaboration with the public sector,



corporates and institutions, to support all the initiatives of the mission.

- **Atal Community Innovation Center:** To stimulate community centric innovation and ideas in the unserved /underserved regions of the country including Tier 2 and Tier 3 cities.
- **Atal Research and Innovation for Small Enterprises (ARISE):** To stimulate innovation and research in the MSME industry. **Hence, statement 1 is not correct.**
- **AIM-iCREST** is an Incubator Capabilities Enhancement program for a Robust Ecosystem focused on creating high performing Startups.
- For **AIM-iCREST**, AIM has collaborated with Bill & Melinda Gates Foundation and Wadhvani Foundation - organizations that can lend credible support and expertise in the entrepreneurship and innovation space. **Hence, statement 2 is not correct.**

QUESTION 78:

The 'AJO-Neo', was recently seen in the news, is?

- (a) A nano based coating material used to improve durability.
- (b) A community driven platform used for leveraging blockchain technology.
- (c) A non-contact device used for measuring neonatal bilirubin level.
- (d) A large size asteroid discovered between the orbits of Earth and Moon.

Answer: (c)

Explanation

- The researchers from the S.N.Bose National Centre For Basic Sciences (SNBNCBS), Kolkata have developed a device called **"AJO-Neo"** to measure neonatal bilirubin level.
- AJO-Neo is a **non-contact and non-invasive spectrometry-based technique** for measurement of neonatal bilirubin level without limitations of other available bilirubin meters. **Hence, option C is correct.**
 - Bilirubin is a yellowish substance in the blood. It forms after red blood cells break down, and it travels through liver, gallbladder, and digestive tract before being excreted.
 - It is a necessary process in the body's clearance of waste products that arise from the destruction of aged or abnormal red blood cells.

QUESTION 79:

Which of the following best describes the term 'tokamak'?

- (a) It is a robotic wheeled vehicle designed to look for signs of life on Mars.
- (b) It is a web based portal to facilitate the monitoring of electric grids.
- (c) It is the latest nuclear submarine launched by Indian Navy.
- (d) It is an experimental machine designed to harness fusion energy.

Answer: (d)

Explanation

- The **International Thermonuclear Experimental Reactor (ITER)** is the world's largest tokamak to prove the feasibility of fusion as a large-scale and carbon-free source of energy.
- The tokamak is an **experimental machine designed to harness the energy of fusion**. Inside a tokamak, the energy produced through the fusion of atoms is absorbed as heat in the walls of the vessel. Like a conventional power plant, a fusion power plant uses this heat to produce steam and then electricity by way of turbines and generators. **Hence, option D is correct.**

QUESTION 80:

Which of the following agreements are related to WTO?

1. Agreement on Agriculture
2. Information Technology Agreement
3. TRIPS Agreement

Select the correct answer using the code given below:

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

Answer: (d)

Explanation

- The **Agreement on Agriculture (AoA)** is an international treaty of the **World Trade Organization**. It was negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade and entered into force with the establishment of the WTO on January 1, 1995.
 - The agreement is aimed at reforming global agricultural trade and making it fairer.
 - The Agreement on Agriculture consists of three pillars—domestic support, market access, and export subsidies.
- **Information Technology Agreement** is a plurilateral agreement enforced by the WTO and concluded by 29 participants in the Ministerial Declaration on Trade in Information Technology Products at Singapore in 1996.
 - It seeks to accelerate and deepen the reduction of trade barriers for the critically important Information and Communication Technology industry.
- The **TRIPS Agreement**, which came into effect on 1 January 1995, is to date the most comprehensive multilateral agreement on intellectual property.
 - The areas of intellectual property that it covers are copyrights, trademarks, geographical indications, industrial designs; patents and protection of new varieties of plants and trade secrets.
- **Hence, option D is correct.**

QUESTION 81:

Consider the following statements:

1. Fiscal deficit refers to the shortfall in a government's income compared with its spending.
2. A high fiscal deficit is always harmful for the economy.
3. The Fiscal Responsibility and Budget Management Act provides for the fiscal deficit to be upto 3% of the GDP by March 2021.

Which of the statements given above is/are correct ?

