



INSIGHTSIAS
SIMPLIFYING IAS EXAM PREPARATION

INSTA STATIC QUIZ

OCTOBER 2020

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INSIGHTSIAS
SIMPLIFYING IAS EXAM
PREPARATION

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1. Polity

1) Consider the following statements regarding Parliamentary privileges.

1. The Constitution provides Parliamentary privileges to the members of both the houses of parliament and not their committees.
2. The Constitution has also extended the parliamentary privileges to those persons who are entitled to speak in the proceedings of a House of Parliament.
3. The parliamentary privileges do not extend to the president of India.

Which of the above statements is/are correct?

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

Solution: b)

Parliamentary privileges are special rights, immunities and exemptions enjoyed by the two Houses of Parliament, their committees and their members.

The Constitution has also extended the parliamentary privileges to **those persons who are entitled to speak and take part in the proceedings** of a House of Parliament or any of its committees. These include the **attorney general of India and Union ministers**.

The parliamentary privileges **do not extend to the president** who is also an integral part of the Parliament.

2) Consider the following statements regarding Committee of Privileges.

1. The functions of this committee are semi-judicial in nature.
2. In the Lok Sabha, the Speaker nominates a committee of privileges.
3. In the Rajya Sabha, the deputy chairperson heads the committee of privileges.

Which of the above statements is/are correct?

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

Solution: d)

In the Lok Sabha, the Speaker nominates a committee of privileges consisting of 15 members as per respective party strengths.

In the Rajya Sabha, the deputy chairperson heads the committee of privileges, that consists of 10 members.

The functions of this committee are semi-judicial in nature.

3) The Rajya Sabha has special powers in which of the following matters.

1. It can authorise the Parliament to make a law on a subject enumerated in the State List.
2. A resolution for the discontinuance of the national emergency can be passed only by the Rajya Sabha.
3. It can authorise the Parliament to create new All-India Services common to both the Centre and states.

Which of the above statements is/are correct?

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

Solution: c)

Due to its federal character, the **Rajya Sabha has been given two exclusive or special powers** that are not enjoyed by the Lok Sabha:

1. It can authorise the Parliament to make a law on a subject enumerated in the State List (Article 249).
2. It can authorise the Parliament to create new All-India Services common to both the Centre and states (Article 312).

A resolution for the discontinuance of the national emergency can be passed only by the Lok Sabha and not by the Rajya Sabha.

4) Consider the following statements

1. Parliament can increase the area of any state without the consent of state legislature.
2. Parliament can alter the name of any state without the consent of state legislature.

Which of the above statements is/are correct?

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

Solution: c)

Article 3 authorises the Parliament to:

- (a) form a new state by separation of territory from any state or by uniting two or more states or parts of states or by uniting any territory to a part of any state,
- (b) increase the area of any state,
- (c) diminish the area of any state,
- (d) alter the boundaries of any state, and
- (e) alter the name of any state without the consent of the state.

Constitution authorises the Parliament to form new states or alter the areas, boundaries or names of the existing states without their consent.

5) Which of the following are the federal features of the Indian Constitution?

1. Written Constitution
2. Division of powers
3. All States having an equal number of seats in the Rajya Sabha

Select the correct answer code:

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

Solution: b)

The seats are allotted to the states in the Rajya Sabha on the basis of population. Hence, the number of representatives vary from state to state.

6) Consider the following statements regarding Parliamentary privileges.

1. The press can publish true reports of parliamentary proceedings without prior permission of the House.
2. A member of the parliament cannot be arrested during the session of Parliament if he/she is booked in civil case.
3. Courts can inquire into the validity of any proceedings in Parliament on the ground of an alleged irregularity of procedure.

Which of the above statements is/are correct?

- a) 1, 2

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

Solution: a)

The **44th Amendment Act of 1978** restored the freedom of the press to publish true reports of parliamentary proceedings without prior permission of the House. But this is not applicable in the case of a secret sitting of the House.

The **courts are prohibited to inquire into the proceedings of a House or its committees.**

Members cannot be arrested during the session of Parliament and 40 days before the beginning and 40 days after the end of a session. This privilege is **available only in civil cases** and not in criminal cases or preventive detention cases.

7) Which of the following factors limit the sovereignty of Indian Parliament?

1. Written Nature of the Constitution
2. Federal System of Government
3. System of Judicial Review
4. Fundamental Rights
5. Fundamental Duties

Select the correct answer code:

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

Solution: c)

The factors that limit the sovereignty of Indian Parliament are:

Written Nature of the Constitution: Parliament has to operate within the limits prescribed by the Constitution.

Federal System of Government: The law-making authority of the Parliament gets confined to the subjects enumerated in the Union List and Concurrent List and does not extend to the subjects enumerated in the State List (except in five abnormal circumstances and that too for a short period).

System of Judicial Review: The adoption of an independent Judiciary with the power of judicial review also restricts the supremacy of our Parliament.

Fundamental Rights: The authority of the Parliament is also restricted by the incorporation of a code of justiciable fundamental rights under Part III of the Constitution.

Fundamental duties does not limit the sovereignty of Indian Parliament.

8) Consider the following statements.

1. The Constitution contains lists that detail the subjects that each tier of government can make laws on.
2. Indian citizens are governed by laws and rules made by both Central and state governments at the same time.
3. Under federalism, the states derive their authority from the Centre.

Which of the above statements is/are correct?

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

d) 1, 2, 3

Solution: b)

Constitutional existence of several tiers of government is the first pre-requisite of a federal polity.

Under federalism, the states do not derive their authority from the Centre, but from the Constitution. While the centre may direct the states to perform certain actions, the fact is that they are an independent tier of government.

The Constitution contains lists that detail the issues that each tier of government can make laws on. All persons in India are governed by laws and policies made by each of these levels of government.

9) The famous Minerva Mills case was related to

- a) Evolution of the basic structure doctrine of the Constitution of India
- b) Supremacy to Directive Principles of State Policy over the Fundamental Rights
- c) Expansion of the Right to Freedom of Speech and Expression
- d) Both (a) and (b)

Solution: d)

Minerva Mills Ltd. and Ors. v. Union Of India and Ors. is a landmark decision of the Supreme Court of India that applied and evolved the **basic structure doctrine** of the Constitution of India.

The 42nd Amendment Act accorded the position of legal primacy and supremacy to the Directive Principles over the Fundamental Rights conferred by Articles 14, 19 and 31. However, this extension was declared as unconstitutional and invalid by the Supreme Court in the Minerva Mills case.

10) Which of the following is not an essential qualification for appointment as a Governor?

- a) He should be a citizen of India
- b) He should be a domicile of the State to which he is being appointed
- c) He must have completed the age of 35 years
- d) He must not be a member of either House of Parliament

Solution: b)

The Constitution lays down only two qualifications for the appointment of a person as a governor. These are:

1. He should be a citizen of India.
2. He should have completed the age of 35 years.

Additionally, two conventions have also developed in this regard over the years.

First, he should be an outsider, that is, he should not belong to the state where he is appointed, so that he is free from the local politics.

Second, while appointing the governor, the president is required to consult the chief minister of the state concerned, So that the smooth functioning of the constitutional machinery in the state is ensured.

However, both the conventions have been violated in some of the cases.

11) In the Indian Parliamentary model of Government

- a) The Centre controls the States and Union territories
- b) The Judiciary controls the Executive
- c) The Executive is responsible to the Legislature
- d) The Legislature controls the Judiciary

Solution: c)

The **Constitution of India provides for a parliamentary form of government**, both at the Centre and in the states. The parliamentary system of government is the one in which the **executive is responsible to the legislature** for its policies and acts.

12) Consider the following statements

1. The Constitution of India is neither rigid nor flexible.
2. Article 368 provides for amendment of the constitution by three ways: by a special majority of the Parliament, by a special majority of the Parliament and with the ratification by half of the total states and by simple majority of the Parliament.
3. Division of powers, written Constitution, supremacy of Constitution, flexibility of Constitution, independent judiciary and bicameralism are the features of a federation.

Which of the above statements is/are incorrect?

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

Solution: c)

The Constitution of India is neither rigid nor flexible but a synthesis of both.

Article 368 provides for two types of amendments:

- (a) Some provisions can be amended by a special majority of the Parliament, i.e., a two-third majority of the members of each House present and voting, and a majority (that is, more than 50 per cent), of the total membership of each House.
- (b) Some other provisions can be amended by a special majority of the Parliament and with the ratification by half of the total states.

At the same time, some provisions of the Constitution can be amended by a simple majority of the Parliament in the manner of ordinary legislative process. Notably, these amendments do not come under Article 368.

The Constitution of India establishes a federal system of government. It contains all the usual features of a federation, viz., two government, division of powers, written Constitution, supremacy of Constitution, rigidity of Constitution, independent judiciary and bicameralism.

Flexibility of Constitution is a unitary or non-federal feature.

13) Which one of the following Directive Principles was not originally provided in the Constitution of India?

- a) Organization of village panchayats
- b) Safeguard forests and wild life
- c) Uniform civil code for the citizens
- d) Organization of agriculture and animal husbandry

Solution: b)

The 42nd Amendment Act of 1976 added four new Directive Principles to the original list. They require the State:

- (i) To secure opportunities for healthy development of children (Article 39).
- (ii) To promote equal justice and to provide free legal aid to the poor (Article 39 A).
- (iii) To take steps to secure the participation of workers in the management of industries (Article 43 A).
- (iv) To protect and improve the environment and to **safeguard forests and wild life** (Article 48 A)

14) Consider the following statement regarding Fundamental Rights.

1. Fundamental Rights in our Constitution are more elaborate than those found in the Constitution of any other country in the world, including the USA.
2. Fundamental Rights are named so because they are guaranteed and protected by the Parliament, the supreme law-making body in India.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only

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

Solution: a)

Part III of the Constitution is rightly described as the Magna Carta of India. It contains a very long and comprehensive list of 'justiciable' Fundamental Rights. In fact, the **Fundamental Rights in our Constitution are more elaborate than those found in the Constitution of any other country in the world, including the USA.**

The **Fundamental Rights** are named so because they are guaranteed and protected by the Constitution, which is the fundamental law of the land.

15) Consider the following statements regarding the constitution of India?

1. Constitution is the supreme law that determines the relationship between the citizens and government.
2. It specifies how the government will be constituted and also lays down limits on the powers of the government.
3. It expresses the aspirations of the people about creating a good society.

