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# STATIC QUIZ

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# 2020

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# 1. Polity

1) Consider the following statements.

1. The Constitution declares that laws made for admission or establishment of new states and alteration of areas, boundaries or names of existing states are considered as amendments of the Constitution under Article 368.

2. Indian territory can be ceded to a foreign state only by amending the Constitution under Article 368.

3. Settlement of a boundary dispute between India and another country does not require a constitutional amendment.

Which of the above statements is/are correct?

a) 1, 2

b) 1, 3

c) 2, 3

d) 1, 2, 3

Solution: c)

The Constitution (Article 4) itself declares that laws made for admission or establishment of new states (under Article 2) and formation of new states and alteration of areas, boundaries or names of existing states (under Articles 3) are not to be considered as amendments of the Constitution under Article 368. This means that such laws can be passed by a simple majority and by the ordinary legislative process.

Indian territory can be ceded to a foreign state only by amending the Constitution under Article 368.

Settlement of a boundary dispute between India and another country does not require a constitutional amendment. It can be done by executive action as it does not involve cession of Indian territory to a foreign country.

2) The Constitution confers which of the following rights and privileges on the citizens of India and denies the same to aliens.

1. Opportunity in the matter of public employment.

2. Contest for the membership of the Parliament and the state.

3. Freedom of speech and expression.

4. Right to life and personal liberty.

Select the correct answer code:

a) 1, 2, 4

b) 2, 3, 4

c) 1, 2, 3

d) 1, 2, 3, 4

Solution: c)

The Constitution confers the following rights and privileges on the citizens of India (and denies the same to aliens):

1. Right against discrimination on grounds of religion, race, caste, sex or place of birth (Article 15).

2. Right to equality of opportunity in the matter of public employment (Article 16).

3. Right to freedom of speech and expression, assembly, association, movement, residence and profession (Article 19).

4. Cultural and educational rights (Articles 29 and 30).

5. Right to vote in elections to the Lok Sabha and state legislative assembly.

6. Right to contest for the membership of the Parliament and the state legislature.

7. Eligibility to hold certain public offices, that is, President of India, Vice-President of India, judges of the Supreme Court and the high courts, governor of states, attorney general of India and advocate general of states.

The right to life and personal liberty is available to all people and so is the right to freedom of religion.

3) Consider the following statements.

1. Parliament shall have the power to make any provision with respect to the acquisition and termination of Indian citizenship.

2. Naturalised citizen who has rendered distinguished service to the science, philosophy, art, literature, world peace or human progress may not take an oath of allegiance to the Constitution of India.

3. The Constitution prohibits discrimination against any citizen on grounds of religion, race, residence, caste, sex or place of birth.

Which of the above statements is/are incorrect?

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

Solution: b)

Parliament shall have the power to make any provision with respect to the acquisition and termination of citizenship and all other matters relating to citizenship (Article 11).

The Government of India may waive all or any of the conditions for naturalisation in the case of a person who has rendered distinguished service to the science, philosophy, art, literature, world peace or human progress. Every naturalised citizen must take an oath of allegiance to the Constitution of India.

The Constitution (under Article 15) prohibits discrimination against any citizen on grounds of religion, race, caste, sex or place of birth and not on the ground of residence. This means that the state can provide special benefits or give preference to its residents in matters that do not come within the purview of the rights given by the Constitution to the Indian citizens. For example, a state may offer concession in fees for education to its residents.

4) Which principle among the following was added to the Directive Principles of State Policy by the 44<sup>th</sup> Amendment to the Constitution?

- a) To promote the welfare of the people by securing a social order permeated by justice
- b) To minimize inequalities in income, status, facilities and opportunities
- c) To secure opportunities for healthy development of children
- d) To take steps to secure the participation of workers in the management of industries

Solution: b)

Option A: To promote the welfare of the people by securing a social order permeated by justice – This provision is Originally available under the Article 38.

Option B: To minimize inequalities in income, status, facilities and opportunities- This is added to Article 38 through 44<sup>th</sup> Constitutional Amendment Act.

Option C and Option D: These provisions are added through 42<sup>nd</sup> Constitutional Amendment.

5) Consider the following pairs.

Union Territory		Name of the High Court
1. Andaman and Nicobar Islands	:	Madras High Court
2. Lakshadweep Islands	:	Kerala High Court
3. Daman and Diu	:	Gujarat High Court

Which of the above pairs is/are correctly matched?

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

d) 1, 2, 3

Solution: a)

- Territorial Jurisdiction of Bombay High Court: Maharashtra, Goa, Dadra and Nagar Haveli and Daman and Diu
- Territorial Jurisdiction of Calcutta High Court: West Bengal and Andaman and Nicobar Islands.
- Territorial Jurisdiction of Kerala High Court: Kerala and Lakshadweep.

