

Educrat IAS Academy

UPSC Prelims Mock Test: 12

Answer Key

1. Consider the following statements.

1. The amount of nutrients, such as carbon, nitrogen, phosphorus and calcium present in the soil varies in different kinds of ecosystems and also on a seasonal basis.
2. Biogeochemical cycles are always gaseous in nature.
3. Environmental Factors like soil, moisture, pH and temperature regulate the rate of release of nutrients into the atmosphere.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The amount of nutrients, such as carbon, nitrogen, phosphorus, calcium, etc., present in the soil at any given time, is referred to as the standing state. It varies in different kinds of ecosystems and also on a seasonal basis.

The movement of nutrient elements through the various components of an ecosystem is called nutrient cycling. Another name of nutrient cycling is biogeochemical cycles (bio: living organism, geo: rocks, air, water). Nutrient cycles are of two types: (a) gaseous and (b) sedimentary.

Environmental factors, e.g., soil, moisture, pH, temperature, etc., regulate the rate of release of nutrients into the atmosphere.

2. Which of the following are considered as ‘Ecosystem Services’?

1. Pollination of crops
2. Prevention of soil erosion
3. Water purification
4. Decomposition of wastes
5. Climate Regulation

Select the correct code:

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

Correct Answer: D

Explanation: Ecosystem services are the many and varied benefits that humans freely gain from the natural environment and from properly-functioning ecosystems. Collectively, these benefits are becoming known as ‘ecosystem services’, and are often integral to the provisioning of clean drinking water, the decomposition of wastes, and the natural pollination of crops and other plants.

Ecosystem services are grouped into four broad categories: provisioning, such as the production of food and water; regulating, such as the control of climate and disease; supporting, such as nutrient cycles and oxygen production; and cultural, such as spiritual and recreational benefits.

3. Which of the following were the goals of the planning system in India between 1950-1990?

1. Export promotion
2. Industrialization
3. Self-reliance
4. Equity

Select the correct answer code:

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

Correct Answer: A

Explanation: All the above are the goals of the planning system in India between 1950-1990.

4. Consider the following statements about Marginal Standing Facility (MSF).

1. It is the penal rate at which banks can borrow money from the central bank over and above what is available to them through the Liquidity Adjustment Facility (LAF) window.
2. Here banks can borrow funds by pledging government securities within the limits of the statutory liquidity ratio.
3. At present MSF is 1 percent above the repo rate.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Marginal Standing Facility (MSF) was announced by the Reserve Bank of India (RBI) in its Monetary Policy (2011-12) and refers to the penal rate at which banks can borrow money from the central bank over and above what is available to them through the LAF window.

MSF is always fixed above the repo rate. The MSF would be a penal rate for banks and the banks can borrow funds by pledging government securities within the limits of the statutory liquidity ratio.

Current Repo Rate is 4.00% and MSF is 4.25%.

5. India's wetlands have been grouped into different categories. These include

1. Freshwater marshes of the Gangetic Plain
2. The floodplains of the Brahmaputra
3. The lakes and rivers of the montane region of Kashmir and Ladakh
4. Mangrove forests of Andaman and Nicobar Islands

Select the correct answer code:

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

Correct Answer: D

Explanation: The country's wetlands have been grouped into eight categories, viz. (i) the reservoirs of the Deccan Plateau in the south together with the lagoons and other wetlands of the southern west coast; (ii) the vast saline expanses of Rajasthan, Gujarat and the Gulf of Kachchh; (iii) freshwater lakes and reservoirs from Gujarat

eastwards through Rajasthan (Keoladeo National Park) and Madhya Pradesh; (iv) the delta wetlands and lagoons of India's east coast (Chilika Lake); (v) the freshwater marshes of the Gangetic Plain; (vi) the floodplains of the Brahmaputra; the marshes and swamps in the hills of northeast India and the Himalayan

foothills; (vii) the lakes and rivers of the montane region of Kashmir and Ladakh; and (viii) the mangrove forest and other wetlands of the island arcs of the Andaman and Nicobar Islands.

6. Consider the following statements about earthquakes

1. The point where the energy is released is called the epicenter.
2. The energy waves travelling in different directions reach the surface. The point on the surface, nearest to the epicenter, is called hypocenter.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: The release of energy occurs along a fault. A fault is a sharp break in the crustal rocks. Rocks along a fault tend to move in opposite directions. As the overlying rock strata press them, the friction locks them together. However, their tendency to move apart at some point of time overcomes the friction. As a result, the blocks get deformed and eventually, they slide past one another abruptly. This causes a release of energy, and the energy waves travel in all directions. The point where the energy is released is called the focus of an earthquake, alternatively, it is called the hypocenter. The energy waves travelling in different directions reach the surface. The point on the surface, nearest to the focus, is called epicentre. It is the first one to experience the waves. It is a point directly above the focus.

7. Consider the following statements with reference to Dharwar System of rocks.

1. These rocks belong to Pre-Cambrian Period
2. These are mainly igneous in origin
3. These are rich in iron and manganese ores

Which of the above statements is/are correct?

- a) 1, 3
- b) 2 Only
- c) 2, 3
- d) None

Correct Answer: A

Explanation: The Precambrian rocks of India have been classified into two systems, namely the Dharwar system and the Archaean system. The rocks of the Dharwar system are mainly sedimentary in origin, and occur in narrow elongated synclines resting on the gneisses found in Bellary district, Mysore and the Aravalli's of Rajputana. These rocks are enriched in manganese and iron ore which represents a significant resource of these metals.

8. Consider the following statements about Mountains

1. Block Mountains are created when large areas are broken and displaced vertically.
2. The uplifted blocks are termed as graben and the lowered blocks are called horsts.
3. The Aravalli range in India is one of the oldest block mountain systems in the world.

Which of the above statements is/are incorrect?

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

Correct Answer: C

Explanation: There are three types of mountains- Fold Mountains, Block Mountains and the Volcanic Mountains. The Himalayan Mountains and the Alps are young fold mountains with rugged relief and high conical peaks. The Aravali range in India is one of the oldest fold mountain systems in the world. The range has considerably worn down due to the processes of erosion. The Appalachians in North America and the Ural mountains in Russia have rounded features and low elevation. They are very old fold mountains.

Block Mountains are created when large areas are broken and displaced vertically. The uplifted blocks are termed as horsts and the lowered blocks are called graben. The Rhine valley and the Vosges Mountain in Europe are examples of such mountain systems.

9. Consider the following statements about Polar vortex.

1. The polar vortex is a large area of high pressure and cold air surrounding the Earth's North and South poles.
2. The polar vortex spins in the stratosphere.
3. During winter in the Northern Hemisphere, the polar vortex will become less stable, sending cold Arctic air southward over the United States.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The polar vortex is a large area of low pressure and cold air surrounding the Earth's North and South poles. The term vortex refers to the counter-clockwise flow of air that helps keep the colder air close to the poles.

The polar vortex spins in the stratosphere, a layer of the atmosphere 10-48 km above the ground and above the troposphere, where most familiar weather patterns develop.

Often during winter in the Northern Hemisphere, the polar vortex will become less stable and expand, sending cold Arctic air southward over the United States.

10. Consider the following statements about Dew point.

1. Dew point is the temperature at which the atmosphere is saturated with water vapour.
2. The dew point gives an indication of the humidity.
3. A higher dew point means there will be less moisture in the air.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Dew point, the temperature at which the atmosphere is saturated with water vapour, when it is cooled without changing its pressure or vapour content. A given volume of air containing much water vapour has a higher dew point than the same volume of drier air; thus, the dew point gives an indication of the humidity. In meteorology the dew point is applied, for example, in predicting the height of the base of certain types of clouds. A higher dew point means there will be more moisture in the air.

11. Consider the following statements.

1. Examples of areas where primary succession occurs are abandoned farm lands, burned forests and lands that have been flooded.
2. Primary succession is faster than secondary succession.
3. Presence of soil makes the succession faster.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Examples of areas where primary succession occurs are newly cooled lava, bare rock, newly created pond or reservoir. The establishment of a new biotic community is generally slow. Before a biotic community of

diverse organisms can become established, there must be soil. Depending mostly on the climate, it takes natural processes several hundred to several thousand years to produce fertile soil on bare rock.

Secondary succession begins in areas where natural biotic communities have been destroyed such as in abandoned farm lands, burned or cut forests, lands that have been flooded. Since some soil or sediment is present, succession is faster than primary succession.

12. Consider the following statements.

1. The numbers and types of animals and decomposers remains constant during ecological succession.
2. At any time during primary or secondary succession, natural or human induced disturbances always discourage or eliminate some species.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Description of ecological succession usually focuses on changes in vegetation. However, these vegetational changes in turn affect food and shelter for various types of animals. Thus, as succession proceeds, the numbers and types of animals and decomposers also change.

At any time during primary or secondary succession, natural or human induced disturbances (fire, deforestation, etc.), can convert a particular seral stage of succession to an earlier stage. Also such disturbances create new conditions that encourage some species and discourage or eliminate other species.

13. Reserve Tranche is the economic term used in the context with

- a) World Bank
- b) World Trade Organisation
- c) Reserve Bank of India
- d) International Monetary Fund

Correct Answer: D

Explanation: A reserve tranche is a portion of the required quota of currency each member country must provide to the International Monetary Fund (IMF) that can be utilized for its own purposes—without a service fee or economic reform conditions.