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

Answer: (c)

Explanation

- The government describes fiscal deficit of India as “the excess of total disbursements from the Consolidated Fund of India, excluding repayment of the debt, over total receipts into the Fund (excluding the debt receipts) during a financial year”.



- In simple words, it is a **shortfall in a government's income** compared with its spending. **Hence, statement 1 is correct.**
 - It means the government that has a fiscal deficit is spending beyond its means.
- The government meets the fiscal deficit by borrowing money. In a way, the total borrowing requirements of the government in a financial year is equal to the fiscal deficit in that year.
- **A high fiscal deficit can also be good for the economy** if the money spent goes into the creation of productive assets (Capital expenditure) like highways, roads, ports and airports that boost economic growth and result in job creation. **Hence, statement 2 is not correct.**
- The **Fiscal Responsibility and Budget Management Act, 2003** provides that the Centre should take appropriate measures to limit the fiscal deficit upto 3% of the GDP by 31st March, 2021. **Hence, statement 3 is correct.**

QUESTION 82:

Consider the following statements with reference to Index of Industrial Production(IIP):

1. The IIP is an index that shows the growth rates in different industry groups of the economy in a fixed period of time.
2. It is compiled and published annually by the National Statistical Office (NSO).
3. Current Base Year for IIP calculation is 2004-2005.

Which of the statements given above is/are correct?

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

Answer: (a)

Explanation

- **The Index of Industrial Production (IIP)** is an index that shows the growth rates in different industry groups of the economy in a fixed period of time. **Hence, statement 1 is correct.**
- It is compiled and published **monthly** by the National Statistical Office (NSO), Ministry of Statistics and Programme Implementation. **Hence, statement 2 is not correct.**
- Base Year for IIP calculation is **2011-2012**. **Hence, statement 3 is not correct.**
- IIP is a composite indicator that measures the growth rate of industry groups classified under:
 - Broad sectors, namely, Mining, Manufacturing, and Electricity.
 - Use-based sectors, namely Basic Goods, Capital Goods, and Intermediate Goods.
 - The eight core sector industries represent about 40% of the weight of items that are included in the IIP.
 - The eight core industries in decreasing order of their weightage: Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilizers.

QUESTION 83:

With reference to the 'Finance Commission', consider the following statements:

1. It is a statutory body that determines the method for distributing the tax proceeds between the Centre and states.
2. The Parliament is required to constitute a Finance Commission at an interval of five years.

Which of the statements given above is/are correct?

- (a) 1 only

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

Answer: (d)

Explanation

- The Finance Commission is a **constitutional body**, that determines the method and formula for distributing the tax proceeds between the Centre and states, and among the states as per the constitutional arrangement and present requirements. **Hence, statement 1 is not correct.**
- Under **Article 280** of the Constitution, **the President of India** is required to constitute a Finance Commission at an interval of five years or earlier. **Hence, statement 2 is not correct.**
- The 15th Finance Commission was constituted by the President of India in November 2017, under the chairmanship of NK Singh. Its recommendations will cover a period of five years from April 2020 to March 2025.

QUESTION 84:

With reference to 'Gramodyog Vikas Yojana', consider the following statements:

1. It is launched by the Ministry of Micro, Small and Medium Enterprises.
2. Khadi and Village Industries Commission (KVIC) is entrusted with providing training and assistance.

Which of the statements given above is/are correct ?

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

Answer: (c)

Explanation

- The **Ministry of Micro, Small and Medium Enterprises** has approved a programme for the benefit of artisans involved in manufacturing of Agarbatti under the Gramodyog Vikas Yojana. **Hence, statement 1 is correct.**
- **Khadi and Village Industries Commission (KVIC)** will provide **training and assistance** as well as **work and raw material to artisans** working in this area, in tie-up with Agarbatti manufacturing machines. **Hence, statement 2 is correct.**
 - **KVIC** is a **statutory body** established by Khadi And Village Industries Commission Act, 1956. It is an apex organisation under the **Ministry of Micro, Small and Medium Enterprises** charged with the planning, promotion, organisation and implementation of programs for the development of Khadi and other village industries in the rural areas

QUESTION 85:

'Operation Breathing Space' is a joint collaboration mission between which of the following two countries?

