#### Q.1) Consider the following pairs with respect to the origin and formation of lakes.

<u>Lakes</u>	<b>Origin/Formation</b>

- 1. Kettle Lake By Glaciation
- 2. Caldera lake By Tectonic activity
- 3. Oxbow lake By river meandering
- 4. Beaver lake By Animals.

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

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

# Q.1) Solution (c)

### **Explanation:**

- A lake is an area filled with water, localized in a basin, surrounded by land, apart from any river or other outlet that serves to feed or drain the lake.
- Lakes lie on land and are not part of the ocean. Therefore, they are distinct from lagoons, and are also larger and deeper than ponds.
- They are formed due to various agents and processes.

Type of Lake	Origin or Formation
Tectonic Lakes, RIft Valley lakes	Formed due to earth movements
Cirque lakes, Tarns, Kettle Lakes, Rock hollow lakes	Formed by glaciation activity
Crater lakes or Caldera Lakes, lava blocked lakes.	Formed by volcanic activity
Karst lakes, Wind deflated lakes	Formed by Erosion
Ox bow lake (Meandering of river)	Formed due to deposition
Beaver lakes	Formed by animals.

# Q.2) Westerlies are stronger and regular in the southern hemisphere than the Northern Hemisphere. Which of the following is/are the reasons behind this?

- 1. Presence of more ocean currents in the southern hemisphere.
- 2. Large expanse of water in the southern hemisphere.
- 3. Higher temperature in southern hemisphere than northern hemisphere.

### Choose the correct option:

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

### Q.2) Solution (a)

### **Explanation:**

- Winds blowing from the subtropical high pressure belts towards the sub polar low pressure belts are called westerlies.
- The directions of the Westerlies are opposite to trade winds and that is why they are also called antitrade winds.
- They blow in the middle latitudes between 30 and 60 degrees latitude, and originate from the high pressure area in the horse latitudes towards the poles.
- The direction of the westerlies are from south-west to north-east in the northern hemisphere and north-west to south-east in the southern hemisphere.
- The westerlies of the southern hemisphere are stronger and regular due to the vast expanse of water. The composition of land is comparatively less compared to the northern hemisphere.
- The westerlies are best developed between 40° and 65°S latitudes. These latitudes are often called Roaring Forties, Furious Fifties, and Shrieking Sixties dreaded terms for sailors.

#### Q.3) What does the term 'Hwangtu' refer to?

- a) Oasis formed in the deserts.
- b) Wind borne dust from the Gobi desert.
- c) Shallow lakes formed in the deserts due to wind erosion.
- d) Depositional landforms in the deserts.

# Q.3) Solution (b)

# **Explanation:**

- The fine dust blown beyond the desert limits is deposited on neighbouring lands as loess. It is a yellow, friable material and is usually very fertile. In China, such yellowish wind-borne dust from the Gobi Desert is called 'Hwangtu' the yellow earth.
- Loess is in fact, fine loam, rich in lime, very coherent and extremely porous. Water sinks in readily so that the surface is always dry.
- Streams have cut deep valleys through the thick mantle of soft loess and badland topography may develop. The most extensive deposit of loess is found in north-west China in the loess plateau of the Hwang- Ho basin.

# Q.4) "Basket of Eggs" topography is formed by which of the following geomorphic agents?

- a) Wind
- b) Glaciers
- c) River
- d) Sea waves

# Q.4) Solution (b)

# **Explanation:**

- The term 'basket of eggs' topography refers to Drumlins which is a depositional landform formed by glaciers.
- They are forms of rounded hummocks resulting from the deposition of glacial till which look like an inverted boat or spoon.
- They vary in size from a few metres to 60-100 metres in height and from a few hundred metres to one-two kilometres in length. When they occur in a cluster they look like a basket of eggs.
- Colonies of drumlins are found in Finland, Northern Island and Wisconsin, USA.