14. Reserve bank of India (RBI) can print hard currency to meet fiscal deficit at exceptional circumstances. Why RBI doesn't take such kind of measure?

- a) RBI has to take permission from President to print currencies, which is cumbersome process.
- b) There is no provision in Reserve Bank of India Act, 1935 to print currency to meet deficit.
- c) RBI has to oblige the norms of International Monetary Fund, while meeting deficit.
- d) Printing of hard currency to meet deficit may cause hyperinflation

Correct Answer: D

Explanation: Printing money just for meeting a deficit creates over flow of money into the market creating hyperinflation. So, RBI usually don't take such measure.

15. Which of the following are released by Central Statistics Office (CSO)?

- 1. Index of Industrial Production (IIP)
- 2. CPI(Rural)
- 3. CPI for Industrial workers CPI(IW)
- 4. Wholesale Price Index (WPI)

Select the correct answer code:

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

Correct Answer: B

Explanation: The all India index of Industrial Production (IIP) is compiled and published monthly by the Central Statistical Organization (CSO).

CPI(Urban) and CPI(Rural) are compiled by Central Statistical Organisation.

CPI for Industrial workers CPI(IW) compiled by Labour Bureau.

In India, Office of Economic Advisor (OEA), Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry calculates the Wholesale Price Index (WPI).

16. Consider the following statements regarding Tropical Thorn Forests.

1. Tropical thorn forests occur in the areas which receive rainfall less than 50 cm.
2. In these forests, plants remain leafless for most part of the year.
3. Important species found are mahua, amla, semul and kusum.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Tropical thorn forests occur in the areas which receive rainfall less than 50 cm. These consist of a variety of grasses and shrubs. It includes semi-arid areas of south west Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh and Uttar Pradesh. In these forests, plants remain leafless for most part of the year and give an expression of scrub vegetation.

Important species found are babool, ber, and wild date palm, khair, neem, khejri, palas, etc. Tussocky grass grows upto a height of 2 m as the under growth.

Mahua, amla, semul, kusum are the main species of Moist deciduous forests.

17. Consider the following statements regarding Shale Gas

1. It refers to natural gas stored underground in fine grained sedimentary rocks.
2. Hydraulic fracturing process can be used to extract shale gas.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Shale gas refers to natural gas that is trapped within shale formations. Shales are fine-grained sedimentary rocks that can be rich sources of petroleum and natural gas.

Over the past decade, the combination of horizontal drilling and hydraulic fracturing has allowed access to large volumes of shale gas that were previously uneconomical to produce.

18. Which of the following explains why one side of a mountain usually has more precipitation than the other side?

- a) The land on one side is greener and lushier than the other
- b) Temperatures are higher on one side of a mountain than on the other
- c) The atmosphere gets denser as elevation increases
- d) Mountains force air to rise, and air cools and releases moisture as it rises

Correct Answer: D

Explanation: Mountains also cause air to rise. As the wind blows across a mountain range, air rises and cools and clouds can form on the windward side. This is why windward sides of mountain ranges tend to get heavy precipitation.

When the air sinks on the leeward side of the mountain range, it is usually much drier and warmer than it was to begin with.

19. The Global Environment Facility (GEF) serves as a financial mechanism for which of the following conventions?

- 1. Convention on Biological Diversity (CBD)
- 2. Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES)
- 3. UN Convention to Combat Desertification (UNCCD)
- 4. Montreal Protocol on Substances that Deplete the Ozone Layer

Select the correct code:

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

Correct Answer: B

Explanation: The GEF provides funding to assist developing countries in meeting the objectives of international environmental conventions. The GEF serves as “financial mechanism” to five conventions, which are Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), Stockholm Convention on Persistent Organic Pollutants (POPs), UN Convention to Combat Desertification (UNCCD), and Minamata Convention on Mercury.

20. Consider the following statements regarding Small Finance Banks (SFB's).

1. SFB's cannot lend to big corporates
2. SFB's cannot invest in mutual funds or insurance products.
3. It lends 75% of their total adjusted net bank credit to priority sector.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: What are small finance banks?

The small finance bank will primarily undertake basic banking activities of acceptance of deposits and lending to unserved and underserved sections including small business units, small and marginal farmers, micro and small industries and unorganised sector entities.

What they can do?

- Take small deposits and disburse loans. Distribute mutual funds, insurance products and other simple third-party financial products.
- Lend 75% of their total adjusted net bank credit to priority sector.
- Maximum loan size would be 10% of capital funds to single borrower, 15% to a group.
- Minimum 50% of loans should be up to 25 lakhs.

What they cannot do?

- Lend to big corporates and groups.
- Cannot open branches with prior RBI approval for first five years.
- Other financial activities of the promoter must not mingle with the bank.
- It cannot set up subsidiaries to undertake non-banking financial services activities.
- Cannot be a business correspondent of any bank

21. Consider the following statements about Intertropical Convergence Zone (ITCZ).

1. ITCZ is also known as doldrums.
2. ITCZ is an area encircling the Earth near the Equator, where the northeast and southeast trade winds converge.
3. ITCZ has no effect on tropical cyclone formation.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: The Intertropical Convergence Zone (ITCZ), known by sailors as the doldrums, is the area encircling Earth near the Equator, where the northeast and southeast trade winds converge.

The Inter Tropical Convergence Zone (ITCZ) is a low-pressure zone located at the equator, it is a zone where air tends to ascend. In July, the ITCZ is located around 20°N-25°N latitudes (over the Gangetic plain), sometimes called the monsoon trough. This monsoon trough encourages the development of thermal low over north and northwest India. Due to the shift of ITCZ, the trade winds of the southern hemisphere cross the equator between 40° and 60°E longitudes and start blowing from southwest to northeast due to the Coriolis force. It becomes southwest monsoon. In winter, the ITCZ moves southward, and so the reversal of winds from northeast to south and southwest, takes place. They are called northeast monsoons.

22. Consider the following statements regarding foot loose industries.

1. Foot loose industries can be located in a wide variety of places.
2. They largely depend on component parts which can be obtained anywhere
3. These industries are generally non-polluting industries.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Foot loose industries can be located in a wide variety of places. They are not dependent on any specific raw material, weight losing or otherwise. They largely depend on component parts which can be obtained anywhere.

They produce in small quantity and also employ a small labour force. These are generally not polluting industries. The important factor in their location is accessibility by road network.

23. The composting process is dependent on which of the following micro-organisms?

1. Bacteria
2. Fungi
3. Virus
4. Actinobacteria

Select the correct code:

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

Correct Answer: C

Explanation: With the proper mixture of water, oxygen, carbon, and nitrogen, micro-organisms are able to break down organic matter to produce compost. The composting process is dependent on micro-organisms to break down organic matter into compost. There are many types of microorganisms found in active compost of which the most common are:

- Bacteria- The most numerous of all the microorganisms found in compost. Depending on the phase of composting, mesophilic or thermophilic bacteria may predominate.
- Actinobacteria- Necessary for breaking down paper products such as newspaper, bark, etc.
- Fungi- molds and yeast help break down materials that bacteria cannot, especially lignin in woody material.
- Protozoa- Help consume bacteria, fungi and micro organic particulates.
- Rotifers- Rotifers help control populations of bacteria and small protozoans.

In addition, earthworms not only ingest partly composted material, but also continually re-create aeration and drainage tunnels as they move through the compost.

24. Consider the following statements regarding Tropical Deciduous Forests.

1. They are also called the monsoon forests.
2. Moist deciduous forests are found in the north-eastern states along the foothills of Himalayas and eastern slopes of the Western Ghats.
3. Teak, sal and sandalwood are the main species of Moist deciduous forests.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Tropical Deciduous Forests are the most widespread forests in India. They are also called the monsoon forests. They spread over regions which receive rainfall between 70-200 cm. On the basis of the availability of water, these forests are further divided into moist and dry deciduous.

The Moist deciduous forests are more pronounced in the regions which record rainfall between 100-200 cm. These forests are found in the north-eastern 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.

25. Consider the following statements.

1. Cyclones originate at the area of low pressure, while anticyclones originate at high pressure area.
2. Cyclones direction is anticlockwise in southern hemisphere, while anticyclones take anti-clockwise direction in the same hemisphere.
3. Cyclones brings stability in the atmosphere, while anticyclones bring instability in the prevailing region.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Cyclone brings instability in the atmosphere and its direction is clockwise in southern hemisphere. Anticyclone has opposite features to it.

26. Consider the following statements about Regional Rural Banks (RRBs).

1. Regional Rural Banks were set up on the basis of the recommendations of Vijay Kelkar committee.
2. The larger shareholder of regional rural banks is the Central Government.
3. RRBs are under the ambit of priority sector lending on par with the commercial banks.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Regional Rural Banks (RRBs) are financial institutions which ensure adequate credit for agriculture and other rural sectors. Regional Rural Banks were set up on the basis of the recommendations of the Narasimham Working Group (1975), and after the legislations of the Regional Rural Banks Act, 1976. The first Regional Rural Bank “Prathama Grameen Bank” was set up on October 2, 1975.

The equity of a regional rural bank is held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35.

The RRB’s have also been brought under the ambit of priority sector lending on par with the commercial banks.