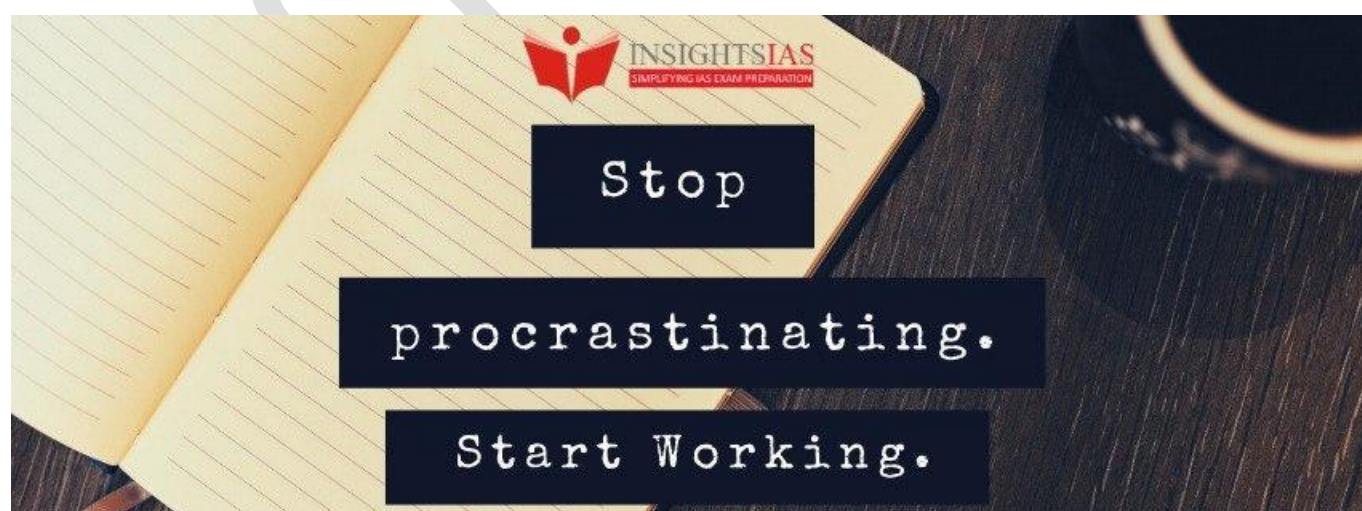
Select the correct answer code:

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

Solution: d)

Constitution is the supreme law that determines the relationship among citizens and also the relationship between the citizens and government. Moreover:

- First, it generates a degree of trust and coordination that is necessary for different kind of people to live together;
- Second, it **specifies how the government will be constituted**, for e.g. by democratic elections.
- Third, it **lays down limits on the powers of the government** and tells us what the rights of the citizens are; and
- Fourth, it **expresses the aspirations of the people**, for e.g. by preamble and DPSP.



2. Geography

1) Consider the following statements regarding Amazon Rainforest.

1. The area covered by Amazon rainforest is larger than Australia.
2. The Andes mountains is located to the east of Amazon rainforest.
3. The entire Amazon rainforest area is located between equator and Tropic of Capricorn.

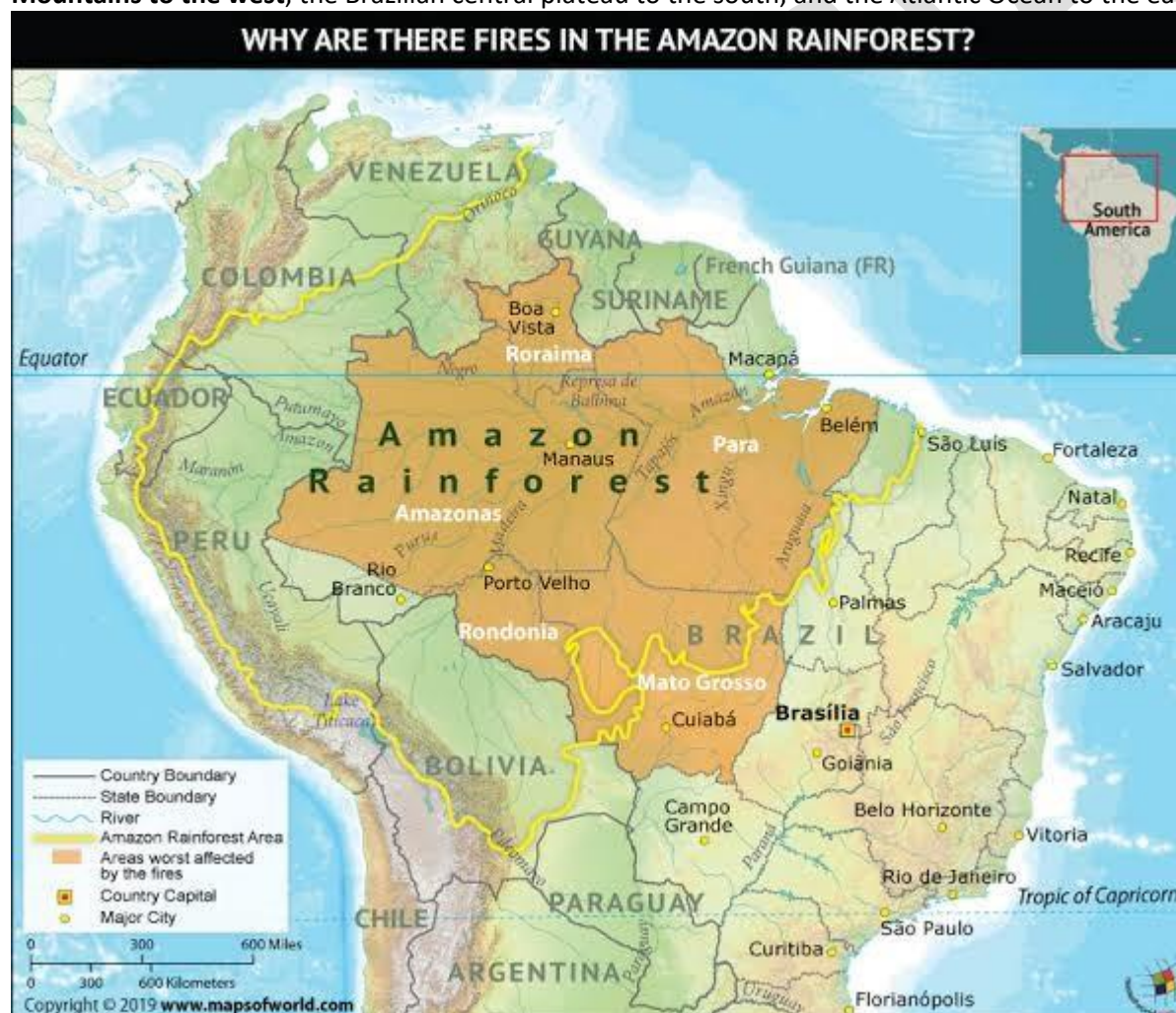
Which of the above statements is/are correct?

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

Solution: b)

Amazon rainforest covers approximately eight million square kilometres — an area larger than Australia.

Comprising about 40% of Brazil's total area, it is bounded by the Guiana Highlands to the north, the **Andes Mountains to the west**, the Brazilian central plateau to the south, and the Atlantic Ocean to the east.



2) The Amazon basin is located in which of the following countries?

1. Bolivia
2. Venezuela
3. Suriname
4. French Guiana
5. Paraguay

Select the correct answer code:

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

Solution: b)

The Amazon basin is the part of South America drained by the Amazon River and its tributaries. It is located in the countries of Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana and French Guiana (France).

3) Consider the following statements regarding Rainforests.

- 1. Rainforests are home to more than half of the world's plant and animal species.
- 2. Rainforests thrive on every continent on earth.
- 3. The largest rainforests on Earth surround the Amazon River and the Congo River.

Which of the above statements is/are correct?

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

Solution: b)

A rainforest is an area of tall, mostly evergreen trees and a high amount of rainfall.

They are home to more than half of the world's plant and animal species—even though they cover just 6% of Earth's surface.

Rainforests thrive on every continent except Antarctica. The largest rainforests on Earth surround the Amazon River in South America and the Congo River in Africa.

The tropical islands of Southeast Asia and parts of Australia support dense rainforest habitats.

4) 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

Solution: c)

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 Ghats, 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.

5) Which of the following best describes the 'Marine upwelling'?

- a) Periodic rise and fall of the ocean due to gravitational attraction of the moon.
- b) Rise in the sea level due to the global warming.

- c) Rise of deep cold water towards the surface of the ocean.
- d) Storm surges hitting the coast due to cyclonic activity.

Solution: c)

Winds blowing across the ocean surface push water away. Water then rises up from beneath the surface to replace the water that was pushed away. This process is known as “upwelling.”

Upwelling occurs in the open ocean and along coastlines. The reverse process, called “downwelling,” also occurs when wind causes surface water to build up along a coastline and the surface water eventually sinks toward the bottom.

Water that rises to the surface as a result of upwelling is typically colder and is rich in nutrients. These nutrients “fertilize” surface waters, meaning that these surface waters often have high biological productivity. Therefore, good fishing grounds typically are found where upwelling is common.

6) Most Rainforests are structured in different layers. Which of the following factors are responsible for this?

- 1. Water
- 2. Sunlight
- 3. Air circulation

Select the correct answer code:

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

Solution: d)

Most rainforests are structured in four layers: emergent, canopy, understory, and forest floor. Each layer has unique characteristics based on differing levels of water, sunlight, and air circulation. While each layer is distinct, they exist in an interdependent system: processes and species in one layer influence those in another.

7) Consider the following statements regarding Foreshocks and earthquake swarm.

- 1. Foreshocks are mild earthquakes that precede larger earthquakes in the same location.
- 2. An earthquake cannot be identified as a foreshock until after a larger earthquake in the same area occurs.
- 3. An earthquake swarm is a sequence of seismic events occurring in a local area within a relatively short period of time.
- 4. Foreshocks and earthquake swarm are mainly clustered in the north-eastern and north-western Himalayan region.

Which of the above statements is/are correct?

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

Solution: c)

The recent earthquakes in different parts of India, albeit of small magnitudes, have occurred due to foreshocks and swarms, a top official of the Geological Survey of India (GSI) said.

Foreshocks -- mild tremor preceding earthquakes -- or swarm activities -- series of earthquakes -- indicate release of tectonic stress and strain during the continuous deformation process, and a detailed study of these jolts could help predict if a significant seismic event is in store.

These minor earthquakes are mainly clustered in the north-eastern and north-western Himalayan region, around the Delhi-National Capital Territory (NCT), western Gujarat and Western Maharashtra areas which have been

demarcated as seismic zones IV and V.

[Source](#)

- 8) Most volcanoes and earthquakes in the world are located at
- The inter-junction of high mountain stretches along the continental belts
 - Within the plates
 - Plate margins
 - Littoral zones of major oceans

Solution: c)

Plate margins witness several plate collisions, sliding, transformation etc that result into volcanism or earthquakes.

Most of them are found in the Ring of Fire.

Some earthquakes also occur within the plates but not as frequently as on the plate margins.

- 9) Consider the following statements regarding Earthquakes and Volcano.
1. Earthquake normally occurs along with the volcanoes.
 2. Volcanoes occur only where ocean crust collides with continental crust.
 3. Volcanoes are one of the best sources of sulphur.

Select the correct answer code:

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

Solution: a)

Earth quakes are usually associated with volcanoes, since both are related to plate movements.

Volcanoes can also happen with ocean-ocean crust collision. Best example is South East Asian Archipelago. Volcanoes are one of the best sources of sulphur, which is not abundant on other continental landforms.