- (a) India and Sri Lanka
- (b) India and U.S
- (c) India and Bhutan
- (d) India and Israel

Answer: (d)

Explanation

- In a mission code-named “Operation Breathing Space”, a team of top **Israeli** defence scientists and health experts will collaborate with **Indian counterparts** to develop, **test and deploy rapid diagnostic tests for Covid-19** that aims to provide results in under a minute. **Hence, option D is correct.**

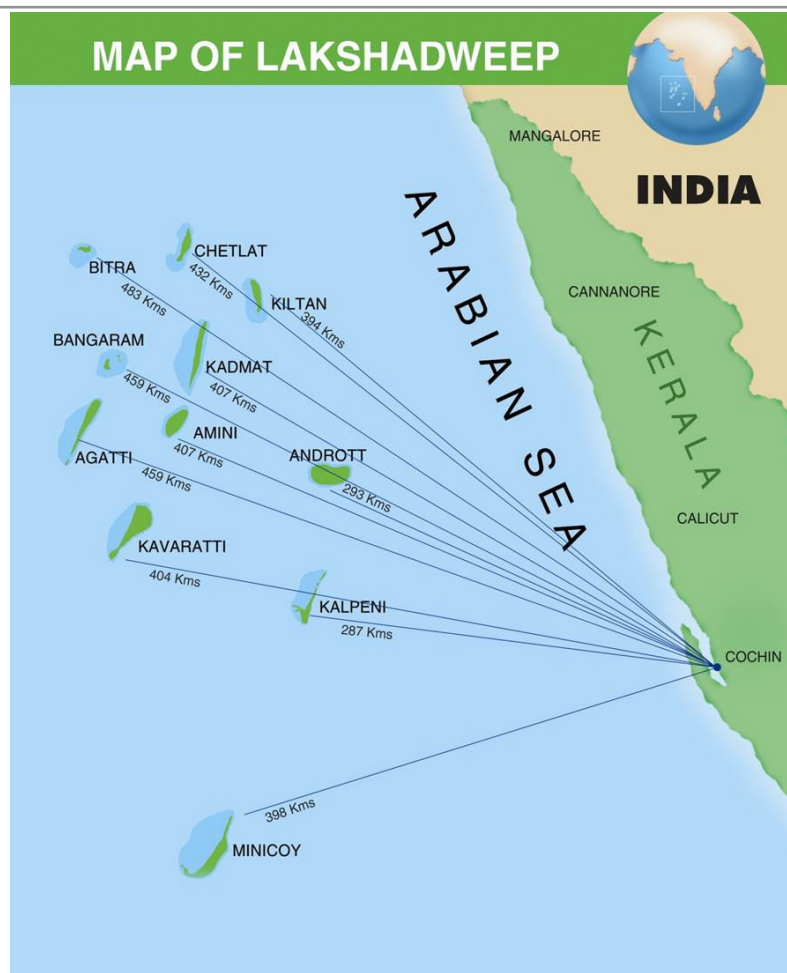
QUESTION 86:

Which of the following Islands of the Lakshadweep group is located nearest to the Kochi (Kerala) coast?

- (a) Minicoy
- (b) Kavaratti
- (c) Agatti
- (d) Andrott

Answer: (d)

Explanation



- Lakshadweep is a tropical archipelago of 36 atolls and coral reefs in the Laccadive Sea, off the coast of Kerala. The name Lakshadweep in Malayalam and Sanskrit means ‘a hundred thousand islands’. It is a Union Territory and the capital is Kavaratti.
- **Minicoy Island** is the southern-most island of Lakshadweep, situated at a distance of **398 km (215 nautical miles)** south-west of Kochi.
- **Kavaratti Island** is the headquarters of the Union Territory of Lakshadweep. This island is at a distance of **404 km (218 nautical miles)** from Kochi.
- **Agatti Island** is at a distance of **459 km (248 nautical miles)** from Kochi and is located to the west

of Kavaratti Island.