# Q.5) Consider the following statements with respect to "La Nina":

- 1. During La Nina Year, the waters in the eastern pacific ocean are colder than normal.
- 2. La Nina brings heavy rains to Peru and Ecuador regions.

# Which of the above statements is/are correct?

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

### Q.5) Solution (a)

### **Basic Information:**

• El Nino and La Nina are climate patterns of opposite phases which together forms the El Nino Southern Oscillation (ENSO).

### El Nino:

- El Nino is known as the "little boy" or "Christ Child" in Spanish.
- During the El Nino year, the ocean water in the eastern pacific will be warmer than normal. Air pressure drops over large areas of the central Pacific and along the coast of South America. The normal low pressure system is replaced by a weak high in the western Pacific. This change in pressure pattern causes the trade winds to be reduced. This reduction allows the equatorial counter current (current along doldrums) to accumulate warm ocean water along the coastlines of Peru and Ecuador. upwelling along the coasts of peru reduces and there is huge amounts of rainfall in the peru and ecuador regions with reduced rainfall over Australia and India.

#### La Nina:

- La Nina means 'little girl' in Spanish and is also known as El Viejo or 'cold event'.
- During the La Nina phase, the water temperature in the Eastern Pacific gets colder than normal. As a result of this, there is a strong high pressure over the eastern equatorial Pacific.
- La Nina causes drought in Peru and Ecuador, heavy floods in Australia and good monsoon rains in India.

### **Statement Analysis:**

Statement 1	Statement 2
Correct	Incorrect
During La Nina year, the ocean water in the eastern pacific region will be colder than normal.	La Nina brings drought conditions to the peru and ecuador regions. It brings heavy rainfall to Australia and good monsoons to

India.

Q.6) Arrange the following sources of freshwaters in the ascending orders of their percentage distribution.

- 1. Icecaps and Glaciers
- 2. Rivers
- 3. Groundwater.
- 4. Lakes.

#### Choose the correct option:

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

### Q.6) Solution (c)

### **Explanation:**

- The distribution of water on the Earth's surface is extremely uneven. Only 3 percent of water on the surface is fresh. The remaining 97 percent resides in the ocean.
- Of freshwater, 69 percent resides in glaciers, 30 percent underground and less than 1 percent is located in lakes, rivers, and swamps.



# Distribution of Earth's Water

### Q.7) Which of the following is/are factors influencing the temperature of oceans?

- 1. Upwelling
- 2. Cloud cover
- 3. Albedo
- 4. Salinity

### Choose the correct option:

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

### Q.7) Solution (d)

### **Explanation:**

### Factors affecting temperature of ocean regions:

- Insolation and Albedo (proportion of insolation reflected back): Insolation is highest at the equator and it decreases as we move towards the pole. As the sun is the basic source of energy, the temperature profile also follows the same pattern.
- **Cloud cover:** Cloud cover hinders the direct insolation. At a given time earth is covered 50 percent with clouds. As the equator is covered with clouds, temperature at tropics is higher than the equator.
- **Salinity:** Salinity increases boiling point of water, thus evaporation decreases. Hence with higher salinity temperature is high.
- Enclosed seas record higher temperatures than open sea where inter-mixing of warm and cold water takes place.
- **Contact with land:** Oceans in the northern hemisphere are warmer than in the southern hemisphere due to greater contact with land surface.
- Ocean Currents: This is a mechanism of temperature distribution in the ocean. Where warm currents carry warm water from the equator towards the pole and vice versa. Cold currents have a cooling effect in an area like Peru Current and Labrador Current.
- **Upwelling:** On the eastern side of ocean water comes to the surface from the depth of ocean. This water is very cold and has a cooling effect on the surface.

### Q.8) Which of the following are the adaptations of vegetation in the tropical climates?

- 1. Deep roots.
- 2. Large dark green leaves.
- 3. Thick Bark.
- 4. Waxy cuticle.

### Choose the correct option:

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

### Q.8) Solution (b)

#### **Explanation:**

Vegetation of a region represents the sum total of the climatic condition, the below illustration shows the adaptability of the vegetation to the prevailing climatic condition.