- 10) The thickness of the troposphere is greater at the equator rather than at the poles because of
1. Rotation of the earth pushes the atmosphere near equator to greater heights
 2. Convection currents leading to thermal expansion of the atmosphere at the equator

Which of the above statements is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Solution: c)

The troposphere is thicker at the equator than at the poles because the equator is warmer. The convection currents of air expand the thickness of the troposphere (atmosphere).

Thus the simple reason is thermal expansion of the atmosphere at the equator and thermal contraction near the poles.

Also, the rotation of the earth causes centrifugal force which is strongest near the equator and pushes the atmosphere to greater heights.

The thickness of the troposphere also varies with season. The troposphere is thicker in the summer and thinner in the winter all around the planet.

- 11) Consider the following statements.
1. The expansion created by the "Big Bang" continues even to the present day.

2. After the Big Bang, the Universe became highly opaque and temperatures started rising till the atmosphere was formed.

Which of the above statements is/are incorrect?

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

Solution: b)

The Big Bang Theory considers the following stages in the development of the universe.

- (i) In the beginning, all matter forming the universe existed in one place in the form of a "tiny ball" (singular atom) with an unimaginably small volume, infinite temperature and infinite density.
- (ii) At the Big Bang the "tiny ball" exploded violently. This led to a huge expansion. It is now generally accepted that the event of big bang took place 13.7 billion years before the present. **The expansion continues even to the present day.** As it grew, some energy was converted into matter. There was particularly rapid expansion within fractions of a second after the bang. Thereafter, the expansion has slowed down. Within first three minutes from the Big Bang event, the first atom began to form.
- (iii) Within 300,000 years from the Big Bang, **temperature dropped to 4,500K (Kelvin) and gave rise to atomic matter. The universe became transparent.**

12) Consider the following statements regarding Temperate Rainforests.

- 1. Temperate rainforests are found mostly in coastal, mountainous areas.
- 2. Cooler temperatures and a more stable climate slow down decomposition, allowing more material to accumulate.
- 3. Temperate rainforests are the most biologically diverse terrestrial ecosystems in the world.

Which of the above statements is/are correct?

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

Solution: c)

Temperate rainforests are located in the mid-latitudes, where temperatures are much more mild than the tropics. **Temperate rainforests are found mostly in coastal, mountainous areas.** Rainfall in these forests is produced by warm, moist air coming in from the coast and being trapped by nearby mountains.

Cooler temperatures and a more stable climate slow down decomposition, allowing more material to accumulate. This productivity allows many plant species to grow for incredibly long periods of time.

Tropical rainforests are the most biologically diverse terrestrial ecosystems in the world.

[Source](#)

13) Consider the following statements.

- 1. In India, oilseeds are largely grown under rainfed conditions.
- 2. Soybean and groundnut contributes to more than 80% of total oilseeds production in India.
- 3. Madhya Pradesh, Maharashtra and Rajasthan are the major Soybean growing states.

Which of the above statements is/are correct?

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

Solution: b)

Soybean (34%), groundnut (27%), rapeseed & mustard (27%) contributes to more than 88% of total oilseeds production and >80% of vegetable oil with major share of mustard (35%), soybean (23%) and groundnut (25%).

Andhra Pradesh (groundnut) & Gujarat (groundnut), Haryana (Mustard), Karnataka (G.nut), **M.P(Soybean), Maharashtra (Soybean), Rajasthan (Mustard & Soybean)**, Tamil Nadu (G. nut), U.P(Mustard), West Bengal (Mustard) contributing more than 95% of total oilseed production in the country.

Majority of the oilseeds are cultivated under rainfed ecosystem (70%).

14) Which of the following lake is not part of Great Lakes region of North America?

- a) Lake Erie
- b) Great Slave Lake
- c) Michigan Lake
- d) Lake Ontario

Solution: b)

The Great Lakes also called the Laurentian Great Lakes and the Great Lakes of North America, are a series of interconnected freshwater lakes located primarily in the upper mid-east region of North America, on the Canada–United States border, which connect to the Atlantic Ocean through the Saint Lawrence River. They consist of **Lakes Superior, Michigan, Huron, Erie, and Ontario.**

15) Which of the following rivers flows through Kaziranga National Park.

- 1. Brahmaputra
- 2. Diphlu
- 3. Dharla
- 4. Mora Diphlu
- 5. Rangpo

Select the correct answer code:

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

Solution: d)

Kaziranga is crisscrossed by four main rivers — Brahmaputra, Diphlu, Mora Diphlu and Mora Dhansiri and has numerous small water bodies.

16) Consider the following statements regarding Asafoetida.

- 1. Asafoetida or heeng is a perennial plant that stores most of its nutrients inside its deep fleshy roots.
- 2. It thrives in dry and cold desert conditions.
- 3. In India, it is grown extensively in the Himalayan region, mainly in the Ladakh region.

Which of the above statements is/are correct?

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

Solution: a)

- Asafoetida, or heeng, is a common ingredient in most Indian kitchens.
- **Heeng is not cultivated in India.**

- India imports Rs 600 crore worth of this pungent flavoured herb every year.
- It is a **perennial plant. The plant stores most of its nutrients inside its deep fleshy roots.**
- Asafoetida is endemic to Iran and Afghanistan, the main global suppliers.
- It **thrives in dry and cold desert conditions.**

Scientists at CSIR-Institute of Himalayan Bioresource, Palampur (IHBT), are on a mission to grow heeng in the Indian Himalayas. The first sapling has been planted in Himachal Pradesh's Kwarling village in Lahaul valley

17) Consider the following statements regarding Asteroids.

1. Asteroids are rocky objects that orbit the Sun.
2. All the Asteroids are found in between Mars and Jupiter.
3. Some of the Near-Earth Asteroids are potentially hazardous.

Which of the above statements is/are correct?

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

Solution: b)

Asteroids are rocky objects that orbit the Sun, much smaller than planets. They are also called minor planets. Asteroids are divided into three classes. First, those found in the main asteroid belt between Mars and Jupiter. The second group is that of trojans, which are asteroids that share an orbit with a larger planet. NASA reports the presence of Jupiter, Neptune and Mars trojans. In 2011, they reported an Earth trojan as well. The third classification is **Near-Earth Asteroids (NEA)**, which have orbits that pass close by the Earth. Those that cross the Earth's orbit are called Earth-crossers. More than 10,000 such asteroids are known, out of which over 1,400 are classified as **potentially hazardous asteroids (PHAs).**

18) Consider the following statements regarding Ring of Fire.

1. The Ring of Fire is a direct result of plate tectonics/ movement and collisions of lithospheric plates.
2. About 90% of the world's earthquakes occur along the Ring of Fire.
3. This region is also prone to high volcanism.

Which of the above statements is/are correct?

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

Solution: d)

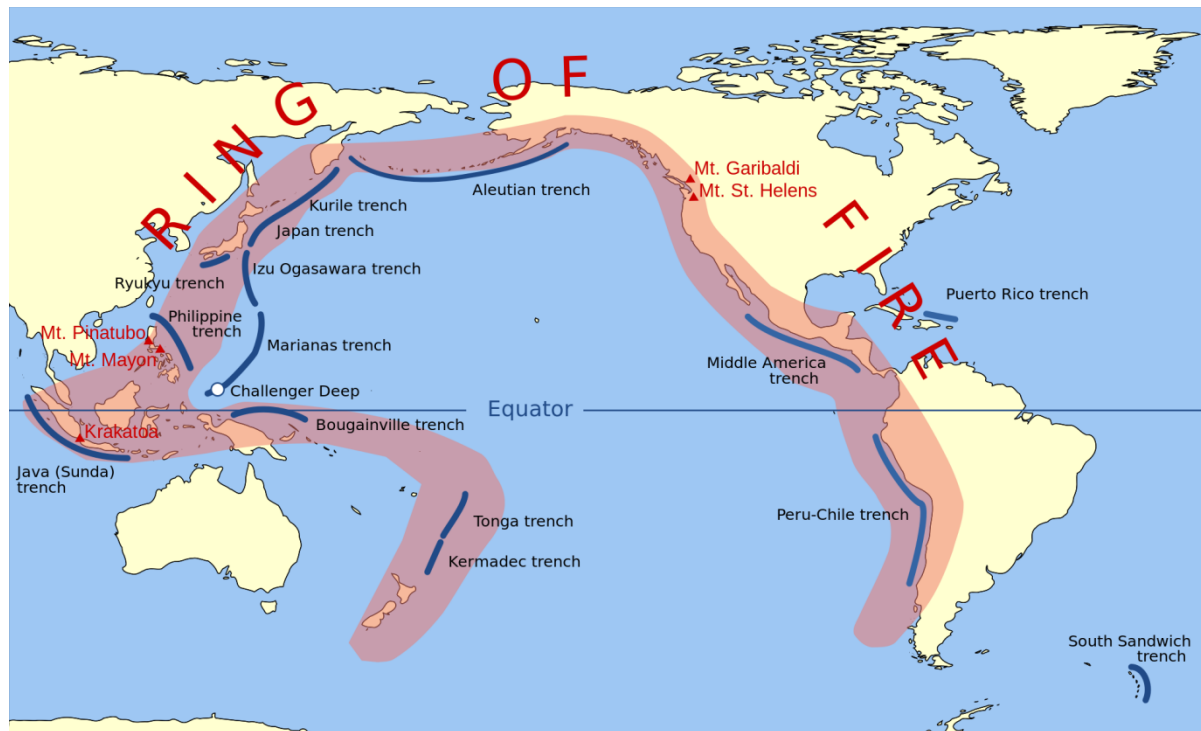
The Ring of Fire (also known as the Rim of Fire or the Circum-Pacific belt) is a major area in the basin of the Pacific Ocean where **many earthquakes and volcanic eruptions occur.**

The Ring of Fire is a direct **result of plate tectonics: the movement and collisions of lithospheric plates**, especially subduction in the northern portion.

It is associated with a nearly continuous series of oceanic trenches, volcanic arcs, and volcanic belts and plate movements.

It has more than 75% of the world's active and dormant volcanoes.

About 90% of the world's earthquakes and about 81% of the world's largest earthquakes occur along the Ring of Fire.



19) Which of the following statement best describes 'Doldrums'?

- High pressure area in subtropical region where westerlies originate.
- Belt of calm region in equatorial region where prevailing trade winds meet.
- Tropical region in Indian ocean where cyclone often originate.
- Frigid zone of the earth where there is little atmospheric circulation.

Solution: b)

Doldrums, also called **equatorial calms**, equatorial regions of light ocean currents and winds within the intertropical convergence zone (ITCZ), a **belt of converging winds** and rising air encircling Earth near the Equator. The northeast and southeast trade winds meet there; this meeting causes air uplift and often produces clusters of convective thunderstorms. They occur along the Equator in the Indian and western Pacific oceans and slightly north of the Equator off the African and Central American west coasts.

20) Consider the following statements regarding Fold Mountains.

- Fold Mountains are created when large areas are broken and displaced vertically.
- They are least likely to have conical peaks.

Which of the above statements is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Solution: d)

Fold mountains are created where two or more of Earth's tectonic plates are pushed together. At these colliding, compressing boundaries, rocks and debris are warped and folded into rocky outcrops, hills, mountains, and entire mountain ranges.