- **Andrott Island** is the largest island with an area of 4.90 sq km, length of 4.66 km and a maximum width of 1.43 km. It lies in the east-west direction. It is **293 km (158 nautical miles)** away from Kochi. **Andrott Island is nearest to the Kochi coast. Hence, option D is correct.**

QUESTION 87:

Which of the following countries recently engaged in Quadrilateral Dialogue to contain the Covid-19 pandemic, boost economic recovery and the Belt and Road Initiative (BRI)?

1. China
2. Afghanistan
3. India
4. Nepal
5. Pakistan
6. Bangladesh

Select the answer using the code below:

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

Answer: (a)

Explanation

- Recently, **China** convened a quadrilateral dialogue with the Foreign Ministers of **Afghanistan, Nepal and Pakistan**.
- China proposed a four-point plan to contain the **Covid-19 pandemic, boost economic recovery and resumption of the Belt and Road Initiative (BRI)** infrastructure projects.
- China is making concrete strategic inroads in South Asia which will necessarily impact India's interests. Experts are of the opinion that attempting to rope in three members of the South Asian Association for Regional Cooperation (SAARC) grouping, without including India, is a provocative move by China and should be seen as a message.

QUESTION 88:

Which of the following Journals were started by Mahatma Gandhi ?

1. Young India
2. Indian Opinion
3. Navajivan

Select the correct answer using the code given below:

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

Answer: (d)

Explanation

Mahatma Gandhi's Works:

- **Journals: Young India, Navajivan, Harijan, Harijan Bandhu, Indian Opinion I and II, etc. Hence, option D is correct.**
- Books: Hind Swaraj, Satyagraha in South Africa, The Story of My Experiments with Truth (autobiography), etc.
- Foundations: Natal Indian Congress (South Africa, 1894), Phoenix Settlement (South Africa, 1904), Satyagraha Ashram (Ahmedabad, 1915), Harijan Sevak Sangh (1932), Sevagram Ashram (Wardha, 1936), etc.

QUESTION 89:

Cataracts in eyes are formed due to break down and clumping of which of the following in the lens of the eyes?

- (a) Protein
- (b) Fat
- (c) Lipid
- (d) Carbohydrate

Answer: (a)

Explanation

- Cataract is a major form of blindness that occurs when the structure of crystallin **proteins** that make up the lens in human eyes deteriorates. **Hence, option A is correct.**
- Such deterioration causes damaged or disorganised proteins to aggregate and form a milky blue or brown layer, which ultimately affects lens transparency.
- As with aging and under various conditions, the lens protein crystallin aggregates to form opaque structures in the eye lens, which impairs vision and causes cataract.

QUESTION 90:

The 'Galapagos Archipelago' known for its high congregation of marine species comes under the influence of ?

- (a) Humboldt Current
- (b) Agulhas Current
- (c) Benguela Current
- (d) Norwegian Current

Answer: (a)

Explanation

- The **Galapagos Islands**, spread over almost 60,000 sq km, are a part of **Ecuador**.
- These are located in the Pacific Ocean around 1,000 km away from the South American continent.
- The **Galapagos Islands comes under the influence of cold Humboldt Current** brings in nutrients that lead to a high congregation of marine species. **Hence, option A is correct.**
 - The Humboldt Current, also called the **Peru Current**, is a cold, low-salinity ocean current that flows north along the western coast of South America.
 - The Humboldt Current is a highly productive ecosystem. It is the most productive eastern boundary current system. It accounts for roughly 18-20% of the total worldwide marine fish catch.
- Ecuador made a part of the Galapagos a wildlife sanctuary in 1935, and the sanctuary became the Galapagos National Park in 1959.
- In 1978, the islands became UNESCO's first World Heritage Site.

The Humboldt Current



QUESTION 91:

Which of the following statements is/are not correct regarding 'Vitamin D'?

1. It is produced endogenously in the body by ultraviolet rays from sunlight.
2. It maintains adequate calcium and phosphate concentrations in blood.
3. The deficiency of vitamin D is only limited to polar regions.

Select the correct answer using the code given below:

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

Answer: (c)

Explanation

- Vitamin D is a fat-soluble vitamin which is naturally present in very few foods like fatty fish, and fish liver oils, beef liver, cheese, and egg yolks.
- It is also produced **endogenously when ultraviolet rays from sunlight** strike the skin and trigger vitamin D synthesis. **Hence, statement 1 is correct.**
 - The sunlight triggers a chemical reaction to a cholesterol-based molecule, and converts it into

calcidiol in the liver and into calcitriol in the kidney.