27. Consider the following statements regarding Soil Erosion.

1. Sheet erosion takes place on level lands after a heavy shower and is harmful since it removes the finer and more fertile top soil.
2. Gully erosion is common on steep slopes which leads to level lands fit for cultivation.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Water erosion which is more serious and occurs extensively in different parts of India, takes place mainly in the form of sheet and gully erosion. Sheet erosion takes place on level lands after a heavy shower and the soil removal is not easily noticeable. But it is harmful since it removes the finer and more fertile top soil. Gully erosion is common on steep slopes. Gullies deepen with rainfall, cut the agricultural lands into small

fragments and make them unfit for cultivation.

28. With reference to ecosystem service, which of the following are the examples of regulating services?

1. Carbon sequestration
2. Hydrological cycle
3. Ensuring genetic diversity
4. Provision of natural medicines

Select the correct answer code:

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

Correct Answer: A

Explanation: Provision of natural medicines doesn't constitute regulating services of ecosystem.

Regulating services are defined as the benefits obtained from the regulation of ecosystem processes such as climate regulation, natural hazard regulation, water purification and waste management, pollination or pest control.

Provisioning services are the products obtained from ecosystems such as food, fresh water, wood, fiber, genetic resources and medicines.

29. Consider the following statements about Ethanol.

1. In India, ethanol is produced from sugarcane only.
2. It allows the engine to more completely combust the fuel.
3. Ethanol is considered as non-renewable fuel.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Ethanol, an anhydrous ethyl alcohol having chemical formula of C_2H_5OH , can be produced from sugarcane, maize, wheat, etc which are having high starch content. In India, ethanol is mainly produced from sugarcane molasses by fermentation process. Ethanol can be mixed with gasoline to form different blends. As the ethanol molecule contains oxygen, it allows the engine to more completely combust the fuel, resulting in fewer emissions and thereby reducing the occurrence of environmental pollution. Since ethanol is produced from plants that harness the power of the sun, ethanol is also considered as renewable fuel.

30. Which of the following are the possible implications when a country adopts negative rate policy.

1. Increases borrowing costs.
2. Help weaken a country's currency rate by making it a less attractive investment than that of other currencies.
3. Boosts Inflation

Select the correct answer code:

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

Correct Answer: C

Explanation: Under a negative rate policy, financial institutions are required to pay interest for parking excess reserves with the central bank.

That way, central banks penalise financial institutions for holding on to cash in hope of prompting them to boost lending.

31. Like tropical cyclones, Tornados also cause devastating effect on life and material property. How tornedos are different from tropical cyclones?

1. Tornadoes originate over land, while cyclone originate on water.
2. Tornadoes forms on relatively larger area than tropical cyclone.
3. Tornadoes mostly occur in middle latitude, while tropical cyclone occurs in 5 to 25 degree north south latitude.

Select the correct answer code:

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

Correct Answer: C

Explanation: Tornadoes forms in relatively smaller area compare to tropical cyclones.

All other statements are correct regarding tornadoes.

32. Tropical monsoon type of climate feeds about 50% of Asia. Which of the following regions in the world have this type of climate?

1. Central America
2. West coast of Europe
3. Western parts of South America
4. East coast of Africa

Select the correct answer code:

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

Correct Answer: C

Explanation: Central America and East coast of Africa has tropical monsoon type of climate.

33. Consider the following statements.

1. Headline inflation is a measure of inflation within an economy, including commodities which tend to be more volatile and prone to inflationary spikes.
2. Headline inflation present an accurate picture of an economy's inflationary trend since sector-specific inflationary spikes persist.
3. Headline CPI inflation measure is being used by RBI as the target rate of inflation.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Headline inflation is a measure of the total inflation within an economy, including commodities

such as food and energy prices (e.g., oil and gas), which tend to be much more volatile and prone to inflationary spikes.

Headline inflation may not present an accurate picture of an economy's inflationary trend since sector-specific inflationary spikes are unlikely to persist.

In the RBI's flexible inflation-targeting (FIT) framework, the headline CPI inflation measure is being used as the target rate of inflation as it reflects the prices of essential consumption goods.

34. Which of the following are part of capital receipts for the Government of India.

1. Loans raised by Government from RBI and public
2. Dividend on investments made by Government
3. Disinvestment receipts
4. Borrowings by Government through sale of Treasury Bills

Select the correct code:

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

Correct Answer: B

Explanation: The capital receipts are loans raised by Government from public, called market loans, borrowings by Government from Reserve Bank and other parties through sale of Treasury Bills, loans received from foreign Governments and bodies, disinvestment receipts and recoveries of loans from State and Union Territory Governments and other parties.

Revenue Budget consists of the revenue receipts of Government (tax revenues and other revenues like interest and dividend on investments made by Government, fees, and other receipts for services rendered by Government) and the expenditure met from these revenues.

35. Consider the following statements regarding Alluvial Soils.

1. Khadar deposited by floods depletes the soil quality by depositing silts.
2. Bhangar is deposited away from the flood plains.
3. These soils are loamier and more clayey and also have sand contents in them.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The alluvial soils vary in nature from sandy loam to clay. They are generally rich in potash but poor in phosphorous. In the Upper and Middle Ganga plain, two different types of alluvial soils have developed, viz. Khadar and Bhangar. Khadar is the new alluvium and is deposited by floods annually, which enriches the soil by depositing fine silts. Bhangar represents a system of older alluvium, deposited away from the flood plains. Both the Khadar and Bhangar soils contain calcareous concretions (Kankars). These soils are more loamy and clayey in the lower and middle

Ganga plain and the Brahmaputra valley. The sand content decreases from the west to east.

36. In which of the following, there are high chances of interacting species living closely together?

1. Mutualism
2. Competition
3. Parasitism
4. Predation
5. Commensalism
6. Amensalism

Select the correct answer code:

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

Correct Answer: B

Explanation: Predation, parasitism and commensalism share a common characteristic– the interacting species live closely together.

37. Which of the following are the favorable conditions for coral reef formations?

1. Shallow continental shelf
2. High sediments in the water
3. Areas where fresh waters from rivers enter oceans
4. Mean annual temperatures should be between 22 – 29-degree C.

Select the correct answer code:

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

Correct Answer: D

Explanation: High fresh water influx and sediments are unfavorable conditions for coral reef formations

38. Consider the following statements.

1. Investments through the FDI route are strategic in nature, and meant for the long term.
2. FDI investors also get a say in the management of the investee company, including board seats.
3. FDIs and FPIs can invest in both listed and unlisted securities.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: FDI and FPI routes are used by foreign funds for entirely different purposes. Investments through the FDI route are strategic in nature, and meant for the long term. Several FDI investors also get a say in the management of the investee company, including board seats.

By contrast, portfolio investments are short-term in nature, with investors having the liberty to buy or sell stock on the bourses. Also, FPIs are allowed to invest only in listed securities, while FDI investments can be made even in unlisted assets.

39. Which of the following are an ecotone?

1. Mangroves
2. Grassland
3. Forest
4. Estuary
5. Coral Reef

Select the correct answer code:

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

Correct Answer: B

Explanation: An ecotone is a transition area between two biomes. It is where two communities meet and integrate. It may be narrow or wide, and it may be local (the zone between a field and forest) or regional (the transition between forest and grassland ecosystems).

For e.g. the mangrove forests represent an ecotone between marine and terrestrial ecosystem, grassland (between forest and desert), estuary (between fresh water and salt water) and river bank or marsh land (between dry and wet).

40. Consider the following statements regarding carrying capacity of a biological species in an environment.

1. The carrying capacity is the number of individuals an environment can support without significant negative impacts to the given organism and its environment.
2. Below carrying capacity, populations typically decrease, while above, they typically increase.
3. The carrying capacity of an environment may vary for different species and may change over time.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: The carrying capacity is the number of individuals an environment can support without significant negative impacts to the given organism and its environment. Below carrying capacity, populations typically increase, while above, they typically decrease.

The carrying capacity of an environment may vary for different species and may change over time due to a variety of factors including: food availability, water supply, environmental conditions and living space.

41. Consider the following statements:

1. Garo and Khasi hills are extensions of Purvanchals in Meghalaya forming water divide between Brahmaputra and Barak River.
2. Rajmahal Hills are formed from rocks dating from the Jurassic Period and named after the town of Rajmahal which lies to the east in the state of Jharkhand.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Garo and Khasi hills are the extensions of peninsular part of the subcontinent. Along with the Karbi Anglong plateau, the Meghalaya plateau (comprising Garo, Khasi and Jaintia hills) is separated from the Chotanagpur plateau (part of peninsular India) by Malda fault (in Bengal).

Volcanic activity during the Jurassic resulted in the formation of the Rajmahal Traps. The Rajmahal hills are named after the town of Rajmahal which lies in the eastern Jharkhand. The River Ganges wanders around the hills changing the direction of flow from east to south.

42. 'Twin Balance Sheet Syndrome', often in news, is

- a) Balance sheets of both public sector banks and public sector enterprises which are in terrible shape.
- b) Balance sheets of Union and state governments with high fiscal deficit.
- c) Balance sheets of both public sector banks (PSBs) and some corporate houses which are in terrible shape
- d) Looming fiscal and current account deficit of Indian economy

Correct Answer: C

Explanation: Twin balance sheet problem refers to the stress on balance sheets of banks due to nonperforming assets (NPAs) or bad loans on the one hand, and heavily indebted corporates on the other.