The **Himalayan Mountains and the Alps** are young fold mountains with rugged relief and high conical peaks. 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.

3. Economy

1) Consider the following statements regarding White Label ATM (WLA)

1. Automated Teller Machines (ATMs) set up, owned and operated by non-bank entities are called White Label ATMs
2. Non-bank ATM operators are authorised under the Payment & Settlement Systems Act, 2007 by the RBI.
3. White label ATMs accept cash deposits.

Which of the above statements is/are correct?

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

Solution: c)

ATMs set up, owned and operated by non-banks are called White label ATMs (WLAs). Non-bank ATM operators are authorised under the Payment & Settlement Systems Act, 2007 by the Reserve Bank of India (RBI).

For a customer, using a WLA is just like using an ATM of any bank.

Until recently, these white label ATMs were not allowed to accept cash deposits, but the latest guidelines have now allowed these ATM operators to provide this service. They can also offer bill payment services through their ATMs.

[Source](#)

[Source](#)

2) Consider the following statements regarding the Marginal Standing Facility (MSF).

1. MSF functions as the last resort for banks to borrow short-term funds over and above that available under the Liquidity Adjustment Facility Window (LAF).
2. MSF is an extraordinary rate at which banks can borrow money from the central bank at a much cheaper rate than repo rate.

Which of the above statements is/are incorrect?

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

Solution: b)

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, being a penal rate, is always fixed above the repo rate.

3) Inflation may result from

1. A reduction in the total productive capacity of the economy even as more and more people are employed
2. Oversupply of goods in the economy

Select the correct answer code:

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

d) Neither 1 nor 2

Solution: a)

In simple terms, inflation is basically too much money chasing too few goods, or excess demand chasing limited supply. In both these cases, the prices of goods rises faster as individual consumers bid process higher in order to get the good.

Excess supply is likely to bring prices down, not high.

If income rises faster, demand for goods and services will also rise. On the other hand, if the economy is unable to satisfy the increased demand, for e.g. due to poor infrastructure, lack of production etc, the higher income will spiral the prices upwards and lead to high inflation.

4) Which of the following best describes 'Anti-Dumping' duty?

- a) a protectionist tariff imposed on foreign imports that are priced below fair market value.
- b) an import tax imposed on certain goods in order to prevent piracy.
- c) tax imposed on the import of the goods pertaining to core industrial sectors.
- d) None of the statements a, b and c are correct.

Solution: a)

An anti-dumping duty is a protectionist tariff that a domestic government imposes on foreign imports that it believes are priced below fair market value. Dumping is a process where a company exports a product at a price lower than the price it normally charges in its own home market.

5) When the Reserve Bank of India increases the repo rate by 50 basis points, which of the following likely to happen?

- 1. India's GDP growth rate increases drastically
- 2. Foreign Institutional Investors may bring more capital into our country
- 3. Scheduled Commercial Banks may increase their lending rates

Select the correct answer code:

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

Solution: d)

Increase in repo rate by RBI would largely lead to increase in lending rates of banks.

6) Which of the following were the purpose of Fiscal Responsibility and Budget Management Act, 2003 (FRBMA)?

- 1. Eliminate revenue deficit of the country
- 2. Reduce fiscal deficit to 3% of the GDP
- 3. Improve overall management of the public funds

Select the correct answer code:

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

Solution: d)

The Fiscal Responsibility and Budget Management Act, 2003 (FRBMA) is an Act of the Parliament of India to **institutionalize financial discipline, reduce India's fiscal deficit, improve macroeconomic management and the overall management of the public funds** by moving towards a balanced budget and strengthen fiscal prudence.

The main purpose was to **eliminate revenue deficit of the country (building revenue surplus thereafter) and bring down the fiscal deficit to a manageable 3% of the GDP by March 2008**. Since then, there have been several amendments to the Act essentially postponing the targets.

7) Consider the following statements regarding Long term repo operation (LTRO).

1. Long term repo operation is a tool under which the central bank provides one-year to three-year money to banks at the prevailing repo rate.
2. As per RBI guidelines, banks need not keep government securities as collateral for accessing funds under LTRO.
3. LTRO helped RBI ensure that banks reduce their marginal cost of funds-based lending rate, without reducing policy rates.

Which of the above statements is/are correct?

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

Solution: b)

The Reserve Bank of India (RBI) has said it will conduct on-tap targeted long-term repo operations (LTRO) for an amount of Rs 1 lakh crore to ensure comfortable liquidity conditions in the system.

The LTRO is a tool under which the central bank provides one-year to three-year money to banks at the prevailing repo rate, accepting government securities with matching or higher tenure as the collateral.

How is it different from LAF and MSF?

While the RBI's current windows of liquidity adjustment facility (LAF) and marginal standing facility (MSF) offer banks money for their immediate needs ranging from 1-28 days, the LTRO supplies them with liquidity for their 1- to 3-year needs. LTRO operations are intended to prevent short-term interest rates in the market from drifting a long way away from the policy rate, which is the repo rate.

LTRO helped RBI ensure that banks reduce their marginal cost of funds-based lending rate, without reducing policy rates.

8) Consider the following statements regarding Current account convertibility.

1. Current account convertibility means freedom to convert domestic currency into foreign currency and vice versa for trade in goods and invisibles.
2. Under current account convertibility for rupee, an exporter can sell the foreign currency he obtained from exporting a commodity at the market determined exchange rate in India.
3. There is partial Current account convertibility in India, so as to limit imports into the country.

Which of the above statements is/are correct?

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

Solution: a)

Current account convertibility means freedom to convert domestic currency into foreign currency and vice versa for trade in goods and invisibles (services, transfers or income from investment). Individuals and entities can convert currencies in the foreign exchange market.

Current account convertibility is one part of currency convertibility.

When there is current account convertibility for rupee, an exporter can sell the US Dollars (or other foreign currency) he obtained from exporting a commodity at the market determined exchange rate in India. This means that there is no exchange controls (foreign exchange controls). Similarly, when an importer buys foreign currency from India's foreign exchange market by exchanging rupee, it is current account convertibility.

In India, there is full current account convertibility since August 20, 1993.

9) 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.

Which of the above statements is/are incorrect?

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

Solution: b)

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.

10) 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 answer code:

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

Solution: b)

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.

11) Consider the following statements about Socialist economy.

1. It emphasises the collective ownership of the means of production.
2. Its only central goal is to attain economic efficiency by most optimum utilization of factors of production.

Which of the above statements is/are incorrect?

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

Solution: b)

Communist economy advocates state ownership of all properties including even labour and absolute power to state in running the economy.

Socialistic economy, on the other hand, **emphasises the collective ownership of the means of production (property and assets)**. It also ascribes a large role to the state in running the economy.

A socialist economy's **central goal is the welfare of its subjects** by progressive and equitable distribution of income, widespread employment, economic growth etc.

Economic efficiency is generally the goal of capitalist economies.

12) Consider the following statements regarding Universal Banking.

1. Universal banking is a system in which banks provide a wide variety of financial services, including commercial and investment services.
2. Universal Banking was conceptualized in India after the recommendation of SH Khan Committee.
3. They are exempted from the CRR and SLR requirements of the RBI.

Which of the above statements is/are correct?

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

Solution: c)

Universal banking is a system in which **banks provide a wide variety of financial services, including commercial and investment services.**

Banks in a universal system may still choose to specialize in a subset of banking service, even though they technically offer much more to their client base.

The second Narasimham committee of 1998 gave an introductory remark on the concept of the Universal banking. However, the concept of **Universal Banking conceptualized in India after the SH Khan Committee recommended it** as a different concept.

Once the Financial Institution becomes a universal Bank, it would be **compliant with the CRR and SLR requirements of the RBI.**

13) Consider the following statements regarding Fiscal Responsibility and Budget Management (FRBM) Act, 2003.

1. The Act made Central government responsible for ensuring inter-generational equity in fiscal management and long-term macro-economic stability.
2. The Act envisages the setting of limits on the Central government's debt and deficits.
3. The law contain an 'escape clause' under which Centre can exceed the annual fiscal deficit target.

Which of the above statements is/are correct?

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

Solution: d)

What is the FRBM Act?

Enacted in August 2003, the legislation is aimed at **making the Central government responsible for ensuring "inter-generational equity in fiscal management and long-term macro-economic stability"**.

To achieve this, the Act envisages the setting of **limits on the Central government's debt and deficits** as well as mandating greater transparency in fiscal operations of the Central government and the conduct of fiscal policy in a medium-term framework.

The rules for implementing the Act were notified in July 2004 and since then every Budget of the Union government has included a Medium Term Fiscal Policy Statement that specifies the annual revenue and fiscal deficit goals over a three-year horizon.

The States have also enacted their own respective Financial Responsibility Legislation.

Source

14) In economics, the monetary base includes:

1. Total currency circulating in the public.
2. Currency that is physically held in the vaults of commercial banks.
3. Sum total of the capital of all financial institutions regulated by Central Bank.
4. Commercial banks' reserves held in the central bank.

Select the correct answer code:

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

Solution: b)

In economics, the **monetary base** (also base money, high-powered money, reserve money) in a country is the total amount of bank notes and coins. This includes:

- the total currency circulating in the public,
- plus the currency that is physically held in the vaults of commercial banks,
- plus the commercial banks' reserves held in the central bank.

The **monetary base should not be confused with the money supply**, which consists of the total currency circulating in the public plus certain types of non-bank deposits with commercial banks.

15) The FRBM Act contain an 'escape clause' under which Centre can exceed the annual fiscal deficit target on which of the following grounds?

1. National security
2. National calamity
3. Collapse of agriculture
4. Decline in real output growth of a quarter by at least three percentage points below the average of the previous four quarters.

Select the correct answer code:

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

Solution: c)

How does a relaxation of the FRBM work?

The law does contain what is commonly referred to as an '**escape clause**'. Under Section 4(2) of the Act, the Centre can exceed the annual fiscal deficit target citing grounds that include **national security, war, national calamity, collapse of agriculture, structural reforms and decline in real output growth of a quarter by at least three percentage points below the average of the previous four quarters**.

There have been several instances of the FRBM goals being reset. Most recently, presenting the Budget for 2020-21 in February, Finance Minister Nirmala Sitharaman had cited the recent reductions in corporate tax as structural reforms that would trigger the escape clause.

But the most significant FRBM deviation happened in 2008-09, in the wake of the global financial crisis. Simultaneously, the deficit goals for the States too were relaxed.

Source

16) Consider the following statements.

1. In recent years, the credit growth in the banking system is higher than deposit growth.
2. Credit-deposit ratio is the ratio of how much a bank lends out of the deposits it has mobilized.
3. If the Credit-deposit ratio is too high, it means that banks might not have enough liquidity to cover any unforeseen fund requirements, may affect capital adequacy and asset-liability mis-match.

Which of the above statements is/are correct?

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

Solution: c)

In recent years, the credit growth in the banking system is lower than deposit growth.

Weak demand in the market and risk aversion in the banking system have kept the credit growth at nearly half the level of the last year. Deposits surged 12 per cent, compared to 10 per cent growth a year ago.

Credit-deposit ratio, popularly CD ratio, is the ratio of how much a bank lends out of the deposits it has mobilized.