- These molecules technically called 25-OHD are physiologically active.
- Vitamin D maintains adequate calcium and phosphate concentrations in blood. It prevents weakening of bones. It has other roles in the body, including cell growth, neuromuscular and immune function, and reduction of inflammation. **Hence, statement 2 is correct.**
- India has a large population suffering from vitamin D deficiency among the public irrespective of their location (urban or rural), age or gender, or whether they are poor or even rich.
 - This is despite India being a tropical nation getting abundant sunshine, which is a precursor to Vitamin D formation in the body. **Hence, statement 3 is not correct.**
- **Effects of Deficiency:**
 - Rickets in children and osteomalacia (softening of bones) in adults.
 - Bones can become thin, brittle, or misshapen (Effects of deficiency).
 - Vitamin D deficiency can cause rickets in children and osteomalacia in adults.
 - Bones can become thin, brittle, or misshapen (osteoporosis) Vitamin D.

QUESTION 92:

With reference to the Emergency Credit Line Guarantee Scheme (ECLGS), consider the following statements:

1. It covers the loans given to larger firms and self-employed people.
2. The RBI provides the guarantee to the loans given under ECLGS scheme.

Which of the statements given above is/are correct ?

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

Answer: (a)

Explanation

- The government has expanded its Emergency Credit Line Guarantee Scheme (ECLGS) to cover loans given to **larger firms as well as to self-employed people and professionals** who have taken loans for business purposes. **Hence, statement 1 is correct.**
 - ECLGS was rolled out in May 2020 as part of the Centre's Aatmanirbhar package in response to the Covid-19 crisis.
 - The objective was to support small businesses struggling to meet their operational liabilities due to the imposition of a nationwide lockdown.
- The ECLGS provides for the Guaranteed Emergency Credit Line (GECL) facility. The GECL is a loan for which 100% guarantee is provided by the **National Credit Guarantee Trustee Company (NCGTC)** to Member Lending Institutions (MLIs) - banks, financial institutions and Non-Banking Financial Companies (NBFCs). **Hence, statement 2 is not correct.**
 - NCGTC is a private limited company incorporated under the Companies Act, 1956 in 2014, established by the Department of Financial Services, Ministry of Finance, as a wholly owned company of the Government of India, to act as a common trustee company for multiple credit guarantee funds.

QUESTION 93:

With reference to Dhole (wild carnivorous animal), consider the following statements

1. It is founded in the Himalyan regions only.

2. It is listed as an endangered species in the IUCN's Red List.
3. It acts as apex predators in forest ecosystems.

Which of the above statements is/are correct?

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

Answer: (c)

Explanation

- **Dhole (Cuon alpinus)** is a wild carnivorous animal belonging to the canine family, found in Central, South, East Asia, and Southeast Asia. They are also known as **Asian wild dogs**.
 - In India it is found in **Karnataka, Maharashtra, Madhya Pradesh** and other central Indian States. **Hence, statement 1 is not correct.**
- It is placed under the International Union for Conservation of Nature's (IUCN) '**endangered**' category.
 - Apart from this, the species is protected under Schedule 2 of the Wildlife Protection Act 1972 and under Appendix 2 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). **Hence, statement 2 is correct.**
- Dholes play an important role as apex predators in forest ecosystems. In India, the first conservation breeding centre for dhole was built at the Indira Gandhi Zoological Park (IGZP) in 2014. **Hence, statement 3 is correct.**

QUESTION 94:

Consider the following statements regarding food security schemes/acts:

1. The National Food Security Act, 2013 legally entitles only rural populations to receive subsidized food grains.
2. One Nation-One Ration Card Scheme seeks to provide portability of food security benefits all across the country.

Which of the statements given above is/are correct ?