43. Consider the following statements.

1. Bank rate is the minimum rate set by the Reserve Bank of India below which banks are not allowed to lend to its customers.
2. Higher bank rate will translate to higher lending rates by the banks.
3. In order to curb liquidity, the central bank can resort to raising the bank rate and vice versa.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Bank rate is the rate charged by the central bank for lending funds to commercial banks.

Bank rates influence lending rates of commercial banks. Higher bank rate will translate to higher lending rates by the banks. In order to curb liquidity, the central bank can resort to raising the bank rate and vice versa.

Base rate is the minimum rate set by the Reserve Bank of India below which banks are not allowed to lend to its customers.

44. Consider the following statements.

1. During the day time the intensity of tides is always uniform along the coastline.
2. The position of both the sun and the moon in relation to the earth has direct bearing on tide height.
3. Neap tides occur when the sun, the moon and the earth are in a straight line.

Which of the above statements is/are incorrect?

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

Correct Answer: C

Explanation: The shape of bays and estuaries along a coastline can also magnify the intensity of tides.

The position of both the sun and the moon in relation to the earth has direct bearing on tide height. When the sun, the moon and the earth are in a straight line, the height of the tide will be higher. These are called spring tides and they occur twice a month, one on full moon period and another during new moon period.

Normally, there is a seven day interval between the spring tides and neap tides. At this time the sun and moon are at right angles to each other and the forces of the sun and moon tend to counteract one another.

45. With reference to the temperate cyclones, which of the following statements is/are correct?

1. They flow in west to east direction.
2. They often come under the influence of westerlies.
3. They have swift and unpredictable movement.
4. Western disturbances in India are due to temperate cyclone.

Select the correct answer code:

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

Correct Answer: C

Explanation: Westerlies are not swift as tropical cyclone and their direction can be predicted.

46. Which of the following factors can lead to Demand-pull inflation?

1. Strong consumer demand
2. Increase in money supply
3. When prices go up
4. Technological innovation

Select the correct code:

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

Correct Answer: B

Explanation: When the aggregate demand in an economy strongly outweighs the aggregate supply, prices go up. Economists describe demand-pull inflation as a result of too many dollars chasing too few goods.

If a government reduces taxes, households are left with more disposable income in their pockets. This, in turn, leads to increased consumer spending, thus increasing aggregate demand and eventually causing demand-pull inflation.

Cost-push inflation is when prices go up.

47. Which one of the following places is located at the confluence of Alaknanda and Bhagirathi

- a) Vishnuprayag
- b) Devaprayag
- c) Rudrapravag
- d) Karnaprayag

Correct Answer: B

Explanation:

Devaprayag – Confluence of Alaknanda and Bhagirathi

Vishnuprayag – Confluence of Alaknanda and Dhauliganga

Rudraprayag – Confluence of Alaknanda and Mandakini

Karanprayag – Confluence of Alaknanda and Pindar

48. Consider the following statements about Agenda 21

1. Agenda 21 is a non-binding action plan of the United Nations with regard to sustainable development.
2. It is a product of the Earth Summit (UN Conference on Environment and Development) held in Rio de Janeiro, Brazil, in 1992.
3. The “21” in Agenda 21 refers to 21 points agreed upon by the member countries to achieve sustainable development.

Select the correct answer code:

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

Correct Answer: A

Explanation: Agenda 21 is a non-binding action plan of the United Nations with regard to sustainable development. It is a product of the Earth Summit (UN Conference on Environment and Development) held in Rio de Janeiro, Brazil, in 1992. The “21” in Agenda 21 refers to the 21st century. Its aim is achieving global sustainable development. One major objective of the agenda 21 is that every local government should draw its own local Agenda 21. Since 2015, Sustainable Development Goals are included in the Agenda 2030.

49. Consider the following statements:

1. Biodiversity is normally greater in the lower latitudes as compared to the higher latitudes.
2. Along the mountain gradients, biodiversity is normally greater in the lower altitudes as compared to the higher altitudes.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Biodiversity normally varies with latitude and altitude. Lower latitude and altitude has relatively higher biodiversity.

50. Balance of Payment is a statistical statement that shows

1. Export and import of visible and invisibles
2. Capital expenditure and income for a country.
3. Net flow of both private and public investment into an economy.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: The transactions in BOP are categorised in

a) Current account showing export and import of visibles (also called merchandise) and invisibles (also called non-merchandise). Invisibles take into account services, transfers and income.

b) Capital account showing a capital expenditure and income for a country. It gives a summary of the net flow of both private and public investment into an economy. External commercial borrowing (ECB), foreign direct investment, foreign portfolio investment, etc form a part of capital account.

51. Consider the following statements:

1. The health of coral zones determines the abundance of some shark species
2. Warm waters result in coral bleaching
3. When a coral bleaches, it is dead

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: Sharks become abundant in a coral zone when the reefs are healthy. In a decade-long study conducted in the Great Barrier Reef, researchers used thousands of remote underwater video stations to count the number of sharks. The results showed that the health of coral reef had a huge affect on abundance of shark, especially the grey reef shark which is found on coral reefs. The study underlines the importance of coral reefs in protecting sharks.

Coral Bleaching:

Warmer water temperatures can result in coral bleaching. When water is too warm, corals will expel the algae (zooxanthellae) living in their tissues causing the coral to turn completely white. This is called coral bleaching. When a coral bleaches, it is not dead. Corals can survive a bleaching event, but they are under more stress and are subject to mortality if continued for a long time.

52. Consider the following statements:

1. The soil develops on crystalline igneous rocks in areas of low rainfall.
2. They are generally poor in nitrogen, phosphorous and humus.
3. They are fertile when fine-grained and are poor in fertility when they are coarse-grained.

The above statements refer to:

- a) Laterite soil
- b) Black Soil
- c) Red and Yellow Soil
- d) None of the above

Correct Answer: C

Explanation: Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern part of the Deccan Plateau. Along the piedmont zone of the Western Ghat, long stretch of area is occupied by red loamy soil. Yellow and red soils are also found in parts of Odisha and Chhattisgarh and in the southern parts of the middle Ganga plain. The soil develops a reddish colour due to a wide diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form. The fine-grained red and yellow soils are normally fertile, whereas coarse-grained soils found in dry upland areas are poor in fertility. They are generally poor in nitrogen, phosphorous and humus.

53. The general rise in Gini Coefficient may indicate

- a) Government policies are not inclusive and benefitting rich more than poor
- b) Increasing foreign exchange reserves due to high export potential.
- c) Budget surplus in consecutive financial years.
- d) Government policies are inclusive and benefitting the disadvantaged groups.

Correct Answer: A

Explanation: Gini Coefficient is a popular statistical measure to gauge the rich-poor income or wealth divide. It measures inequality of a distribution — be it of income or wealth — within nations or States. Its value varies anywhere from zero to 1; zero indicating perfect equality and one indicating the perfect inequality.

Gini Coefficients can be used to compare income distribution of a country over time as well. An increasing trend indicates that income inequality is rising independent of absolute incomes.

A general rise in Gini Coefficient indicates that government policies are not inclusive and may be benefiting the rich more than the poor.

54. Which of the following measures is/are examples of expansionary fiscal policy?

1. Decrease in tax rate
2. Increase in pensions
3. Increase in unemployment compensation
4. Increase in tax rate.

Select the correct answer codes:

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

Correct Answer: C

Explanation: An expansionary is a macroeconomic policy that seeks to encourage economic growth or combat inflationary price increases by expanding the money supply, lowering interest rates, increasing government spending or cutting taxes.

Increasing the tax rate is not an example of expansionary fiscal policy.

55. Consider the following statements.

1. The Coromandel Coast stands between Western Ghats and Arabian Sea.
2. Doddabetta is the highest peak in the southern peninsula.
3. Palghat Pass is located between the Nilgiri Hills to the north and Annamalai Hills to the south.

Which of the above statements is/are incorrect?

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

Correct Answer: A

Explanation: The Coramandal Coast stands between the Eastern Ghats and the Bay of Bengal. The Western Ghats runs along the Arabian sea and the lands between these are known as Konkan up to Goa and beyond that as Kanara. The southernmost part is known as Malabar Coast.

The Anaimudi is the highest peak in the southern peninsula. Doddapetta is another highest peak in the Western Ghats.

Palghat Pass is located between the Nilgiri Hills to the north and Anaimalai Hills to the south.

56. Consider the following statements about Bioaerosols

1. Bioaerosols can be formed from fungi and bacteria only.
2. Plants, soil, water, animals and humans all serve as sources of bioaerosols.
3. With higher humidity, higher bioaerosol levels can prevail.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Bioaerosols are airborne particles that are biological in origin. Bioaerosols include fungi, bacteria, viruses, and pollen. Bioaerosols can be formed from nearly any process that involves biological materials and generates enough energy to separate small particles from the larger substance, such as wind, water, air, or mechanical movement.

Plants, soil, water, and animals (including humans) all serve as sources of bioaerosols, and bioaerosols are subsequently present in most places where any of these sources live.

Bacterial cells when they become airborne normally rapidly die, within a few seconds, due to evaporation of water associated with the particle. Thus with higher humidity, higher bioaerosol levels can prevail.