CD ratio helps in assessing a bank's liquidity and indicates its health - if the ratio is too low, banks may not be earning as much as they could be. **If the ratio is too high, it means that banks might not have enough liquidity to cover any unforeseen fund requirements, may affect capital adequacy and asset-liability mis-match.**

17) Which of the following are RBI's main risk provision accounts?

1. Contingency Fund
2. Currency and Gold Revaluation Account (CGRA)
3. Investment Revaluation Account Foreign Securities (IRA-FS)
4. Investment Revaluation Account-Rupee Securities (IRA-RS)

Select the correct answer code:

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

Solution: d)

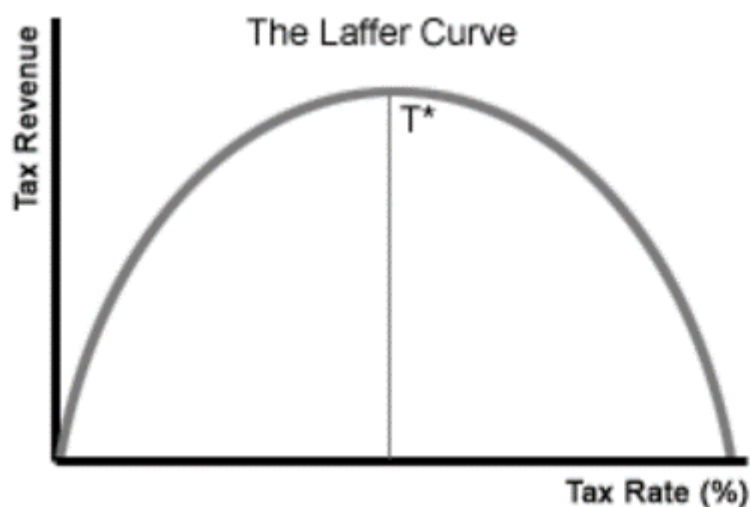
The central bank's main risk provision accounts are Contingency Fund, Currency and Gold Revaluation Account (CGRA), Investment Revaluation Account Foreign Securities (IRA-FS) and Investment Revaluation Account-Rupee Securities (IRA-RS).

18) Laffer curve is a relationship between

- a) Tax revenue and tax rate
- b) Tax rate and tax buoyancy
- c) Tax rate and tax elasticity
- d) Tax buoyancy and tax elasticity

Solution: a)

In economics, the **Laffer curve** illustrates a theoretical relationship between rates of taxation and the resulting levels of the government's tax revenue. The shape of the curve is a function of taxable income elasticity – i.e., taxable income changes in response to changes in the rate of taxation.



19) Consider the following statements regarding Reserve Money.

1. Reserve money consists of vault cash in banks and deposits of commercial banks with RBI.
2. Banks use this reserve to meet the demand for cash by account holders.

Which of the above statements is/are correct?

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

Solution: c)

Banks hold a part of the money people keep in their bank deposits as reserve money and loan out the rest to various investment projects. **Reserve money consists of two things – vault cash in banks and deposits of commercial banks with RBI.** Banks use this reserve to meet the demand for cash by account holders.

20) Consider the following statements about International Finance Corporation (IFC).

1. It is a sister organization of the IMF.
2. It is the largest global development institution focused exclusively on the private sector in developing countries.
3. Its goals are to increase sustainable agriculture opportunities, improve healthcare and education.

Which of the above statements is/are correct?

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

Solution: c)

IFC—a sister organization of the World Bank and member of the World Bank Group—is the **largest global development institution focused exclusively on the private sector in developing countries.** The World Bank Group has set two goals for the world to achieve by 2030: end extreme poverty and promote shared prosperity in every country.

Functions:

- It offers an array of debt and equity financing services and helps companies face their risk exposures, while refraining from participating in a management capacity.
- The corporation also offers advice to companies on making decisions, evaluating their impact on the environment and society, and being responsible.
- It advises governments on building infrastructure and partnerships to further support private sector development.

Since 2009, the IFC has focused on a set of development goals that its projects are expected to target. Its goals are to **increase sustainable agriculture opportunities, improve healthcare and education**, increase access to financing for microfinance and business clients, advance infrastructure, help small businesses grow revenues, and invest in climate health.

Source

4. Art and Culture

1) Consider the following statements about Mauryan art and architecture.

1. Stone was the principal building material.
2. Lauria Nandangarh pillar in Champaran was built during the time of Ashoka.

Which of the above statements is/are correct?

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

Solution: b)

The palace of Chandragupta Maurya was inspired by the Achaemenid palaces at Persepolis in Iran. **Wood was the principal building material.**

During the time of Ashoka, the inscription of pillars – as a symbol of the state or to commemorate battle victories – assumed a great significance. He also used pillars to propagate imperial sermons as well.

Example: Lauria Nandangarh pillar in Champaran, Sarnath pillar near Varanasi, etc.

2) Consider the following pairs:

State	Dance/Traditions
1. Tamil Nadu	: Karakkatam
2. Mizoram	: Tamang Selo
3. Maharashtra	: Koli

Which of the above pairs is/are matched correctly?

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

Solution: b)

- Karakattam is an ancient folk dance of Tamil Nadu performed in praise of the rain goddess Mariamman. The ancient Tamil epic says that this type of dance has derived from Bharatham and a mixture of multiple forms of Tamil dance forms.

- Tamang Selo is a genre of Nepali Folk song sung by the Tamang people and widely popular amongst the Nepali speaking community in Nepal, India and around the world. It is usually accompanied by Tamang instruments, the Damphu, Madal and Tungna.

- Koli dance is the folk dance of fisher community of Maharashtra. In this dance, we can see the dance movements of girls are inspired from their daily life of fishing. Sea waves, throwing net in the sea, catching fishes are some of those movements

3) Which of the following traditions finds their name in UNESCO List of Intangible Cultural Heritage?

1. Kutiyattam
2. Yoga
3. Kalbelia folk dance of Rajasthan
4. Kalaripayattu

Select the correct answer code:

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

Solution: d)

From India the Intangible Cultural Heritages added into this list include:

- Tradition of Vedic chanting
- Ramlila, the traditional performance of the Ramayana
- Kutiyattam, Sanskrit theatre
- Ramman, religious festival and ritual theatre of the Garhwal Himalayas.
- Mudi yettu, ritual theatre and dance drama of Kerala
- Kalbelia folk songs and dances of Rajasthan
- Chhau dance
- Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir.
- Sankirtana, ritual singing, drumming and dancing of Manipur
- Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab
- Yoga
- Nawrouz
- Kumbh Mela

4) Consider the following statements regarding Sangeet Natak Akademi.

1. Sangeet Natak Akademi is the first National Academy of the arts set-up by the Republic of India.
2. It is presently an Autonomous Body of the Ministry of Culture, Government of India and is fully funded by the Government for implementation of its schemes and programmes.

Which of the above statements is/are correct?

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

Solution: c)

The Sangeet Natak Akademi - India's national academy for music, dance and drama - is the first National Academy of the arts set-up by the Republic of India. It was created by a resolution of the (then) Ministry of Education, Government of India, dated 31 May 1952 notified in the Gazette of India of June 1952. The Akademi became functional the following year, with the appointment of its first Chairman, Dr P.V. Rajamannar, and the formation of its all-India council of representatives, the General Council.

The Sangeet Natak Akademi is presently an Autonomous Body of the Ministry of Culture, Government of India and is fully funded by the Government for implementation of its schemes and programmes.

5) Jamdani weave is

1. Fine muslin on which decorative motifs are woven
2. Tradition most popular in Western India
3. Work that employs use of both cotton and gold threads

Select the correct answer code:

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

Solution: c)

Jamdani is a fine muslin textile produced for centuries in South Rupshi of Narayanganj district in Bangladesh. The historic production of jamdani was patronized by imperial warrants of the Mughal emperors. Under British colonialism, the Bengali jamdani and muslin industries rapidly declined due to colonial import policies favoring

industrially manufactured textiles. In more recent years, the production of jamdani has witnessed a revival in Bangladesh. Jamdani is typically woven using a mixture of cotton and gold thread.

In 2013, the traditional art of weaving jamdani was declared a UNESCO Intangible Cultural Heritage of Humanity.

In 2016, Bangladesh received geographical indication (GI) status for Jamdani Sari.



6) Ancient India had a rich tradition of music. Which of these treatises were written to expound the various styles and aspects of music?

1. Natya Shashtra
2. Brihat Samhita
3. Brihaddesi

Select the correct answer code:

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

Solution: a)

Brihat Samhita, is a treatise on astrology.

The history of the system of music that prevailed in India from ancient times, goes back to the Vedas. **The earliest treatise we have on music is the Natya Sastra of Bharata.**

Other treatises on music after Bharata, such as the **Brihaddesi** of Matanga, Sangeeta Ratnakara of Sharangadeva, Sangeet Sudhakara of Haripala, Swaramelakalanidhi of Ramamatya, etc., provide us information about the different aspects of music and its development during the different periods.

7) Consider the following statements:

1. There were no evidence of musical instruments found at the sites of Indus valley civilization.
2. Jaimini Brahmana speaks collectively of dance and music
3. In Hindustani music, Dhrupad is the pure music without distraction of words.

Which of the above statements is/are correct?

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

Solution: b)

Musical instruments like seven-holed flute and Ravanahatha, have been recovered from the sites of Indus Valley Civilization.

The Jaimini Brahmana speaks collectively of dance and music.

Dhrupad is pure music without distraction of words.

8) Which of the following statement about Saptak is correct?

- a) Emotions which are evoked through singing.
- b) The rhythmic groupings of beats.
- c) The seven swaras.
- d) A system of classification of the ragas in different groups.

Solution: c)

The seven swaras together are called Saptak or Sargam.

The emotions which are evoked through the singing and playing of instruments are called Rasas.

The rhythmic grouping of beats are called Tala.

A system of classification of the ragas in different groups are called Thaata.

9) Consider the following:

- 1. Temple at Deogarh near Jhansi
- 2. Giant copper statue of Buddha originally found at Sultanganj
- 3. Delhi Iron pillar
- 4. Bagh caves paintings

The above statements belong to which of the following dynasties of India?

- a) Peshwas
- b) Guptas
- c) Paramara
- d) Western Ganga

Solution: b)

The Delhi Iron pillar of the Gupta period is still free from rust though completely exposed to sun and rain for so many centuries.

The paintings of the Gupta period are seen at Bagh caves near Gwalior.

Moreover, the mural paintings of Ajanta mostly illustrate the life of the Buddha as depicted in the Jataka stories.

There was little influence of Gandhara style on Gupta art. But the beautiful statue of standing Buddha at Mathura reveals a little Greek style. The Buddha statue unearthed at Sarnath was unique piece of Gupta art.

10) Consider the following statements.

- 1. Udayagiri caves are famous for the Hathigumpha inscription which is carved out in Devanagari script.
- 2. Stupas became larger and more decorative in the post- Mauryan period.
- 3. The Gandhara School of Art had the influence of Greek and Roman traditions.

Which of the above statements is/are correct?