#### Adaptations to tropical climates:

- Large dark-green leaves (= lots of chlorophyll) to absorb sun light, especially in understory with lots of shade
- Leaf arrangement maximizes light capture
- Slick waxy cuticle to allow rain to run off
- Shallow roots (no need to go deep for nitrogen or water) and buttress or stilt roots (to help with stability).
- Continuous growth (no year-rings in trees); trees can reach enormous heights.

#### Adaptations to desert climates:

- Small leaves or no leaves at all to minimize water loss
- Photosynthesis instead often in trunk
- Leaves are frequently modified to spines which aid in defense but also can reflect excess light.
- Highly reflective cuticle to reflect excess light.
- Succulence storing of water in specialized tissues (fleshy leaves, trunks, underground etc.) also extensive and deep root system.

#### Adaptations to temperate climates:

- annual life cycle
- deciduousness when perennial
- If not deciduous then leaves are needles protected by thick cuticles to survive winter.
- thick bark to protect against cold winters.

#### Q.9) Which of the following trenches are found in the Atlantic Ocean?

- 1. Tonga trench
- 2. Peurto-Rico trench
- 3. Kurile trench.
- 4. Romanche Trench

#### Choose the correct option:

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

### Q.9) Solution (c)

#### **Basic Information:**

Ocean	Name of the trench
Pacific Ocean	Mariana Trench, Tonga Trench, Kurile Trench, Karmadec Trench, Phillipine Trench, Japan Trench, Peru-Chile Trench
Atlantic Ocean	Peurto-Rico Trench, South Sandwich Trench, Cayman Trench, Romanche trench, Norwegian trench.
Indian Ocean	Sunda Trench, Diamantia trench, sumatra trench.

### Q.10) Arrange the following lakes with respect to their salinity in descending order.

- 1. Caspian sea
- 2. Red Sea
- 3. Dead sea
- 4. Lake Van

### Choose the correct option:

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

### Q.10) Solution (d)

#### **Basic Information:**

Water Body	Salinity (In Ppt)
Baltic Sea	7
Red Sea	39
Caspian Sea	180
Dead sea	250
Lake Van	330

**Q.11)** The plate tectonics theory divides the earth crust into several major and minor plates. Which of the following is/are categorised as minor plates?

- 1. Cocos Plate.
- 2. Australian plate.
- 3. Nazca plate.
- 4. Arabian plate.

#### Choose the correct option:

- a) 1,3 and 4 only
- b) 1,2 and 3 only

- c) 2,3 and 4 only
- d) 1,2,3 and 4

### Q.11) Solution (a)

### **Explanation:**

Major Plates	Minor Plates
Antarctic plate, North-American Plate, South-American Plate, Pacific Plate, India- Australian Plate, African Plate, Eurasian Plate.	Cocos Plate, Nazca Plate, Arabian Plate, Philipine Plate, caroline plate, fuji plate.

### Q.12) What does the term "Tombolo" refer to in geomorphology?

- a) Coastal depositional landforms.
- b) Depositional landforms formed by glaciers.
- c) Erosional Landforms formed by winds.
- d) Erosional Landforms formed by water.

# Q.12) Solution (a)

### **Explanation:**

- When the mainland is attached to an island by a narrow piece of land such as a bar or a spit, the resulting landform is called a tombolo.
- It appears to be a small island that has not fully separated from the mainland. This island-like landform is actually attached to the coast by a thin sand bar or spit.
- Tombolos are sometimes referred to as "tied islands", because they seem to be tethered to the coast.

### Q.13) With respect to measuring earthquakes consider following statements:

- 1. Mercalli scale measures the intensity of the earthquake in which visible damage is captured.
- 2. Richter scale measures the energy released during the earthquake.