57. Consider the following statements regarding Eutrophication.

1. Eutrophication is when a body of water becomes overly enriched with minerals and nutrients which induce excessive growth of algae and in turn, increases water quality.
2. Increase of phytoplankton in a water body is the response to increased levels of nutrients.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Eutrophication is when a body of water becomes overly enriched with minerals and nutrients which induce excessive growth of algae. This process may result in oxygen depletion of the water body. One example is an “algal bloom” or great increase of phytoplankton in a water body as a response to increased levels of nutrients.

Eutrophication is often induced by the discharge of nitrate or phosphate-containing detergents, fertilizers, or sewage into an aquatic system.

58. Which of the following currents are cold currents

1. Humboldt Current
2. California Current
3. North Atlantic Drift
4. Benguela Current

Select the correct codes:

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

Correct Answer: B

Explanation: North Atlantic Drift is a warm current.

59. Consider the following pairs:

Terms	Their origin
1. Annex—I Countries	: Cartagena Protocol
2. Certified Emissions Reductions:	Nagoya Protocol
3. Clean Development Mechanism:	Kyoto Protocol

Which of the pairs given above is/are correctly matched?

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

Correct Answer: C

Explanation: Parties to the UNFCCC are classified as: Annex I, Annex II and Non-Annex I.

Annex I Parties include the industrialized countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States.

Certified Emission Reductions (CERs) are a type of emissions unit (or carbon credits) issued by the Clean Development Mechanism (CDM) Executive Board for emission reductions achieved by CDM projects under the rules of the Kyoto Protocol.

60. Which of the following belong to the category of primary air pollutants?

1. Sulphur dioxide
2. Ozone
3. Carbon monoxide
4. Nitric oxide
5. Fine dust particles
6. Formaldehyde

Select the correct using the code given below:

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

Correct Answer: A

Explanation: Ozone and Formaldehyde are not primary pollutant.

Primary pollutants are directly emitted from the sources. Examples of primary pollutants are carbon monoxide, carbon dioxide, sulphur dioxide and benzene etc. Secondary pollutants are not emitted directly. They are formed from the combination of primary pollutants with some other compound. Examples of secondary pollutants are Ozone, Formaldehyde, PAN (peroxy acetyl nitrate) and Smog etc.

61. The relationship between Cattle Egrets and livestock is an example of

- a) Commensalism
- b) Parasitism
- c) Mutualism
- d) Amensalism

Correct Answer: A

Explanation: Commensalism is a relationship between two organisms where one receives a benefit or benefits from the other and the other is not affected by it. In other words, one is benefited and the other is neither benefited nor harmed. Other ex: Anemonefishes or clownfishes – These live amid the tentacles of the anemones which protects them from predators. Predators are poisoned by the nematocysts of the anemones.

62. Consider the following statements.

1. It is India's largest inland Salt Lake
2. The lake receives water from Rupnagar and Khari Rivers.
3. It has been designated as a Ramsar site.

The above refer to?

- a) Bhimtal Lake
- b) Bhitarkanika Lake
- c) Sambhar Lake
- d) Chilika Lake

Correct Answer: C

Explanation: The Sambhar Salt Lake is India's largest inland salt lake. The lake receives water from five rivers Medtha, Samaod, Mantha, Rupangarh, Khari and Khandela. The lake is an extensive saline wetland. It is the source of most of Rajasthan's salt production.

Sambhar has been designated as a Ramsar site (recognized wetland of international importance) because the wetland is a key wintering area for tens of thousands of pink flamingos and other birds that migrate from northern Asia and siberia.

63. Most parts of India do not have rainfall in the winter season, because

1. The wind moves from land to sea.
2. Cyclonic circulation on land
3. They have little humidity

Select the correct code:

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

Correct Answer: A

Explanation: Winter monsoons do not cause rainfall as they move from land to the sea. It is because firstly, they have little humidity; and secondly, due to anti cyclonic circulation on land, the possibility of rainfall from them reduces. So, most parts of India do not have rainfall in the winter season.

64. Consider the following statements regarding World Bank Group.

1. The International Bank for Reconstruction and Development (IBRD) lends to governments of middle-income and creditworthy low-income countries.
2. The Multilateral Investment Guarantee Agency (MIGA) is the largest global development agency focused exclusively on the private sector.
3. International Finance Corporation (IFC) promotes foreign direct investment into developing countries to support economic growth, reduce poverty, and improve people's lives.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation: The World Bank Group consists of five organizations:

1. The International Bank for Reconstruction and Development

The International Bank for Reconstruction and Development (IBRD) lends to governments of middle-income and creditworthy low-income countries.

2. The International Development Association

The International Development Association (IDA) provides interest-free loans — called credits — and grants to governments of the poorest countries.

Together, IBRD and IDA make up the World Bank.

3. The International Finance Corporation

The International Finance Corporation (IFC) is the largest global development institution focused exclusively on the private sector. We help developing countries achieve sustainable growth by financing investment, mobilizing capital in international financial markets, and providing advisory services to businesses and governments.

4. The Multilateral Investment Guarantee Agency

The Multilateral Investment Guarantee Agency (MIGA) was created in 1988 to promote foreign direct investment into developing countries to support economic growth, reduce poverty, and improve people's lives. MIGA fulfills this mandate by offering political risk insurance (guarantees) to investors and lenders.

5. The International Centre for Settlement of Investment Disputes

The International Centre for Settlement of Investment Disputes (ICSID) provides international facilities for conciliation and arbitration of investment disputes.

65. A foreigner is travelling by Air India from Delhi to Mumbai. What will this be considered as in terms of national income:

- a) Import
- b) Domestic consumption
- c) Exports
- d) None of the Above

Correct Answer: C

Explanation: In this case Air India is an Indian Company and a foreigner will be contributing money towards his travel. Therefore, overall there would be foreign exchange inflow and thus we can classify it as an export.

66. Consider the following statements in respect of Trade Related Analysis of Fauna and Flora in Commerce (TRAFFIC):

1. TRAFFIC is a bureau under United Nations Environment Programme (UNEP).
2. The mission of TRAFFIC is to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation: Statement 1: It is a NGO, not a bureau under UNEP. So, 1 is wrong.

TRAFFIC is governed by the TRAFFIC Committee, a steering group composed of members of TRAFFIC's partner organizations, WWF and IUCN.

Statement 2: It is working globally on Wildlife trade monitoring network. It specializes in investigating and analysing wildlife trade trends, patterns, impacts and drivers to provide the leading knowledge base on trade in wild animals and plants.

67. Consider the following statements about Intergovernmental Panel on Climate Change (IPCC).

1. It was created by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).
2. IPCC scientists assess the scientific papers published each year to provide a comprehensive summary on climate change, its impacts and future risks.
3. The IPCC does not conduct its own research.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), the objective of the IPCC is to provide governments at all levels with scientific information that they can use to develop climate policies. IPCC reports are also a key input into international climate change negotiations.

The IPCC is an organization of governments that are members of the United Nations or WMO. The IPCC currently has 195 members. For the assessment reports, IPCC scientists volunteer their time to assess the thousands of scientific papers published each year to provide a comprehensive summary of what is known about the drivers of climate change, its impacts and future risks, and how adaptation and mitigation can reduce those risks.

An open and transparent review by experts and governments around the world is an essential part of the IPCC process, to ensure an objective and complete assessment and to reflect a diverse range of views and expertise. The IPCC does not conduct its own research.

68. Which of the following regions is known as ‘Molasses Basin’?

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

Correct Answer: C

Explanation: Mizoram is also known as the ‘Molassis Basin’. It is made up of soft unconsolidated deposits.

69. With reference to India economy, consider the following:

1. Bank rate
2. Open market operations
3. Public debt
4. Public revenue

Which of the above is/are component/components of Monetary Policy?

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

Correct Answer: C

Explanation: Public debt and Public revenue are matters falling under Fiscal policy. The Ministry of Finance handles these subjects.

Bank rate and OMOs fall within the jurisdiction of RBI's monetary policy.

70. Consider the following statements about Bank Rate.

1. A rise in bank rate raises the deposit as well as lending rates in the economy.
2. Bank rate is purely a signaling rate and most interest rates are de-linked from the bank rate.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: Bank rate is the rate at which central bank lends money to the commercial banks by buying their eligible rated securities – bills of exchange or commercial paper.

Bank Rate once used to be the policy rate (the key interest rate based on which all other short term interest rates move) in India. A rise in bank rate raises the deposit as well as lending rates in the economy while a lowering of the bank rate reduces these rates. It is the central banker's tool for controlling liquidity and inflation.

Bank Rate is now aligned to Marginal Standing Facility (MSF) rate, the penal rate at which banks can borrow money from the central bank over and above what is available to them through the LAF window. In other words, MSF assumed the role of bank rate, once the latter became operational in 2011.

Unlike other policy rates, the bank rate is purely a signalling rate and most interest rates are de-linked from the bank rate.

71. Which of the following is not a consequence of rupee depreciation?

- a) Increase in the cost of imports
- b) Foreign trips will become costlier
- c) Exports will become competitive
- d) Reduction in remittances from abroad

Correct Answer: D

Explanation: Rupee depreciation badly affects importers or those who wish to visit foreign countries for holidays as they need more local currency to get the same service or product.

When rupee depreciates exporters from India are benefited. (Eg: Software companies, seafood exporters etc.)

Depreciation of rupee benefit the overseas Indians as those who are working abroad will gain more on remitting money to their homeland.