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

Answer: (b)

Explanation

- The enactment of the **National Food Security Act, (NFSA) 2013** marks a paradigm shift in the approach to food security from welfare to the rights-based approach.
- The Act legally entitles up to **75% of the rural population and 50% of the urban population** to receive subsidized foodgrains under the Targeted Public Distribution System. **Hence, statement 1 is not correct.**
- **One Nation-One Ration Card Scheme (ONORC)** was started as an inter-State portability of ration cards in 2019.
- It allows the migratory **National Food Security Act (NFSA), 2013** beneficiaries to lift their entitled quota of food grains from any Fair Price Shop (FPS) of their choice anywhere in the country. **Hence, statement 2 is correct.**
 - The poor migrant workers will be able to buy subsidised rice and wheat from any ration shop in



the country but for that their ration cards must be linked to Aadhaar.

- It was started as an inter-State portability of ration cards in 2019.
- Now a total of 24 States/UTs are connected under the ONORC scheme.
- The remaining states/UTs are targeted to be integrated into the scheme by March 2021.

QUESTION 95:

Which of the following themes of circuits are included in Swadesh Darshan Scheme?

1. Himalayan Circuit
2. Tirthankara Circuit
3. Coastal Circuit
4. Sufi Circuit

Select the correct answer using the code given below:

- (a) 1, 2 and 4 only
- (b) 1, 2 and 3 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

Answer: (d)

Explanation

- **Swadesh Darshan Scheme** was launched in 2014-15 for integrated development of theme-based tourist circuits in the country.
 - Currently, there are 15 theme based circuits - Buddhist, Coastal, Desert, Eco, Heritage, Himalayan, Krishna, North-east, Ramayana, Rural, Spiritual, Sufi, Tirthankara, Tribal and Wildlife. **Hence, option D is correct.**
 - Theme-based tourist circuits are developed on the principles of high tourist value, competitiveness and sustainability in an integrated manner to enrich tourist experience and enhance employment opportunities.
- Under the scheme, the **Ministry of Tourism** provides Central Financial Assistance (CFA) to State Governments/Union Territory Administrations for infrastructure development of circuits.
- This scheme is envisioned to synergise with other schemes like **Swachh Bharat Abhiyan, Skill India, Make in India**, etc. with the idea of positioning the tourism sector as a major engine for job creation, driving force for economic growth, building synergy with various sectors to enable tourism to realise its potential.

QUESTION 96:

Consider the following statements with reference to Inflation targeting by Reserve Bank of India (RBI):

1. Determining targets for consumer price index (CPI) is part of Monetary Policy Committee (MPC) of RBI.
2. Inflation target is set by the RBI on an annual basis.

Which of the statements given above is/are correct ?

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

Answer: (a)

Explanation

- The Reserve Bank of India (RBI) through the Monetary Policy Committee (MPC) has set the objective of achieving the target for consumer price index (CPI) inflation of 4% within a band of +/- 2% (**which implies a range of 2-6%**), while supporting growth. **Hence, statement 1 is correct.**
- In May 2016, the Reserve Bank of India (RBI) Act, 1934 was amended to provide a statutory basis for the implementation of the flexible inflation targeting framework.
- The amended RBI Act also provides for the **inflation target to be set by the Government of India, in consultation with the Reserve Bank**, once in every five years. **Hence, statement 2 is not correct.**

QUESTION 97:

Consider the following statements with reference to the 'Tsunami ready programme'?

1. It has been initiated by UNESCO to promote tsunami preparedness through community participation.
2. Odisha is the first state in India to have tsunami ready recognised communities.

Which of the statements given above is/are correct ?

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

Answer: (c)

Explanation

- **Tsunami Ready** is a **community performance-based programme** initiated by the **Intergovernmental Oceanographic Commission (IOC) of UNESCO** to promote tsunami preparedness through active collaboration of public, community leaders, and national and local emergency management agencies. **Hence, statement 1 is correct.** The main objective of this programme is
 - To improve the coastal community's preparedness for tsunami emergencies.
 - To minimize the loss of life and property and to ensure a structural.
 - Systematic approach in building community preparedness through fulfilling the best-practice indicators set by the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) of UNESCO-IOC.
- The **Intergovernmental Oceanographic Commission (IOC) of UNESCO** (also known as UNESCO-IOC) has approved the recognition of two communities of Odisha viz., Venkatraipur and Noliasahi as Tsunami Ready Communities.
 - With this recognition, India has become the first country in the Indian Ocean Region to achieve the honor from the UNESCO-IOC.
 - Odisha is the first state in India to have such recognised communities.
 - **Hence, statement 2 is correct.**