### Which of the statements given above is/are correct?

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

### Q.13) Solution (c)

### **Basic Information:**

- The earthquake events are scaled either according to the magnitude or intensity of the shock.
- The magnitude scale is known as the Richter scale. The magnitude relates to the energy released during the quake. The magnitude is expressed in numbers, 0-10.
- The intensity scale is named after Mercalli. The intensity scale takes into account the visible damage caused by the event. The range of intensity scale is from 1-12.

### **Statement Analysis:**

Statement 1	Statement 2
Correct	Correct
The Mercalli scale bases its measurement on the observed effects of the earthquake and describes its intensity.	The Richter scale measures the seismic waves, or the energy released, causing the earthquake and describes the quake's magnitude. It is a logarithmic.
The calculation for the Mercalli scale is quantified from the observation of the earthquake's effect on the earth's surface. It is also based on the effect on humans, objects, and man-made structures.	The logarithmic scale for the Richter is base- 10 and is based on the amplitude of waves.

### Q.14) Consider the following climatic conditions:

- 1. Uniform temperature throughout the year without winters.
- 2. Evening precipitation.
- 3. Convectional rainfall.

# The above described conditions are referring to which of the following climatic regions of the world?

- a) Tropical Marine Climate
- b) Hot wet Equatorial climate.
- c) Mediterranean climate
- d) Sudan climate.

### Q.14) Solution (b)

#### **Explanation:**

- Equatorial hot, wet climate is found between 5 10 degree north & south of the equator.
- The most outstanding feature of the equatorial climate is its great uniformity of temperature throughout the year with no winters.
- The average monthly temperatures are about 26 28 degrees Celsius, with small annual range of temperature 3 degree Centigrade and fairly greater diurnal range of temperature 12 – 15 degree Centigrade.
- Cloudiness and heavy precipitation. 150 250 cm of rainfall or more in a year.
- There is no month without the rain.
- Most of the rainfall is convectional, with thunderstorms & lightning often accompanying the torrential showers.
- Evening showers are common.

# Q.15) Arrange the following gases in the atmosphere as per their percentage by volume in ascending order.

- 1. Carbon dioxide
- 2. Argon
- 3. Hydrogen
- 4. Oxygen
- 5. Nitrogen.

#### Choose the correct option:

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

d) 1-3-2-4-5

### Q.15) Solution (c)

### **Explanation:**

Percentage by volume of various gases in the atmosphere.

- 1. Nitrogen 78 %
- 2. Oxygen- 20 %
- 3. Argon 0.93 %
- 4. Carbon-dioxide 0.03 %
- 5. Neon 0.0018 %
- 6. Helium 0.0005 %
- 7. Ozone 0.00006 %
- 8. Hydrogen 0.00005 %
- 9. Kryton, Xenon, Methane -- Trace amounts.

# Q.16) Which of the following are the indirect sources of obtaining information regarding earth's interior?

- 1. Seismic activity
- 2. Magnetic field
- 3. Volcanic eruptions.

### Choose the correct option:

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

### Q.16) Solution (c)

#### **Explanation:**

The knowledge about the interior of the earth is obtained through direct sources and indirect sources.

Direct sources of Information	Deep Drilling projects, Volcanic Eruptions
Indirect Sources of Information	Gravitation, Magnetic field, Seismic activity, meteors, analysis of temperature and pressure variations within earth.

# Q.17) Which of the following is/are related to the formation or modification of the present day atmosphere?

- 1. Degassing
- 2. Solar Winds.
- 3. Differentiation of materials in earth's interior.
- 4. Photosynthesis.

# Choose the correct option:

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

# Q.17) Solution (d)

# **Explanation:**

The present atmosphere is the result of many factors:

- Solar winds contributed in removing the hydrogen and helium present in the early atmosphere.
- During the cooling of the earth, gases and water vapour were released from the interior of the earth through the process of degassing.
- The composition of the atmosphere was modified by the living world through the process of photosynthesis.

# Q.18) Consider the following statements with respect to water vapour in the atmosphere:

- 1. Water vapour increases from poles towards the equator.
- 2. Water vapour decreases with altitude.