72. Which of the following statements describes the Radial drainage pattern.

- a) The drainage pattern resembling the branches of a tree
- b) When the primary tributaries of rivers flow parallel to each other and secondary tributaries join them at right angles
- c) When the rivers discharge their waters from all directions in a lake or depression
- d) When the rivers originate from a hill and flow in all directions

Correct Answer: D

Explanation: Important Drainage Patterns

(i) The drainage pattern resembling the branches of a tree is known as “dendritic” the examples of which are the rivers of northern plain.

(ii) When the rivers originate from a hill and flow in all directions, the drainage pattern is known as ‘radial’. The rivers originating from the Amarkantak range present a good example of it.

(iii) When the primary tributaries of rivers flow parallel to each other and secondary tributaries join them at right angles, the pattern is known as ‘trellis’.

(iv) When the rivers discharge their waters from all directions in a lake or depression, the pattern is known as ‘centripetal’.

73. With reference to Nitrogen Cycle, the biological oxidation of ammonia to nitrite takes place in which of the following process?

- a) Assimilation
- b) Denitrification
- c) Ammonification
- d) Nitrification

Correct Answer: D

Explanation: The nitrogen cycle contains several stages:

1. Nitrification
 2. Assimilation
 3. Ammonification
 4. Denitrification
- Nitrification – Nitrification is the biological oxidation of ammonia or ammonium to nitrite followed by the oxidation of the nitrite to nitrate. Nitrification is an aerobic process performed by small groups of autotrophic bacteria and archaea.
 - Assimilation – Nitrogen compounds in various forms, such as nitrate, nitrite, ammonia, and ammonium are taken up from soils by plants which are then used in the formation of plant and animal proteins.
 - Ammonification – When plants and animals die, or when animals emit wastes, the nitrogen in the organic matter re-enters the soil where it is broken down by other microorganisms, known as decomposers. This decomposition produces ammonia which is then available for other biological processes.
 - Denitrification – Nitrogen makes its way back into the atmosphere through a process called denitrification, in which nitrate (NO_3^-) is converted back to gaseous nitrogen (N_2).

74. A 'willful default' would be deemed to have occurred if which of the following events.

1. Defaulting in meeting its repayment obligations to the lender even when it has the capacity to repay.
2. Not utilizing the finance from the lender for the specific purposes for which finance was availed and diverting the funds for other purposes.
3. Disposed off the movable fixed assets or immovable property given for the purpose of securing a term loan without the knowledge of the bank.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation: Simply, default means non-payment of a loan availed by a borrower. A willful defaulter is an entity or a person that has not paid the loan back despite the ability to repay it.

A 'wilful default' would be deemed to have occurred if any of the following events is noted:

- (a) The unit has defaulted in meeting its payment / repayment obligations to the lender even when it has the capacity to repay.
- (b) The unit has defaulted in meeting its payment / repayment obligations to the lender and has not utilised the finance from the lender for the specific purposes for which finance was availed of but has diverted the funds for other purposes
- (c) The unit has defaulted in meeting its payment / repayment obligations to the lender and has siphoned off the funds so that the funds have not been utilised for the specific purpose for which finance was availed of, nor are the funds available with the unit in the form of other assets.
- (d) The unit has defaulted in meeting its payment / repayment obligations to the lender and has also disposed off or removed the movable fixed assets or immovable property given for the purpose of securing a term loan without the knowledge of the bank / lender.

75. Consider the following statements about Keystone species.

- 1. The top predators are considered as keystone species.
- 2. If keystone species are lost, it will lead to the degradation of whole ecosystem.
- 3. Plants cannot be Keystone species.

Which of the above statements is/are correct?

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

Correct Answer: C

Explanation: A keystone species is a species that has a disproportionately large effect on its natural environment relative to its abundance. Such species are described as playing a critical role in maintaining the structure of an ecological community, affecting many other organisms in an ecosystem and helping to determine the types and numbers of various other species in the community.

A keystone species is a plant or animal that plays a unique and crucial role in the way an ecosystem functions.

Top predators (Lion, Tiger, Crocodile, and Elephant) are considered as keystone species because it regulates all other animal population indirectly. Hence top predators are given much consideration in conservation.

If keystone species are lost, it will lead to the degradation of whole ecosystem. For example certain plant species (ebony tree, Indian-laurel) exclusively depends upon bats for its pollination. If the bat population is reduced then regeneration of particular plants becomes more difficult.

76. Which of the following country(s) has/have recently proposed a Supply Chain Resilience in Indo-Pacific initiative?

1. United States of America
2. Japan
3. Australia

Select the correct answer using the code given below:

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

Correct Answer: B

Explanation: Australia-India-Japan Economic Ministers trilateral meeting proposed an initiative for Supply chain resilience in the Indo- Pacific.

The joint statement reads “In light of the COVID-19 crisis and the recent global-scale changes in the economic and technological landscape, the Ministers underscored the necessity and potential to enhance the resiliency of supply chains in the Indo-Pacific region.

Recognizing the pressing need for regional cooperation on supply chain resilience in the Indo- Pacific, the Ministers shared their intention to work toward the launch of a new initiative to achieve the objective through cooperation. They instructed their officials to promptly work out the details of the new initiative for its launch later this year. The Ministers noted the important role of business and academia in realizing the objective.”

77. Consider the following statements regarding the Hypersonic Technology Demonstrator Vehicle of DRDO:

1. The vehicle uses the air-breathing scramjet engine technology.
2. India is the first Asian country that has developed technologies to field fast-manoeuvring hypersonic missiles.

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

Correct Answer: A

Explanation: Statement 1 is correct. Defence Research and Development Organisation (DRDO) has successfully demonstrated the hypersonic air-breathing scramjet technology with the flight test of Hypersonic Technology Demonstration Vehicle (HSTDV) from Dr APJ Abdul Kalam Launch Complex at Wheeler Island, off the coast of Odisha recently.

Statement 2 is incorrect. Only the United States, Russia and China have developed technologies to field fast-maneuvring hypersonic missiles that fly at lower altitudes and are extremely hard to track and intercept.

It is estimated to take around four years for India to develop hypersonic cruise missiles powered by air-breathing scramjet engines.

The dual-use hypersonic technology has non-military applications too – it can be used for launching satellites and developing commercial planes

Hypersonic: more than five times faster than the speed of sound (>Mach 5).

78. Consider the following statements regarding the Blockchain technology:

1. A blockchain is a centralized ledger of all transactions across a peer-to-peer network.
2. No participant can change or tamper with a transaction after it's been recorded to the shared ledger.

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

Correct Answer: B

Explanation: Statement 1 is incorrect. Blockchain is a decentralized distributed ledger technology. All network participants have access to the distributed ledger and its immutable record of transactions.

With this shared ledger, transactions are recorded only once, eliminating the duplication of effort that's typical of traditional business networks.

Blockchain is decentralized, i.e. it does not store any of its information in a central location, instead, the data is copied and spread across a network of computers.

Statement 2 is correct. No participant can change or tamper with a transaction after it's been recorded to the shared ledger. If a transaction record includes an error, a new transaction must be added to reverse the error, and both transactions are then visible.

79. Which of the following institution has recently released the ‘Ecological Threat Register’ report?

- a) Institute for Economics and Peace
- b) Intergovernmental Panel on Climate Change
- c) International Union for Conservation of Nature
- d) United Nations Framework Convention on Climate Change

Correct Answer: A

Explanation: The 2020 Ecological Threat Register (ETR) is the inaugural edition which covers 157 independent states and territories. It has been released by the Institute for Economics and Peace (IEP).

The ETR measures ecological threats that countries are currently facing and provides projections to 2050. The Ecological Threat Register analyses risk from population growth, water stress, food insecurity, droughts, floods, cyclones, rising temperatures and sea levels.

Report highlights:

-Over the next 30 years, 141 countries are exposed to at least one ecological threat by 2050.

-Country with the largest number of people at risk of mass displacements in Pakistan, followed by Ethiopia and Iran. In these countries, even small ecological threats and natural disasters could result in mass population displacement, affecting regional and global security.

-Today, 2.6 billion people experience high or extreme water stress – by 2040, this will increase to 5.4 billion people.

-So far, India received the largest amount of climate-related aid in 2018, amounting to the US \$6.5 billion dollars.

80. Which of the following is/are not covered by the definition of ‘foreign source’ under the Foreign Contribution (Regulation) Act, 2010?

- 1. Government of any foreign country
- 2. International Monetary Fund
- 3. Intergovernmental Panel on Climate Change

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) All of the above

Correct Answer: B

Explanation: The Foreign Contribution (Regulation) Act, 2010 regulates foreign donations and ensures that such contributions do not adversely affect internal security.

Some of the Foreign Sources, as defined in Section 2(1) (j) of FCRA, 2010 include:

- the Government of any foreign country or territory and any agency of such Government;
- any international agency, not being the United Nations or any of its specialized agencies, the World Bank, International Monetary Fund or such other agency as the Central Government may notify;

Central Govt. has notified several international bodies to be not covered by the definition of 'foreign source'. The list among others includes Intergovernmental Panel on Climate Change (IPCC), Geneva.

- a trade union in any foreign country or territory;
- a foreign trust or a foreign foundation;
- a society, club or other association or individuals formed or registered outside India;
- a citizen of a foreign country.

81. Consider the following statements regarding the Supersonic Missile Assisted Release of Torpedo (SMART):

1. It is targeted to achieve Anti-Submarine Warfare (ASW) operations within the Torpedo range.
2. It has been developed by the Defence Research and Development Organisation (DRDO).