QUESTION 98:

With reference to United Nations Human Rights Council (UNHRC), consider the following statements:

1. The membership of UNHRC is decided through voting in the General Assembly.
2. India has never got the membership of UNHRC.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2

(d) Neither 1 nor 2

Answer: (a)

Explanation

- The **United Nations Human Rights Council (UNHRC)** is a United Nations body whose mission is to promote and protect human rights around the world.
- **The members of the General Assembly elect the members who occupy the UNHCR's 47 seats. Hence, statement 1 is correct.**
- The term of each seat is three years, and no member may occupy a seat for more than two consecutive terms. The seats are distributed among the UN's regional groups as follows:
 - 13 for Africa, 13 for Asia, six for Eastern Europe, eight for Latin America and the Caribbean (GRULAC), and seven for the Western European and Others Group (WEOG)
- India has been elected to the United Nations Human Rights Council (UNHRC) for a period of three years beginning January 1, 2019. **India has previously served on the Human Rights Council from 2011-2014 and 2014-2017. Hence, statement 2 is not correct.**

QUESTION 99:

Consider the following statements:

1. Human Leukocyte Antigen genes are usually the same for members of the same family.
2. In an autoimmune disease, the immune system attacks the body's own tissues and organs.
3. Lack of iron and disrupted oxygen supply to the brain are leading causes of Schizophrenia.

Which of the statements given above is/are correct?

- (a) 1 and 3 only
- (b) 2 only
- (c) 1 and 2 only
- (d) 2 and 3 only

Answer: (b)

Explanation

- A body has an immune system, which is a complex network of special cells and organs that defends the body from germs and other foreign invaders.
- In a body suffering from **Autoimmune disease**, the immune system attacks the body's own tissues and organs. **Hence, statement 2 is correct.**
- The body parts that are affected depend on the type of autoimmune disease. There are more than 80 known types. Some of them are Multiple Sclerosis, Leucoderma etc.
- **Schizophrenia's cause is not exactly known yet.** There are various studies among groups of varied ethnicities across the world, on the possible causes and other relations. **Hence, statement 3 is not correct.**
- These studies have shown associations of the disease with different alleles related to the Human Leukocyte Antigen (HLA).
- HLA is an important part of the immune system and related to a group of genes on chromosome six.
- HLA genes are **extremely variable** and are very different across human populations. **Hence, statement 1 is not correct.**

QUESTION 100:

Which of the following mentioned personalities were associated with Bengal School of Painting?

1. Abanindranath Tagore
2. Nandalal Bose
3. Sunayani Devi
4. Raja Ravi Varma

Select the correct answer using the code given below:

- (a) 1 and 4 only
- (b) 2 and 3 only
- (c) 3 and 4 only
- (d) 1, 2 and 3 only

Answer: (d)

Explanation

- **Bengal School of Painting** is also called the **Renaissance School** or the Revivalist School, as it represented the first modern movement of Indian art.
- It rediscovered the glories of Indian art and consciously tried to produce what it considered a truly Indian art inspired by the creations of the past.
- Its leading artist was Abanindranath Tagore and its theoretician was E.B. Havell, the principal of the Calcutta School of Art.
 - Other painters and artists of Bengal school were **Nandalal Bose**, M.A.R Chughtai, **Sunayani Devi** (sister of Abanindranath Tagore), **Manishi Dey**, Mukul Dey, Kalipada Ghoshal, Asit Kumar Haldar, Sudhir Khastgir, Kshitindranath Majumdar, Sughra Rababi.
- Raja Ravi Varma was a celebrated Indian painter and artist. His works are held to be among the best examples of the **fusion of European techniques** with a purely Indian sensibility.
 - In Bengal, the **nationalist artists rejected the art of Ravi Varma as imitative and westernised**, and declared that such a style was unsuitable for depicting the nation's ancient myths and legends.
 - **Hence, option D is correct.**