### Which of the above statements is/are correct?

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

### Q.18) Solution (c)

### **Basic Information:**

- Gases form of water present in the atmosphere is called water vapour. It is one of the most variable gaseous substances present in the atmosphere.
- It is the source of all kinds of precipitation.
- The amount of water vapour varies from 2 percent to 4 percent. Its maximum amount in the atmosphere could be up to 4% which is found in the warm and wet regions.
- Water vapour reaches in the atmosphere through evaporation and transpiration.
- Water vapour absorbs part of the incoming solar radiation (insolation) from the sun and preserves the earth's radiated heat. It thus acts like a blanket allowing the earth neither to become too cold nor too hot.
- Water vapour also contributes to the stability and instability in the air.
- The amount of water vapour decreases with altitude.
- It also decreases from the equator towards the poles

### **Statement Analysis:**

Statement 1	Statement 2
Correct	Correct
Water vapour increases from poles towards equator due to higher amount of insolation received towards the equator.	As one goes higher in the atmosphere, the amount of water vapour decreases.

### Q.19) With respect to the cyclones and anti-cyclones, consider the following statements.

1. Cyclones have high pressure at the centre while anti-cyclones have low pressure at the centre.

2. Winds blow anti-clockwise in the northern hemisphere in cyclones and clockwise in anti-cyclones.

### Which of the above statements is/are correct?

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

### Q.19) Solution (b)

### **Basic Information:**

### **Cyclones:**

- cyclone is a large scale air mass that rotates around a strong center of low atmospheric pressure.
- Cyclones are characterized by inward spiraling winds that rotate about a zone of low pressure.
- There are two types of cyclones. Tropical Cyclones and Temperate cyclones.
- Cyclones move in Anti clockwise in Northern hemisphere and in Clockwise direction in Southern hemisphere due to coriolis effect.

### Anticyclones:

- An anticyclone is just opposite to a cyclone
- Basically it is a large-scale circulation of winds around a central region of high atmospheric pressure
- Clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere
- Anticyclones herald fair weather, clearing skies, calm air with high temperature in summers & cold in winters



### **Statement Analysis:**

Statement 1	Statement 2
Incorrect	Correct
The major difference between the cyclones and anti-cyclones is that the cyclones are low pressure systems. WInds blow from outside towards inside i.e, from high pressure outside to low pressure at the centre. While this is opposite in the anti- cyclones.	Winds blow anti-clockwise in the Northern hemisphere and clockwise in the southern hemisphere in cyclones due to coriolis force. While in anti-cyclones winds blow clockwise in the northern hemisphere and anti-clockwise in southern hemisphere.

### Q.20) Consider the following statements with regard to seismic waves.

- 1. P-waves are compressional waves while S-Waves are longitudinal waves.
- 2. S-Waves are faster and travel through solids, liquids and gases.

### Which of the above statements is/are correct?

- a) 1 only
- b) 2 only

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

### Q.20) Solution (a)

#### **Basic Information:**

#### Seismic Waves:

- Seismic waves are waves of energy that travel through the Earth's layers.
- They are a result of earthquakes, volcanic eruptions, magma movement, large landslides and large man-made explosions that give out low-frequency acoustic energy.
- There are two types of seismic waves :
  - 1. Body waves
  - 2. Surface waves.

#### **Body Waves and Surface Waves:**

- Body waves are the waves that can travel through the layers of the earth and surface waves travel on the surface of the earth.
- Body Waves are divided into P-waves and S-waves.
- P waves or Primary waves are the first waves to reach the surface of the earth. They travel in a to and fro manner, hence, are called compressional waves. They are fastest seismic waves and can move through solid, liquid or gas.
- S waves, or Secondary waves, are the second waves to arrive during an earthquake. They are much slower than P waves and can travel only through solids. They Shake the medium in the direction perpendicular to which they are moving and hence called transverse waves.
- Surface waves are called by different names like Rayleigh Waves, Love waves, Stoneley waves etc.