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

Correct Answer: B

Explanation: The Supersonic Missile Assisted Release of Torpedo (SMART) has been successfully flight tested recently from Wheeler Island off the coast of Odisha.

Statement 1 is incorrect. SMART is a missile assisted release of lightweight Anti-Submarine Torpedo System for Anti-Submarine Warfare (ASW) operations far beyond Torpedo range. This launch and demonstration is significant in establishing Anti-Submarine warfare capabilities.

Statement 2 is correct. It has been developed by DRDO, a number of DRDO laboratories including DRDL, RCI Hyderabad, ADRDE Agra, NSTL Visakhapatnam have developed the technologies required for SMART.

82. Which of the following is/are inherited blood disorders?

1. Thalassemia
2. Sickle Cell Disease

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

Correct Answer: C

Explanation: Option 1 is correct. Thalassemia is an inherited (passed from parents to children through genes) blood disorder caused when the body doesn't make enough of a protein called hemoglobin, an important part of red blood cells.

When there isn't enough hemoglobin, the body's red blood cells don't function properly and they last shorter periods of time, so there are fewer healthy red blood cells traveling in the bloodstream.

Option 2 is correct. Sickle Cell Disease is a group of inherited red blood cell disorders. Healthy red blood cells are round, and they move through small blood vessels to carry oxygen to all parts of the body. In someone who has SCD, the red blood cells become hard and sticky and look like a C-shaped farm tool called a "sickle".

The sickle cells die early, which causes a constant shortage of red blood cells. Also, when they travel through small blood vessels, they get stuck and clog the blood flow. This can cause pain and other serious problems such as infection, acute chest syndrome and stroke.

Second phase of "Thalassemia Bal Sewa Yojna" for the underprivileged Thalassemic patients was launched recently. It is a Coal India CSR funded Hematopoietic Stem Cell Transplantation (HSCT) program that aims to provide a one-time cure opportunity for Haemoglobinopathies like Thalassemia and Sickle Cell Disease for patients who have a matched family donor.

83. Consider the following statements regarding the ‘Moushik’ microprocessor:

1. Its applications include smart cards like credit and debit cards.
2. The design and fabrication have been done indigenously 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

Correct Answer: C

Explanation: Both statements are correct.

Indian Institute of Technology Madras researchers have booted up a microprocessor ‘Moushik’.

The design of the microprocessor, motherboard printed circuit board design, assembly and post-silicon boot-up were done at IIT Madras. The foundry-specific back-end design and fabrication were undertaken at Semi-Conductor Laboratory of Indian Space Research Organization (ISRO) in Chandigarh and manufacturing of this motherboard was done at Bengaluru.

The field application of Moushik includes smart cards, such as credit and debit cards; ID cards; travel cards for Metros and driving licences; electronic voting machines etc.

The SHAKTI Processor Program, was started as an academic initiative back in 2014 by the RISE group at IIT-Madras.

84. Which of the following country(s) is/are currently named as ‘High-Risk Jurisdictions subject to a Call for Action’ by the Financial Action Task Force (FATF)?

1. Iran
2. North Korea
3. Pakistan

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) All of the above

Correct Answer: A

Explanation: The FATF listed High-risk jurisdictions have significant strategic deficiencies in their regimes to counter money laundering, terrorist financing, and financing of proliferation. This list is often externally referred to as the “black list”.

Currently only two countries are under the black list: Iran and Democratic People’s Republic of Korea.

Pakistan is listed as Jurisdictions under increased monitoring, that are actively working with the FATF to address strategic deficiencies in their regimes to counter money laundering, terrorist financing, and proliferation financing. This list is often externally referred to as the ‘grey list’.

85. Consider the following statements regarding the Amur Falcons:

1. These migratory birds travel from Siberia to India before heading towards Africa in winter.
2. It listed as a Vulnerable species in the IUCN Red List.

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

Correct Answer: A

Explanation: Statement 1 is correct. Every October, flocks of Amur falcons from Siberia start landing in north east India (fame for Pangti village of Nagaland). Thousands of these small raptors (*Falco amurensis*) frolic in the village for about two months before they head for warmer climes in Kenya and South Africa in a non-stop flight over the Arabian Sea.

Statement 2 is incorrect. *Falco amurensis* is listed as Least Concern under IUCN Red List.

Chuilon and Irang, the radio-tagged Amur Falcons, arrived in Manipur after completing one migratory journey that covered 29,000 km in 361 days recently.

86. Consider the following statements regarding the report ‘Banking on Climate Change 2020’:

1. It has been released by Rainforest Action Network.
2. It notes that the total bank financing to fossil fuels industry has consistently reduced since the Paris Agreement of 2015.

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

Correct Answer: A

Explanation: Statement 1 is correct. The 11th edition of the annual fossil fuel finance report, 'Banking on Climate Change 2020' has been released by the Rainforest Action Network. The report lays out banks' support for fossil fuels in the four years after the Paris Agreement was adopted.

Statement 2 is incorrect. According to the 2020 report, after the Paris Agreement of 2015, where countries agreed to try to limit average global warming to well below 2°C, global banks continued to finance the fossil fuel industry with \$2.7 trillion. The report finds that big U.S. banks dominate this arena with JPMorgan Chase, Wells Fargo and Citi being the world's top fossil fuel financiers.

87. Consider the following statements regarding the 'Integrated Govt. Online training' (iGOT) program:

1. It is a training module for the capacity building of frontline workers to handle the COVID-19 pandemic efficiently.
2. The iGOT module has been launched on the DIKSHA platform of Ministry of Education.

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

Correct Answer: C

Explanation: Both statements are correct.

In April 2020 Government of India had launched a training module for management of COVID-19 named 'Integrated Govt. Online training' (iGOT) portal on Ministry of Education's DIKSHA platform for the capacity building of frontline workers to handle the pandemic efficiently.

Courses on iGOT have been launched for Doctors, Nurses, Paramedics, Hygiene Workers, Technicians, Auxiliary Nursing Midwives (ANMs), State Government Officers, Civil Defence Officers, Various Police Organizations, National Cadet Corps (NCC), Nehru Yuva Kendra Sangathan (NYKS), National Service Scheme, Indian Red Cross Society, Bharat Scouts and Guides and other volunteers at the stage.

Ministry of Health has said that uniquely designed Integrated Government Online training'- iGOT platform provides self-contained training material for COVID-19 warriors comprising 56 modules, 196 videos and 133 training documents.

88. Consider the following statements regarding Operation Greens (TOP to TOTAL) scheme:

1. It aims to protect the growers of fruits and vegetables from making distress sale due to lockdown and reduce the post -harvest losses.
2. The Ministry of Food Processing Industries provides subsidy for transportation and hiring storage facilities for eligible crops.

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

Correct Answer: C

Explanation: Both statements are correct.

Ministry of Food Processing Industries (MoFPI) had recently extended the Operation Greens Scheme from Tomato, Onion and Potato (TOP) to all fruits & vegetables (TOTAL) for a period of six months on pilot basis as part of Aatmanirbhar Bharat Abhiyan.

The objective of intervention is to protect the growers of fruits and vegetables from making distress sale due to lockdown and reduce the post – harvest losses.

Ministry provides subsidy at 50 % of the cost of the following two components:

–Transportation of eligible crops from surplus production cluster to consumption centre; and/or

–Hiring of appropriate storage facilities for eligible crops (for maximum period of 3 months).

89. The term ‘technical recession’ was in news recently, what does it mean?

- a) GDP of a country increasing while global GDP is decreasing
- b) Economic output reducing for two consecutive quarters
- c) Increase in supply despite low demand in economy
- d) Economic output of manufacturing sector reducing while primary and tertiary sector keeps growing

Correct Answer: B

Explanation: Reserve Bank of India in its monthly bulletin stated that India has entered a technical recession in the first half of 2020-21 for the first time in its history with Q2:2020-21 likely to record the second successive quarter of GDP contraction.

A technical recession is a term used to describe two consecutive quarters of decline in output. In the case of a nation's economy, the term usually refers to back-to-back contractions in real GDP.

The difference between a 'technical recession' and a 'recession' is that while the former term is mainly used to capture the trend in GDP, the latter expression encompasses an appreciably more broad-based decline in economic activity.

90. Which of the following is/are correctly matched?

1. The State of Food Security and Nutrition in the World – Food and Agricultural Organization
2. Global Report on Food Crises – Food Security Information Network
3. Hunger Report 2020: Better Nutrition, Better Tomorrow – Bread for the World Institute

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) All of the above

Correct Answer: D

Explanation: All of the above reports are correctly matched.

–The State of Food Security and Nutrition in the World is an annual flagship report jointly prepared by FAO, IFAD, UNICEF, WFP and WHO to inform on progress towards ending hunger, achieving food security and improving nutrition and to provide in depth analysis on key challenges for achieving this goal in the context of the 2030 Agenda for Sustainable Development.

–The 2020 Global Report on Food Crises is the result of a joint, consensus-based assessment of acute food insecurity situations around the world by 16 partner organizations (FAO, UNICEF, WFP etc.). It is facilitated by the Food Security Information Network, which provides the core coordination and technical support to pillar 1 of the Global Network Against Food Crises's.