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

Solution: c)

Udayagiri caves are famous for the Hathigumpha inscription which is carved out in **Brahmi script**.

Stupas became larger and more decorative in the post- Mauryan period. Stone was increasingly used in place of wood and brick.

The Gandhara School of Art developed in the western frontiers of Punjab, near modern day Peshawar and Afghanistan. **The Greek invaders brought with them the traditions of the Greek and Roman sculptors**, which influenced the local traditions of the region.

Thus, Gandhara School also came to be known as **Greco-Indian School of Art**.

11) Which among the following Indus Valley civilization Sites belong to India?

1. Harappa
2. Rakhigarhi
3. Dholavira
4. Mohenjodaro
5. Ropar

Select the correct answer code:

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

Solution: c)

While **Harappa and Mohenjodaro are situated in Pakistan**, the important sites excavated in India are **Lothal and Dholavira in Gujarat, Rakhigarhi in Haryana, Ropar in the Punjab, Kalibangan and Balathal in Rajasthan**.

12) According to experts, which of the following statements regarding Kalibangan is/are correct?

1. Kalibangan in Rajasthan has given the evidence of the earliest ploughed agricultural field ever revealed through an excavation.
2. It is also a site which has given an evidence of earliest archaeologically recorded Earthquake.

Select the correct answer code:

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

Solution: c)

Kalibangan has given the evidence of the **earliest (2800 BC) ploughed agricultural field ever revealed through an excavation** as per Dr. B Lal. It is also a site which has given an **evidence of earliest recorded "Earthquake"**.

13) Aihole inscription, is known as the Cradle of Indian architecture, was issued under the reign of

- a) Chalukyas
- b) Pallavas
- c) Rashtrakutas
- d) Marathas

Solution: a)

Aihole was the first capital of Chalukyas where they built numerous temples dating back to the 6th century CE. **Many inscriptions found at Aihole**, but the inscription which found at Meguti Temple popularly known as Aihole inscription, which has the significance in the history of India, witnessed for the many historical events of Chalukyas.

The Aihole inscription issued by Pulakeshin II gives the details of his reign.

14) Consider the following statements regarding Bardo Chham.

1. Bardo Chham is a folk dance performed in Arunachal Pradesh.
2. It is based on the stories of good and evil.
3. The performers wear masks representing different animals.

Which of the above statements is/are correct?

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

Solution: d)

Bardo Chham

- **Region/Area:** Arunachal Pradesh
- **Occasion:** Performed during festivals
- **Highlight:** The performers wear masks representing different animals
- **Purpose:** Depiction of good over evil
- Bardo Chham is performed by the Sherdukpen tribe of the West Kameng district. The dancers perform to the beats of many percussion instruments.



15) Which of the following are the Folk dances of North East India.

- 1. Bihu
- 2. Bagurumba
- 3. Kummi
- 4. Dhol Cholom

Select the correct answer code:

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

Solution: b)

Bihu

- **Region/Area:** Assam
- **Occasion:** Performed during the Bihu festival

- **Highlight:** Lyrics used in the songs propagates love

Bagurumba

- **Region/Area:** Assam
- **Occasion:** Performed during various festivals
- **Highlight:** The dance is inspired from nature

Dhol Cholom

- **Region/Area:** Manipur
- **Occasion:** Performed during Holi festival
- **Highlight:** The dancers display acrobatic moves while playing dhol – a large drum

Kummi is a folk dance, popular in Tamil Nadu and Kerala.

16) Consider the following statements regarding Metal works during Harappan civilization.

1. Copper, tin, gold and silver were easily available locally, thus obviating the need to import them from distant places.

2. The earliest evidence of metallurgy in the Indian subcontinent comes from the site of Mehrgarh.

Which of the above statements is/are correct?

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

Solution: b)

While some of the raw materials that the Harappans used were available locally, many items such as **copper, tin, gold, silver and precious stones had to be brought from distant places.**

The **earliest evidence of metallurgy in the Indian subcontinent comes from the site of Mehrgarh in Baluchistan** dated to circa 6500 BCE, a part of early Harappan civilization. It is recovered in the form of a tiny copper bead from grave of a child.

17) Consider the following statements about Kalighat paintings which originated in Bengal.

1. The school produced paintings that were irreproducible by lithography.

2. The school restricted itself to the depiction of natural, nationalistic and secular themes.

Which of the above is/are incorrect?

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

Solution: c)

The paintings over a period of time developed as a distinct school of Indian painting. An important achievement of the Kalighat artistes was that they made **simple paintings and drawings, which could easily be reproduced by lithography.**

From the depiction of Hindu gods, goddesses, and other mythological characters, the Kalighat paintings developed to reflect a variety of themes.

The artists also chose to portray **secular themes and personalities** and in the process played a **role in the Independence movement.** They painted heroic characters like Tipu Sultan and Rani Lakshmibai.

18) Consider the following statements about Dhrupad, a genre in Hindustani classical music.

- 1. It finds mention in Ain-e-Akbari.

2. The phrases of Dhrupad alapa are slow and contemplative in the beginning, but the tempo increases in stages.

3. It is a sub-set of Khyal form of classical singing.

Which of the above statements is/are correct?

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

Solution: a)

Abul Fazl, courtier and chronicler at the court of the Emperor Akbar, defines the dhrupad verse form in his **Ain-e-Akbari** as "four rhyming lines, each of indefinite prosodic length.

The elaboration of Dhrupad alap is done using the syllables of a mantric phrase, it is **slow in the beginning and raises tempo after some time.**

Dhrupad and khyāl are the two forms of classical singing that exist today in North India.

19) Thumri is a common genre of semi-classical Indian music with its origin in

- a) Odisha
- b) Maharashtra
- c) Uttar Pradesh
- d) Rajasthan

Solution: c)

Originated in eastern part of Uttar Pradesh, the term 'thumri' is derived from the Hindi verb thumakna which means "to walk with dancing steps so as to make the ankle-bells tinkle."

The form is, thus, connected with dance, dramatic gestures, mild eroticism, evocative love poetry and folk songs of Uttar Pradesh, though there are regional variations.

The text is romantic or devotional in nature, and usually revolves around a girl's love for Krishna.

Thumri is characterized by its sensuality, and by a greater flexibility with the raag.

The lyrics are usually in Uttar Pradesh dialects of Hindi called Awadhi and Braj Bhasha.

20) Known as the "Khajuraho of Vidarbha", the temple of Markandadeo, is built in which of these styles?

- a) Dravidian
- b) Nagara
- c) Vesara
- d) Ahom

Solution: b)

Known as the "Khajuraho of Vidarbha", the temple of Markandadeo is situated on the bank of River Wainganga in district Gadchiroli of Maharashtra.

The temples belong to the Nagara group of temples of North India. On stylistic grounds, their date ranges in between 9- 12th centuries CE. The temples belong to saiva, vaishnava and sakta faith. Most of the temples have a simple plan, with ardhmandapa, mandapa, antarala and garbhagriha forming the component of the entire set up.



5. History

1) Consider the following statements

1. Harappan Civilization got its name from the city that was discovered first.
2. In the late-Harappan stage the Indus culture rose to its peak and started spreading in southern India and across Indian Frontiers.

Which of the above statements is/are correct?

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

Solution: a)

The Indus civilisation is also known as the Harappan Civilisation, after its type site, Harappa, the first of its sites to be excavated early in the 20th century in what was then the Punjab province of British India and now is Pakistan.

Late Harappan: Around 1900 BCE signs of a **gradual decline began to emerge**, and by around 1700 BCE most of the cities had been abandoned.

2) Consider the following statements regarding Vedic civilization

1. Sabha and Samiti were legislative assemblies at tribal or territorial level.
2. The king was autocratic with main responsibility of being protector of the tribe and the cattle wealth.
3. Samiti was not open for women in early Vedic period.

Which of the above statements is/are correct?

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

Solution: b)

The king was not autocratic. He had to abide by the decision of assemblies called sabha, samiti. Sabha and samiti were legislative assemblies at tribal and territorial level. The samiti was a general assembly which was open for all including women.

3) Who among the following rulers founded the Vikramashila University?

- a) Dharmapala
- b) Bhoja
- c) Gopala
- d) Kumaragupta

Solution: a)

Vikramashila University was one of the two most important centres of learning in India during the Pala Empire, along with Nalanda. **Vikramashila was established by King Dharmapala** in response to a supposed decline in the quality of scholarship at Nalanda.

4) Ashokan inscriptions were majorly engraved in the Brahmi script and Kharoshthi script. With reference to the above scripts consider the following statements.

1. Brahmi script was written from left to right where as Kharoshthi script was written from right to left.
2. Brahmi script prevailed in the north western region of India whereas Kharoshthi script prevailed in the rest of the country.

Which of the above statements is/are incorrect?

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

Solution: b)

Brahmi script was written from left to right where as Kharoshthi script was written from right to left. Kharoshthi script prevailed in the north western region of India whereas Brahmi script prevailed in the rest of the country.

5) With reference to the entry of European powers into India, which one of the following statements is not correct?

- a) The Portuguese captured Goa in 1499
- b) The English opened their first factory in South India at Masulipatam
- c) In Eastern India, the English Company opened its first factory in Orissa in 1633
- d) Under the leadership of Dupleix, the French occupied Madras in 1746

Solution: a)

The Portuguese captured Goa from rulers of Bijapur in 1510 and not in 1499.

6) Match List-I (ancient places) with List-II (their Present location):

List-I	List-II
A. Banawali	1. Sind
B. Lothal	2. Rajasthan
C. Kalibangan	3. Gujarat
D. Kot Diji	4. Haryana

Select the correct answer code:

- A B C D
- a) 4 3 2 1
 - b) 1 2 3 4
 - c) 2 3 4 1
 - d) 3 4 2 1

Solution: a)

7) Consider the following statements regarding Harappan civilization.

- 1. The citadels were mainly inhabited by the common people.
- 2. The Great Bath was used for ritual bathing and it was made up of stone

Which of the above statements is/are correct?

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

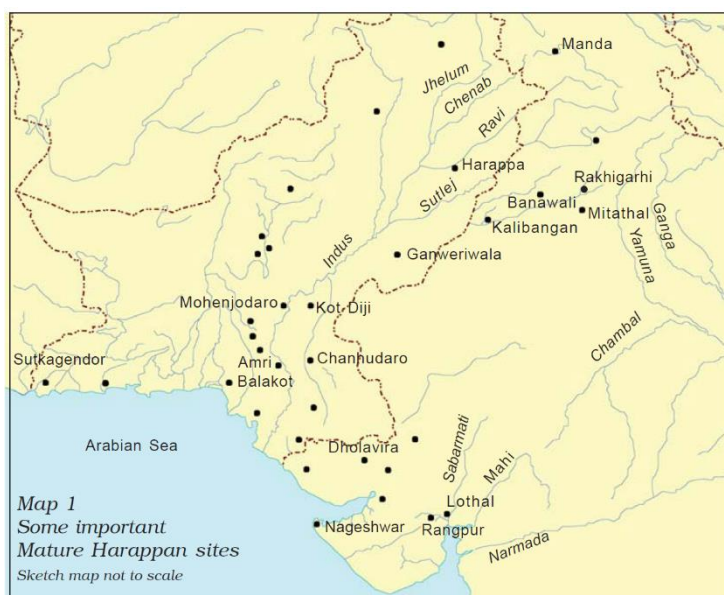
Solution: d)

Citadels were inhabited by elite people and great bath was made up of burnt brick.