#### **Statement Analysis:**

Statement 1	Statement 2
Incorrect	Incorrect
P - waves are compressional waves while S- waves are called Transverse waves.	P - waves are faster and travel through solids, liquids and gases.

### Q.21) Which of the following is/are a Zoonosis?

- 1. Cat scratch fever
- 2. Swine flu
- 3. Fish tank granuloma
- 4. Q fever

### Select the correct answer using the code given below:

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

### Q.21) Solution (d)

- 1. Cat scratch fever, also called cat scratch disease (CSD), is a bacterial infection. The disease gets its name because people contract it from cats infected with Bartonella henselae bacteria.
- Swine flu is an infection caused by a virus. It's named for a virus that pigs can get.In 2009 a strain of swine flu called H1N1 infected many people around the world. The virus is contagious and can spread from human to human.
- 3. Fish tank granulomais a skin condition caused by Mycobacterium marinum, characterized by a skin lesion that presents roughly three weeks after exposure.
- Zoonosis is another name for a zoonotic disease.
- Diseases, transmissible from animals to humans through direct contact or though food, water, and the environment, are commonly referred to as "zoonosis."
- Zoonoses may be bacterial, viral, or parasitic, or may involve unconventional agents.
- Antimicrobial resistance in human pathogens is another major public health threat which is partly impacted by use of antibiotics in animal husbandry and agriculture.

#### Zoonoses can be transmitted in various ways:

- ➤ through the air
- by eating contaminated meat or produce
- through close contact with an infected animal
- > by touching an area or surface that an infected animal touched
- through insect bites like mosquitos or ticks

- 1. Vectorborne: e.g being bitten by a tick, a mosquito, a flea. Diseases that can be transmitted in this way include malaria, West Nile virus and Lyme disease.
- Direct contact or close proximity. Coming into contact with the saliva, blood, urine, mucous, faeces or other body fluids of an infected animal; or with areas where animals live and roam, or objects or surfaces that have been contaminated with germs.

Diseases that are mainly transmissible to other animals or humans in this way include:

- Avian influenza, a highly contagious viral disease which occurs primarily in poultry and wild water birds.
- Q fever, a disease caused by the bacterium Coxiela burnetti. It has been reported in a wide range of species, including cattle, sheep and goats. People can get infected by breathing in dust contaminated with bacteria from the placenta and birth fluids or faeces of infected animals.
- Salmonella infections, which can originate from contact with infected reptiles and amphibians such as pet snakes, iguanas and frogs or their environment.
- Verotoxin-producing Escherichia coli (E. coli), which can be acquired through contact with infected farm animals.
- These diseases can also be transmitted through the environment, e.g. Verotoxinproducing E. coli in contaminated swimming water.
- Salmonellosis and listeriosis are caused by eating contaminated food or drinking water

### Q.22) With reference to Ayushman Bharat Scheme, Consider the following statements:

- 1. It will cover over 10 crore poor and vulnerable families providing coverage for primary, secondary and tertiary care hospitalization.
- 2. It provides a cover of rupees 5 lakh per family per year for medical treatment in empanelled public hospitals only.

#### Which of the statements given above is/are incorrect?

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

### Q.22) Solution (c)

# The Central government has decided to provide free testing and treatment of Coronavirus under the Ayushman Bharat Yojana.

- Ayushman Bharat is National Health Protection Scheme, which will cover over 10 crore poor and vulnerable families (approximately 50 crore beneficiaries) providing coverage upto 5 lakh rupees per family per year **for secondary and tertiary care hospitalization.**
- It provides a cover of 5 lakh per family per year for medical treatment in **empanelled** hospitals, both public and private.
- Ayushman Bharat National Health Protection Mission will subsume the on-going centrally sponsored schemes Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS).
- It provides cashless and paperless service to its beneficiaries at the hospital.
- E-cards are provided to the eligible beneficiaries based on the deprivation and occupational criteria of Socio-Economic Caste Census 2011 (SECC 2011).
- There is no restriction on family size, age or gender.
- All previous medical conditions are covered under the scheme.
- It covers 3 days of hospitalisation and 15 days of post hospitalisation, including diagnostic care and expenses on medicines.
- The scheme is portable and a beneficiary can avail medical treatment at any PM-JAY empanelled hospital outside their state and anywhere in the country.
- States would need to have State Health Agency (SHA) to implement the scheme.