–Launched amid the COVID-19 pandemic, Bread for the World Institute's 2020 report Hunger Report 2020: Better Nutrition, Better Tomorrow focuses on the greatest obstacles to ending hunger and malnutrition: inequities associated with gender, race, ethnicity, and other identifiers of marginalized social status.

91. Which of the following is/are type(s) of Intellectual Property?

1. Industrial Designs
2. Music
3. Geographical Indications

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) All of the above

Correct Answer: D

Explanation: Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce.

Types of intellectual property:

- Copyright is a legal term used to describe the rights that creators have over their literary and artistic works. Works covered by copyright range from books, music, paintings, sculpture and films, to computer programs, databases, advertisements, maps and technical drawings.
- Patent is an exclusive right granted for an invention. Generally speaking, a patent provides the patent owner with the right to decide how – or whether – the invention can be used by others.
- Trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises.
- Industrial design constitutes the ornamental or aesthetic aspect of an article. A design may consist of three-dimensional features, such as the shape or surface of an article, or of two-dimensional features, such as patterns, lines or color.
- Geographical indications and appellations of origin are signs used on goods that have a specific geographical origin and possess qualities, a reputation or characteristics that are essentially attributable to that place of origin. Most commonly, a geographical indication includes the name of the place of origin of the goods.
- Trade secrets are IP rights on confidential information which may be sold or licensed.

92. AlphaFold artificial intelligence program has been in news recently, what is its utility?

- a) Predictions of protein structure
- b) Modeling of Solar system
- c) Simulating a potential pandemic situation after COVID-19
- d) Genome sequence development

Correct Answer: A

Explanation: AlphaFold is an artificial intelligence program developed by Google's DeepMind which performs predictions of protein structure.

It has outperformed around 100 other teams in a biennial protein-structure prediction challenge called Critical Assessment of Structure Prediction (CASP). The results were announced on 30 November, at the start of the conference — held virtually this year — that takes stock of the exercise.

The ability to accurately predict protein structures from their amino-acid sequence would be a huge boon to life sciences and medicine. It would vastly accelerate efforts to understand the building blocks of cells and enable quicker and more advanced drug discovery.

93. Which of the following statement correctly defines the term Epigenetics?

- a) Study of changes in heritable changes in gene expression due to change in DNA sequence
- b) Study of heritable changes in gene expression that do not involve changes to DNA sequence
- c) Genetic variation resulting in the several different forms of individuals in a single species
- d) Large-scale study of proteomes

Correct Answer: B

Explanation: Epigenetics literally means “above” or “on top of” genetics. It refers to external modifications to DNA that turn genes “on” or “off.” These modifications do not change the DNA sequence, but instead, they affect how cells “read” genes. Unlike genetic changes, epigenetic changes are reversible.

It is therefore, the study of heritable changes in gene expression (active versus inactive genes) that do not involve changes to the underlying DNA sequence — a change in phenotype without a change in genotype — which in turn affects how cells read the genes.

94. Which of the following organization has launched the Asia Pacific Vaccine Access Facility (APVAX)?

- a) Asian Development Bank
- b) World Health Organisation
- c) Bill & Melinda Gates Foundation
- d) Shanghai Cooperation Organization

Correct Answer: A

Explanation: Asian Development Bank (ADB) has launched \$9 billion COVID-19 vaccine initiative, the Asia Pacific Vaccine Access Facility, or APVAX.

The Rapid Response Component will provide timely support for critical vaccine diagnostics, procurement of vaccines, and transporting vaccines from the place of purchase to ADB's developing members.

The Project Investment Component will support investments in systems for successful distribution, delivery, and administration of vaccines along with associated investments in building capacity, community outreach, and surveillance. This may include such areas as cold-chain storage and transportation, vehicles, distribution infrastructure, processing facilities, and other physical investments.

95. Consider the following statements regarding Carbon Neutrality:

1. It is achieved when anthropogenic CO₂ emissions are balanced by anthropogenic CO₂ removals over a specified period.
2. India has targeted to achieve Carbon Neutrality by 2050 as per its Intended Nationally Determined Contributions (INDCs).

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

Correct Answer: A

Explanation: Statement 1 is correct. Net zero carbon dioxide (CO₂) emissions are achieved when anthropogenic CO₂ emissions are balanced by anthropogenic CO₂ removals over a specified period. Net zero CO₂ emissions are also referred to as carbon neutrality.

Statement 2 is incorrect. India's Intended Nationally Determined Contributions (INDCs):

–To reduce the emissions intensity of GDP by 33%–35% by 2030 below 2005 levels;

–To increase the share of non-fossil-based energy resources to 40% of installed electric power capacity by 2030, with help of transfer of technology and low-cost international finance including from Green Climate Fund (GCF);

–To create an additional (cumulative) carbon sink of 2.5–3 GtCO₂e through additional forest and tree cover by 2030.

96. Consider the following statements regarding the E-way bills:

1. It is a mechanism to ensure that goods being transported comply with the GST Law.
2. For a distance of less than 200 Km the e-way bill is valid for a day from the bill generation.

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

Correct Answer: C

Explanation: Statement 1 is correct. E-way bill is a mechanism to ensure that goods being transported comply with the GST Law and is an effective tool to track movement of goods and check tax evasion.

It is generated from the GST Common Portal for E-Way bill system by the registered persons or transporters who cause movement of goods of consignment before commencement of such movement.

Statement 2 is correct. The validity of e-way bill depends on the distance to be travelled by the goods. For a distance of less than 200 Km the e-way bill will be valid for a day from the relevant date. For every 200 Km thereafter, the validity will be additional one day from the relevant date. The “relevant date” shall mean the date on which the e-way bill has been generated.

As per the notification dated 22 December 2020, No. 94 /2020. the validity period of e-waybill will be changed from 100 KM per day to 200 KM per day from 01/01/2021.

97. Consider the following statements regarding the Sea Vigil-21 Exercise:

1. It is a joint maritime Exercise between Indian and Australian naval forces.
2. The exercise will cover entire coastline and Exclusive Economic Zone of 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

Correct Answer: B

Explanation: Statement 1 is incorrect. The second edition of the biennial pan-India coastal defence exercise ‘Sea Vigil-21’ will be conducted on 12-13 January 2021. Assets of the Indian Navy, Coast Guard, Customs and other maritime agencies will participate in SEA VIGIL, the conduct of which is also being facilitated by the Ministries of Defence, Home Affairs, Shipping, Petroleum and Natural Gas, Fisheries, Customs, State Governments and other agencies of Centre/ State.

Statement 2 is correct. The exercise, inaugural edition of which was conducted in January 2019; will be undertaken along the entire 7516 km coastline and Exclusive Economic Zone of India and will involve all the 13 coastal States and Union Territories along with other maritime stakeholders, including the fishing and coastal communities.

98. What was the mandate of the B.N. Srikrishna Committee?

- a) Data Protection Framework for India
- b) National Education Policy
- c) Doubling the Farmer’s Income
- d) Reforms in Criminal Laws of India

Correct Answer: A

Explanation: A Committee of Experts on a Data Protection Framework for India under the chairmanship of (retd.) Justice B.N. Srikrishna was constituted by the government in 2017 which submitted its report in 2018. The committee also brought out a draft Personal Data Protection Bill (PDPB).

The framework seeks to put in place a culture of privacy by design and promoting concepts such as consent framework, purpose limitation, storage limitation, and data minimization among various other privacy-oriented concepts.

[Dr. Kasturirangan Committee – National Educational Policy.]

[Ashok Dalwai Committee – Doubling the Farmers’ Income]

[Ranbir Singh Committee – Criminal Laws Reforms]

99. Where is Kholongchhu Hydroelectric Project located?

- a) Bhutan
- b) Myanmar
- c) Tibet (China)
- d) Vietnam

Correct Answer: A

Explanation: The Kholongchhu hydroelectric project is a 600MW run-of-the-river hydropower facility under construction on the Kholongchhu River in Bhutan. It is being developed through a joint venture (JV) partnership between India and Bhutan.

The Concession Agreement for the 600 MW Kholongchhu (Joint Venture) Hydroelectric Project between the Royal Government of Bhutan and Kholongchhu Hydro Energy Limited was signed in 2020.

Hydropower sector is the flagship area of India-Bhutan bilateral cooperation. The 720 MW Mangdechhu hydroelectric project was jointly inaugurated earlier in August 2019 by the Hon'ble Prime Ministers of India and Bhutan. With this, four (04) hydroelectric projects of bilateral cooperation (336 MW Chukha HEP, 60 MW Kurichhu HEP, 1020 MW Tala HEP and 720 MW Mangdechhu HEP), totaling over 2100 MW, are already operational in Bhutan.

100. Consider the following statements regarding trends in Indian economy in pandemic year 2020-21:

1. The Services sector have shown a positive growth rate despite the slowdown in economy.
2. The Agriculture, Forestry and Fishing sector is estimated to have negative growth rate.

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

Correct Answer: D

Explanation: Both statements are incorrect.

Trends in Indian Economy:

–India expected to have a Current Account Surplus of 2% of GDP in FY21, a historic high after 17 years

–On supply side, Gross Value Added (GVA) growth pegged at -7.2% in FY21 as against 3.9% in FY20:

–Agriculture set to cushion the shock of the COVID-19 pandemic on the Indian economy in FY21 with a growth of 3.4%

–Industry and services estimated to contract by 9.6% and 8.8% respectively during FY21