8) The easternmost Harappan site amongst the following is

- a) Rakhigarhi
- b) Chanhudaro
- c) Dholavira
- d) Ganweriwala

Solution: a)



9) Consider the following statements about Government of India Act of 1858.

1. The Act abolished the East India Company, and transferred the powers of government, territories and revenues to the British Crown.
2. It ended the system of double government.
3. It made a beginning of representative institutions by associating Indians with the law-making process.

Which of the above statements is/are correct?

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

Solution: b)

Government of India Act of 1858:

- The act known as the Act for the Good Government of India, **abolished the East India Company, and transferred the powers of government, territories and revenues to the British Crown.**
- It provided that India henceforth was to be governed by, and in the name of, Her Majesty. It changed the designation of the Governor-General of India to that of Viceroy of India. He (viceroy) was the direct representative of the British Crown in India. Lord Canning thus became the first Viceroy of India.
- It **ended the system of double government** by abolishing the Board of Control and Court of Directors.

Indian Councils Act of 1861 made a beginning of representative institutions by associating Indians with the law-making process.

10) Consider the following statements regarding Gandhi-Irwin Pact.

1. Gandhi-Irwin Pact was a political agreement signed after the second Round Table Conference in London.
2. It marked the end of a period of civil disobedience (*satyagraha*) in India against British rule that Gandhi and his followers had initiated with the Salt March.

Which of the above statements is/are correct?

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

Solution: b)

The 'Gandhi - Irwin Pact' was a political agreement signed by Mahatma Gandhi and Lord Irwin, Viceroy of India, **on 5 March 1931 before the second Round Table Conference in London**. It marked the end of a period of civil disobedience (*satyagraha*) in India against British rule that Gandhi and his followers had initiated with the Salt March.

[Source](#)

11) Consider the following statements regarding Palaeolithic age.

1. It spans nearly one-third of human history.
2. Evidence of the existence of ostriches were found in India during this period.
3. Bone tools could be found, but stone tools were not made in this period.

Which of the above statements is/are correct?

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

Solution: b)

The Palaeolithic period extends from 2 million years ago to about 12,000 years ago. This long stretch of time is divided into the Lower, Middle and Upper Palaeolithic. This long span of time covers 99% of human history. Stone tools found during this period are generally tiny, and are called microliths.

Ostriches were found in India during the Palaeolithic period. Large quantities of ostrich egg shells were found at Patne in Maharashtra. Designs were engraved on some pieces, while beads were also made out of them.

12) Which among the following sites provide the earliest evidence of settled agriculture in the Indian subcontinent?

- a) Inamgarh
- b) Dholavira
- c) Mehrgarh
- d) Kalibangan

Solution: c)

Located in Kacchi plains of Baluchistan, Mehrgarh provides the earliest evidence of settled agriculture in the subcontinent and probably south Asia. It is considered a precursor to Indus Valley Civilization

13) In Ancient India, shrenis served which of these purposes?

1. Provided training to crafts persons
2. Procured raw material for merchants
3. Served as financial institutions for money deposits
4. Supported religious institutions by donations

Select the correct answer code:

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

Solution: d)

Many crafts persons and merchants formed associations known as shrenis.

These shrenis of crafts persons provided training, procured raw material, and distributed the finished product.

Then shrenis of merchants organised the trade.

Shrenis also served as banks, where rich men and women deposited money.

This was invested, and part of the interest was returned or used to support religious institutions such as monasteries.

14) The Gandhi-Irwin Pact included

1. Right to make salt in coastal villages for personal consumption and sale.
2. Right to peaceful and non-aggressive picketing
3. Acceptance of Gandhiji's suggestion for enquiry into police excesses
4. Release of all political prisoners not convicted of violence

Select the correct answer code:

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

Solution: b)

Gandhi-Irwin Pact placed the Congress on an equal footing with the government.

Irwin on behalf of the government agreed on—

1. immediate release of all political prisoners not convicted of violence;
2. remission of all fines not yet collected;
3. return of all lands not yet sold to third parties;
4. lenient treatment to those government servants who had resigned; right to make salt in coastal villages for personal consumption (not for sale);
6. right to peaceful and non-aggressive picketing; and
7. withdrawal of emergency ordinances.

The viceroy, however, turned down two of Gandhi's demands—

- (i) public inquiry into police excesses, and
- (ii) commutation of Bhagat Singh and his comrades' death sentence to life sentence.

Gandhi on behalf of the Congress agreed—

- (i) to suspend the civil disobedience movement, and
- (ii) to participate in the next Round Table Conference

15) Arrange the following events in their correct chronological order:

1. Nehru Report
2. First RTC
3. First May Day in India
4. Dandi March

Select the correct code:

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

Solution: a)

In 1923, the first May day was celebrated in India in Madras.

1928 – Nehru Report

Dandi March – March 12-April 6, 1930

First Round Table Conference – November 1930 – January 1931

16) The advent or development of which of the following was termed as "Neolithic Revolution"?

- a) Metallurgy

- b) Agriculture
- c) Megaliths
- d) Painted pottery

Solution: b)

The **Neolithic Revolution, also called the Agricultural Revolution**, marked the transition in human history from small, nomadic bands of hunter-gatherers to larger, agricultural settlements and early civilization.

17) Consider the following statements.

1. According the Aitreya Brahmana a daughter has been described as a source of pride.
2. During later vedic period, gold and silver coins were used as media of exchange.

Which of the above statements is/are incorrect?

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

Solution: a)

According the Aitreya Brahmana a daughter has been described as a source of misery.

Besides nishka of the Rig Vedic period, gold and silver coins like satamana and krishnala were used as media of exchange during later vedic period.

18) In the early decades after the Permanent Settlement, zamindars regularly failed to pay the revenue to the East India Company. What are the reasons for their failure?

1. The initial revenue demands were very high.
2. The prices of agricultural produce were depressed, which made it difficult for the ryots to pay their dues to the zamindar.
3. The revenue was invariable, regardless of the Harvest.

Select the correct answer code:

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

Solution: c)

In the early decades after the Permanent Settlement, however, zamindars regularly failed to pay the revenue demand and unpaid balances accumulated. The reasons for this failure were various.

First: the **initial demands were very high**. The Company pegged the revenue demand high, arguing that the burden on zamindars would gradually decline as agricultural production expanded and prices rose.

Second: this high demand was imposed in the 1790s, a time when the **prices of agricultural produce were depressed, making it difficult for the ryots to pay their dues to the zamindar**.

Third: the **revenue was invariable, regardless of the harvest, and had to be paid punctually**.

19) During the time of British Raj, the term 'Amlah' refer to

- a) Rich Peasants
- b) Officer of the Zamindar
- c) Village headman
- d) Sharecropper

Solution: b)

At the time of rent collection, **an officer of the zamindar, usually the amlah**, came around to the village. But rent collection was a perennial problem. Sometimes bad harvests and low prices made payment of dues difficult for the ryots. At other times ryots deliberately delayed payment.

20) Consider the following statements about Indian Councils Act of 1909.

1. It increased the size of the legislative councils, both Central and provincial.
2. For the first time, it provided for the association of Indians with the executive Councils of the Viceroy and Governors.
3. It introduced a system of communal representation for Muslims and Christians.

Which of the above statements is/ are correct?

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

Solution: a)

Indian Councils Act of 1909 is also known as Morley-Minto Reforms.

It considerably increased the size of the legislative councils, both Central and provincial.

It provided (for the first time) for the association of Indians with the executive Councils of the Viceroy and Governors.

It introduced a system of communal representation for Muslims by accepting the concept of 'separate electorate'. Under this, the Muslim members were to be elected only by Muslim voters.

6. Environment

1) Hot water discharged by industries is considered as a water pollutant because

1. Higher water temperature generally decreases the level of dissolved oxygen of water.
2. High temperature limits oxygen dispersion into deeper waters, contributing to anaerobic conditions in deep water.

Which of the above statements is/are correct?

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

Solution: c)

Elevated temperature typically decreases the level of dissolved oxygen of water. This can harm aquatic animals such as fish, amphibians and other aquatic organisms.

Thermal pollution may also **increase the metabolic rate of aquatic animals**, as enzyme activity, resulting in these organisms consuming more food in a shorter time than if their environment were not changed.

High temperature limits oxygen dispersion into deeper waters, contributing to anaerobic conditions. This can lead to increased bacteria levels when there is ample food supply. Many aquatic species will fail to reproduce at elevated temperatures.

2) Three of the following criteria have contributed to the recognition of Western Ghats, Sri Lanka and Indo Burma regions as hotspots of biodiversity

1. Species richness
2. Vegetation density
3. Endemism
4. Ethno-botanical importance
5. Threat perception
6. Adaption of flora and fauna to warm and humid conditions

Which three of the above are correct criteria for recognizing biodiversity hotspots?

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

Solution: c)

Vegetation density, botanical importance, adaptation of flora and fauna are not considered while recognizing hot spots of biodiversity.

3) Consider the following statements

1. Shola forest-grassland ecosystem is characterized by patches of forest of stunted evergreen shola trees in the valleys and grasslands of Tamil Nadu only.
2. Exotic invasive trees like pine, acacia and eucalyptus are largely seen in Shola forests.

Which of the above statements is/are correct?

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

Solution: b)

Shola forests are tropical Montane forests found in the valleys separated by rolling grasslands only in the higher elevations. **They are found only in South India in the Southern Western Ghats.**

- The Shola forests are generally said to be found in altitudes above 2000 metres of sea-level. Although they are found from altitudes higher than 1600 metres.
- Shola forests are a native only to the Southern Western Ghats.
- They are found only in the high-altitude mountains of the states Karnataka, Kerala and Tamil Nadu.
- **Exotic invasive trees like pine, acacia and eucalyptus are largely seen in Shola forests.**

4) Consider the following pairs

List I

1. Tipeshwar Wildlife Sanctuary - Gujarat
2. Bhandavgarh National Park - Madhya Pradesh
3. Raiganj Wildlife Sanctuary - West Bengal

List II

Which of the above pairs is/are correct?

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

Solution: b)

Tipeshwar Wildlife Sanctuary is located in Maharashtra.

5) Snow Leopard is naturally found in which of the following states?

1. Jammu and Kashmir
2. Arunachal Pradesh
3. Sikkim
4. Uttar Pradesh

Select the correct answer code:

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

Solution: d)

The snow leopard inhabits the higher Himalayan and trans-Himalayan landscape in Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.

Snow Leopard is not naturally found in Uttar Pradesh.

6) Consider the following statements regarding BirdLife International.

1. BirdLife International is an inter-governmental organisation that strives to conserve birds and their habitats.
2. BirdLife International's priority include preventing extinction of bird species and empowering conservationists worldwide.
3. It is the official International Union for Conservation of Nature's Red List authority for birds.

Which of the above statements is/are correct?