### Q.23) Consider the following statements:

- 1. Inter-State migration and quarantine are under the Concurrent List.
- 2. The prevention of infectious diseases moving from one State to another is under the Union 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

### Q.23) Solution (d)

Kerala-Karnataka border issue poses questions on restrictions, relations during a pandemic – COVID19.

- Inter-State migration and quarantine are under the Union List, while the prevention of infectious diseases moving from one State to another is under the Concurrent List.
- This means that while States have the power to impose border restrictions, the responsibility to prevent a breakdown of inter-State relations over such disputes is on the Centre.
- The Kerala High Court took the view that denying emergency medical aid amounts to a violation of the right to life and liberty.
- Article 21: Denying emergency medical aid amounts to a violation of the right to life and liberty.

Earlier the Kerala Governor promulgated the 'Kerala Epidemic Diseases Ordinance, 2020' to arm itself with extraordinary powers to deal with the pandemic. One of its clauses says the State can seal its borders for such period as necessary, while another empowers it to restrict the duration of essential or emergency services, including health, food supply and fuel.

# Q.24) Which of the following is/are Correctly matched:

- 1. COVSACK COVID-19 Sample Collection Kiosk developed by Indian Railways.
- 2. CovidGyan a website for scientifically accurate COVID-19 related content launched by IISc, TIFR Centres, Tata Memorial Centre and others.
- 3. Jeevan low-cost ventilator prototype for Covid-19 patients manufactured by DRDO.

### Select the correct answer using the code given below:

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

# Q.24) Solution (b)

The Defence Research and Development Laboratory, Hyderabad of Defence Research and Development Organisation (DRDO) developed the 'COVID-19 Sample Collection Kiosk' (COVSACK) to combat the coronavirus.

- The COVSACK is a kiosk through which healthcare workers can take coronavirus samples from suspected infected patients. The patient walks into the kiosk and a nasal/oral swab is taken by healthcare professional from outside through the built-in gloves, according to a statement.
- The kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread. The shielding screen of the kiosk cabin protects the healthcare worker from the aerosols/droplet transmission while taking the sample. This reduces the need of frequent PPE change by healthcare workers.

CovidGyan, a website dedicated to scientifically accurate COVID-19 related content and resources, has been launched as a joint initiative of multiple institutions including IISc, various TIFR Centres, Tata Memorial Centre, India Bioscience, the Bangalore Life Science Cluster (NCBS, inStem & C-CAMP) and Vigyan Prasar.

Indian Railways, has manufactured a low-cost ventilator prototype 'Jeevan' for Covid-19 patients.

 Jeevan can be utilised as an emergency ventilator and its production is easy, which can be done with the smaller size components or locally sourced components. The body of the ventilator has been made from the train coach components. The cost of this device will be a fraction of what the regular ventilators cost.

CSIR constituent Lab in Bengaluru, CSIR-National Aerospace Laboratories (CSIR-NAL), along with MAF Clothing, Bengaluru has developed and certified the overall protective coverall suit. The polyproplylene spun laminated multi-layered non-woven fabric-based coverall can be used to ensure the safety of doctors, nurses, paramedical staff and healthcare workers working round the clock on COVID-19 mitigation.

### Q.25) With reference to Compensation cess, Consider the following statements:

- 1. It is a relief for States for the loss of revenues arising from the implementation of GST.
- 2. It is levied only on five products considered to be sin or luxury goods.
- 3. Firstly, the collected compensation cess flows into the Consolidated Fund of India.