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

Solution: c)

BirdLife International is a **global partnership of non-governmental organizations** that strives to conserve birds and their habitats.

BirdLife International's priorities include preventing extinction of bird species, identifying and safeguarding important sites for birds, maintaining and restoring key bird habitats, and empowering conservationists worldwide.

BirdLife International has identified 13,000 Important Bird and Biodiversity Areas and is the **official International Union for Conservation of Nature's Red List authority for birds**.

As of 2015, BirdLife International has established that 1,375 bird species (13% of the total) are threatened with extinction (critically endangered, endangered or vulnerable).

BirdLife International publishes a quarterly magazine, **BirdLife: The Magazine**, which contains recent news and authoritative articles about birds and their conservation.

7) How does silting of water bodies affect aquatic life?

1. Coral polyps grow more favourably in silted and shallow water bodies.
2. Silt acts as a vehicle for certain pesticides into water bodies which adversely affect aquatic life.

Select the correct answer code:

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

Solution: b)

Hard bottom communities like corals and mussel banks (including oysters) are more sensitive to siltation. Siltation adversely affects coral population.

In rural areas the erosion source is typically soil degradation due to intensive or inadequate agricultural practices, leading to soil erosion, especially in fine-grained soils such as loess. The result will be an increased amount of silt and clay in the water bodies that drain the area often adding unwanted fertilizers to these bodies.

8) Light pollution can have which of the following effects on the ecology and biodiversity?

1. It adversely affects the migration of birds that navigate using the stars.
2. It is known to disturb the reproductive cycles of some animals.
3. It disturbs circadian rhythms in humans affecting the sleep pattern.

Select the correct answer code:

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

Solution: d)

Light pollution is excessive brightness that causes visual discomfort.

- Skyglow is the brightening of the night sky over inhabited areas. It is caused by cluttered, bright, excessive and confusing groupings of light sources.
- It affects the reproductive cycles of those animals that depend on sensing light movements or seasonal movements to reproduce. Since birds migrate using star light, it can confuse them, and even disorient night-flying insects.
- Excessive blue light emitted from LEDs directly affects sleep pattern in Human by suppressing the production of the hormone melatonin, which mediates the sleep-wake cycle in humans.

9) Consider the following statements about Biodiversity loss.

1. Biodiversity *loss* describes the decline in the number, genetic variability, and variety of species, and the biological communities in a given area.
2. A loss in biodiversity can make plants and animals more vulnerable to pests and diseases.
3. Biodiversity loss is always anthropogenic.

Which of the above statements is/are correct?

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

Solution: c)

Biodiversity loss describes the decline in the number, genetic variability, and variety of species, and the biological communities in a given area. This loss in the variety of life can lead to a breakdown in the functioning of the ecosystem where decline has happened.

An area's biodiversity increases and decreases with natural cycles. Seasonal changes, such as the onset of spring, create opportunities for feeding and breeding, increasing biodiversity as the populations of many species rise. In contrast, the onset of winter temporarily decreases an area's biodiversity, as warm-adapted insects die and migrating animals leave. In addition, the seasonal rise and fall of plant and invertebrate populations (such as insects and plankton), which serve as food for other forms of life, also determine an area's biodiversity.

10) Consider the following statements about Fly Ash.

1. Fly ash is the end product of combustion during the process of power generation in the coal based thermal power plants.
2. Fly ash can be used in combination with other alkaline materials to transform sewage sludge into organic fertilizer or biofuel.

Which of the above statements is/are incorrect?

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

Solution: d)

Fly ash, the end product of combustion during the process of power generation in the coal based thermal power plants, is a proven resource material for many applications of construction industries and currently is being utilized in manufacturing of Portland Cement, bricks/blocks/tiles manufacturing, road embankment construction and low-lying area development, etc.

Fly ash contains heavy metals from coal, a large amount of PM 2.5 and black carbon (BC).

Fly ash, in view of its alkalinity and water absorption capacity, may be used in combination with other alkaline materials to transform sewage sludge into organic fertilizer or biofuel.

11) Which of the following are considered as Ecosystem Services?

1. Erosion and flood control
2. Building of knowledge and the spreading of ideas
3. Creation of soils
4. Water purification

Select the correct answer code:

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

d) 1, 2, 3, 4

Solution: d)

Four major categories of ecosystem services: provisioning, regulating, cultural and supporting services.

Provisioning Services: A provisioning service is any type of benefit to people that can be extracted from nature. Along with **food**, other types of provisioning services include **drinking water, timber, wood fuel, natural gas, oils, plants** that can be made into clothes and other materials, and medicinal benefits.

Regulating Services: A regulating service is the benefit provided by ecosystem processes that moderate natural phenomena. Regulating services include **pollination, decomposition, water purification, erosion and flood control, and carbon storage and climate regulation.**

Cultural Services: A cultural service is a non-material benefit that contributes to the development and cultural advancement of people, including how ecosystems play a role in local, national, and global cultures; the **building of knowledge and the spreading of ideas; creativity born from interactions with nature (music, art, architecture); and recreation.**

Supporting Services: Ecosystems themselves couldn't be sustained without the consistency of underlying natural processes, such as photosynthesis, nutrient cycling, the creation of soils, and the water cycle.

12) Which of the following are the sources of Persistent Organic Pollutants (POPs)?

1. Improper use and/or disposal of agrochemicals
2. Elevated temperatures and combustion processes
3. Unwanted by-products of industrial processes

Select the correct answer code:

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

Solution: d)

Sources of pollution from POPs include the improper use and/or disposal of agrochemicals and industrial chemicals, elevated temperatures and combustion processes, and unwanted by-products of industrial processes or combustion.

[Source](#)

13) Which of the following can be threats to the biodiversity of a geographical area?

1. Global warming
2. Fragmentation of habitat
3. Invasion of alien species
4. Promotion of vegetarianism

Select the correct answer code:

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

Solution: a)

Global Warming, fragmentation of habitat and invasion of alien species can be threats to the biodiversity of a geographical area.

Promotion of vegetarianism doesn't threat biodiversity of geographical area.

14) Due to improper / indiscriminate disposal of old and used computers or their parts, which of the following are released into the environment as e-waste?

1. Beryllium
2. Cadmium
3. Chromium
4. Heptachlor
5. Mercury
6. Lead
7. Plutonium

Select the correct answer code:

- a) 1, 3, 4, 6, 7
- b) 1, 2, 3, 5, 6
- c) 2, 4, 5, 7
- d) 1, 2, 3, 4, 5, 6, 7

Solution: b)

Heptachlor is an insecticide. Plutonium is radioactive and hence not used in day to day computer/electronic items.

15) Consider the following statements regarding Phosphorus and Phosphorus Cycle.

1. Phosphorus cycle is largely atmospheric and easily dissolves in water from air.
2. Phosphorus occurs as a mineral in phosphate rocks and enters the Phosphorus cycle from erosion and mining activities.
3. Phosphorus is responsible for excessive growth of rooted and free-floating microscopic plants in water bodies.

Which of the above statements is/are correct?

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

Solution: b)

Phosphorous cycle is mainly terrestrial. The main storage for phosphorus is in the earth's crust. On land phosphorus is usually found in the form of phosphates.

It occurs in large amounts as a mineral in phosphate rocks and enters the cycle from erosion and mining activities.

By the process of weathering and erosion phosphates enter rivers and streams that transport them to the ocean.

Being an important nutrient, **phosphorous promotes eutrophication in lakes.** Along with nitrogen related compounds it leads to undesirable situations like **algal bloom.**

16) Which of the following contribute to the oxygen cycle on earth?

1. Oxidation of volcanic gases
2. Fixation of N₂ by lightning
3. Chemical weathering

Select the correct answer code:

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

Solution: d)

The largest reservoir of Earth's oxygen is within the silicate and oxide minerals of the crust and mantle (99.5%). Only a small portion has been released as free oxygen to the biosphere (0.01%) and atmosphere (0.36%). The main source of atmospheric free oxygen is photosynthesis.

The processes that lead to loss of oxygen are:

- Aerobic respiration (largest – more than 75%)
- Microbial oxidation
- Combustion of fossil fuel (anthropogenic – around 6-7% loss only)
- Photochemical oxidation
- Fixation of N₂ by lightning
- Fixation of N₂ by industry (anthropogenic)
- Oxidation of volcanic gases
- Chemical weathering
- Surface reaction of O₃

17) Consider the following statements regarding Alpha and beta diversity.

1. Alpha diversity is the diversity within an ecosystem which is generally described as the number of species.

2. Beta diversity is the geographic diversity which refers to the total diversity of a region.

Which of the above statements is/are correct?

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

Solution: a)

Alpha is the diversity within an ecosystem which is generally described as the number of species.

Beta diversity involves the comparison of different ecosystems in environmental gradients, for example, in a mountainous area within a coastal area. Beta diversity shows us the size of the change of species from one ecosystem to another.

Gamma diversity refers to the total diversity of a region, i.e. the geographic diversity. It is the sum of the alpha diversity of various ecosystems.

18) Consider the following statements about Savanna type climate.

- 1. It is a transitional type of climate between the equatorial forest and the trade wind hot deserts.
- 2. It is characterized by high and year-round rainfall.

Which of the above statements is/are incorrect?

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

Solution: b)

- Savanna or Sudan climate is a transitional type of climate found between the equatorial forests & trade wind hot deserts.
- It is confined within the tropics (Tropic of Cancer & Tropic of Capricorn) & is best developed in Sudan, where dry & wet climate are most distinct, hence named Sudan climate.
- It covers much of Africa (Kenya, Nigeria, Gambia) as well as large areas of Australia, South America (Brazilian highlands), and India.

- Sudan climate is characterized by an alternate & distinct hot, rainy season (from May to Sep) & cool, dry season (Oct – April) in Northern Hemisphere & vice versa in Southern Hemisphere.

19) Consider the following statements.

1. Stenothermal organisms can tolerate and thrive in a wide range of temperatures.
2. Freshwater animals cannot live for long in sea water because of the osmotic problems.

Which of the above statements is/are correct?

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

Solution: b)

A few organisms can tolerate and thrive in a wide range of temperatures (they are called eurythermal), but, a vast majority of them are **restricted to a narrow range of temperatures (such organisms are called stenothermal)**.

Many freshwater animals cannot live for long in sea water and vice versa because of the osmotic problems, they would face.

20) The highly degraded organic matter rich in phosphorus, nitrogen and potassium in particular, resulting from the activity of earthworms is known as:

- a) Compost bedding
- b) Humus
- c) Worm casting
- d) Vermicomposting

Solution: d)

Vermicomposting is a type of composting in which certain species of earthworms are used to enhance the process of organic waste conversion and produce a better end-product. It is a mesophilic process utilizing microorganisms and earthworms. Earthworms feed the organic waste materials and pass it through their digestive system and give out in a granular form (cocoons) which is known as vermicompost.

A wide range of organic residues, such as straw, husk, leaves, stalks, weeds etc. can be converted into vermicompost. Other potential feedstock for vermicomposting production are livestock wastes, poultry litter, dairy wastes, food processing wastes, organic fraction of MSW, bagasse, digestate from biogas plants etc.