### Which of the statements given above is/are correct?

- a) 1 and 3 only
- b) 1 only

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

### Q.25) Solution (d)

- Compensation cess was introduced as relief for States for the loss of revenues arising from the implementation of GST.
- States, in lieu of giving up their powers to collect taxes on goods and services after local levies were subsumed under the GST, were guaranteed a 14 per cent tax revenue growth in the first five years after GST implementation by the Central government. States' tax revenue as of FY16 is considered as the base year for the calculation of this 14 per cent growth. Any shortfall against it is supposed to be compensated by the Centre using the funds specifically collected as compensation cess.
- Compensation cess is levied on five products considered to be 'sin' or luxury goods. For example, SUV vehicles (more than 4 metres) are charged 50 per cent GST, of which the GST tax rate is 28 per cent and the compensation cess is 22 per cent. The collected compensation cess flows into the Consolidated Fund of India, and then transferred to the Public Account of India, where a GST compensation cess account has been created. States are compensated bi-monthly from the accumulated funds in this account.
- Select vehicles, tobacco and aerated drinks, apart from coal, are levied a compensation cess.

### Q.26) The term 'Compulsory Licensing' is mentioned in which of the following?

- a) Companies Act 2013
- b) Indian Patent Act, 1970
- c) Indian Telegraph Act, 1885
- d) Information Technology Act, 2000

# Q.26) Solution (b)

### **Compulsory licensing**

 It is when a government allows someone else to produce a patented product or process without the consent of the patent owner or plans to use the patentprotected invention itself. It is one of the flexibilities in the field of patent protection included in the WTO's agreement on intellectual property — the TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement.

• This concept is recognised at both national as well as international levels, with express mention in both (Indian) Patent Act, 1970 and TRIPS Agreement. There are certain pre-requisite conditions, given under sections 84-92, which need to be fulfilled if a compulsory license is to be granted in favour of someone.

### Q.27) Which of the following statements is/are correct?

- 1. India is the world's third-largest importer of crude oil.
- 2. India is the world's largest importer of Liquified Natural Gas.

### Select the correct statements

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

# Q.27) Solution (a)

India is the world's third-largest importer of crude oil and the fourth largest importer of LNG.

### Q.28) 'United for Biodiversity' Coalition has been launched by

- a) MERCOSUR
- b) BIMSTEC
- c) European Commission
- d) Climate Vulnerable Group

# Q.28) Solution (c)

The European Commission (EC) launched the 'United for Biodiversity' coalition made up of zoos, aquariums, botanical gardens, national parks, and natural history and science museums from around the world, on World Wildlife Day 2020.

# Q.29) Consider the following statements

- 1. Bal Gangadhar Tilak in his newspaper, 'Kesari', had criticised measures adopted by the government to tackle the plague epidemic in Maharashtra.
- 2. Chapekar brothers assassinated the plague commissioner of Poona/Pune.

# Select the correct statements

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

### Q.29) Solution (c)

### **Epidemic Diseases Act**

- It was first drafted to deal with bubonic plague that swept Maharashtra in 1897.
- The Act prohibited public gatherings, and regulated travel, routine screening, segregation, and quarantine.
- Bal Gangadhar Tilak was described as the 'father of Indian unrest' by Valentine Chirol of The Times (London). His newspaper, Kesari, had criticised measures adopted by the government to tackle the epidemic.
- Damodar Hari Chapekar and Balkrishna Hari Chapekar, assassinated W.C. Rand, the plague commissioner of Poona, and Lieutenant Charles Egerton Ayerst, an officer of the administration.

### Q.30) The 'Mighty Five' countries is often discussed in the context of

- a) Manufacturing Sector
- b) IT and services Sector
- c) Climate Mitigation
- d) Passport Strength

### Q.30) Solution (a)

Mighty 5 or MITI-V is not the name of a new team of superheroes, rather it is the acronym for Malaysia, India, Thailand, Indonesia and Vietnam – five nations predicted to be among the 15-most competitive manufacturing countries in the world by 2020.