6) Grants from the Centre to the States under the recommendations of Finance Commission are known as

- a) Development assistance
- b) Discretionary grants
- c) Statutory grants
- d) Plan grants

Solution: c)

7) With reference to the Central Administrative Tribunal (CAT), consider the following statements:

1. The CAT is not bound by the procedure laid down in the Civil Procedure Code of 1908 and is guided by the principles of natural justice.
2. The appeals against the orders of the CAT could be made only in the Supreme Court and not in the high courts.

Which of the above statements is/are correct?

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

Solution: a)

The original Constitution did not contain provisions with respect to tribunals. The 42nd Amendment Act of 1976 added a new Part XIV-A to the Constitution. This part is entitled as 'Tribunals' and consists of only two Articles— Article 323 A dealing with administrative tribunals and Article 323 B dealing with tribunals for other matters. The CAT is not bound by the procedure laid down in the Civil Procedure Code of 1908. It is guided by the principles of natural justice. These principles keep the CAT flexible in approach.

Originally, appeals against the orders of the CAT could be made only in the Supreme Court and not in the high courts. However, in the Chandra Kumar case (1997), the Supreme Court declared this restriction on the jurisdiction of the high courts as unconstitutional, holding that judicial review is a part of the basic structure of the Constitution. It laid down that appeals against the orders of the CAT shall lie before the division bench of the concerned high court. Consequently, now it is not possible for an aggrieved public servant to approach the Supreme Court directly against an order of the CAT, without first going to the concerned high court.

8) Consider the following statements:

1. State governments in India are subordinate to the Union government.
2. State governments in India draw their authority from the Union government.

Which of these is/are incorrect?

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

Solution: c)

State governments are not mere agents of Union government. They derive their authority from the Indian constitution. They are not subordinate to the Centre. Instead, the Centre is more powerful than the state governments to maintain the unity and integrity of the Indian union.

9) Which of the following provisions of 73rd Constitutional Amendment Act (1992) or the Part IX of the Constitution is/are the compulsory provisions/features?

1. Indirect elections to the post of chairperson of panchayats at the intermediate and district levels.
2. 21 years to be the minimum age for contesting elections to panchayats.
3. Providing reservation of seats (both members and chairpersons) for backward classes in panchayats at any level.

Select the correct answer code:

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

Solution: a)

Compulsory Provisions of the 73rd Constitutional Amendment Act (1992) or the Part IX of the Constitution:

1. Organisation of Gram Sabha in a village or group of villages.
2. Establishment of panchayats at the village, intermediate and district levels.
3. Direct elections to all seats in panchayats at the village, intermediate and district levels.
4. Indirect elections to the post of chairperson of panchayats at the intermediate and district levels.
5. 21 years to be the minimum age for contesting elections to panchayats.
6. Reservation of seats (both members and chairpersons) for SCs and STs in panchayats at all the three levels.
7. Reservation of one-third seats (both members and chairpersons) for women in panchayats at all the three levels.
8. Fixing tenure of five years for panchayats at all levels and holding fresh elections within six months in the event of supersession of any panchayat.
9. Establishment of a State Election Commission for conducting elections to the panchayats.
10. Constitution of a State Finance Commission after every five years to review the financial position of the panchayats.

10) Under which of the following circumstances can the Parliament legislate on the subjects in the State list?

1. Rajya Sabha passes a resolution to that effect
2. When any state makes a request to the parliament
3. President's Rule
4. Financial emergency

Which of the above statements is/are incorrect?

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

Solution: b)

The Constitution empowers the Parliament to make laws on the subjects enumerated in the State List under the following five abnormal circumstances:

- (a) when Rajya Sabha passes a resolution to that effect.
- (b) when a proclamation of National Emergency is in operation.
- (c) when two or more states make a joint request to the Parliament.
- (d) when necessary to give effect to international agreements, treaties and conventions.
- (e) when President's Rule is in operation in the state.

11) The parliamentary form of government emphasises on the

- a) System of Universal Adult Franchise
- b) Separation of powers between the legislature and executive
- c) Democratic election system administered by an independent body
- d) Interdependence between the legislative and executive organs

Solution: d)

Option b) is valid in the Presidential system as in USA.

A Parliament may not be based on democratic elections or even adult franchise. It can be an entirely nominated body as it largely used to be in the colonial rule. So, a) and c) are incorrect.

In India, executive is a part of the legislature, and the legislature is led by the executive. So, c) is the correct option.

12) Consider the following statements regarding Interim government of India, formed in 1946.

1. It was the only such cabinet in India's history in which both Congress and the Muslim League shared power at the Centre.
2. The interim government functioned according to the Government of India Act of 1935.
3. The interim government functioned until India became a sovereign democratic republic.

Which of the above statements is/are correct?

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

Solution: b)

On September 2, 1946, the interim government of India led by Jawaharlal Nehru was formed.

It was the only such cabinet in India's history in which both Congress and the Muslim League shared power at the Centre.

The interim government functioned with a great degree of autonomy, and remained in power until the end of British rule, after which it was succeeded by the Dominions of India and Pakistan.

The interim government functioned according to the older Government of India Act of 1919.

13) Consider the following statements regarding Governors of States in India.

1. According to Constitution, the same person can be the Governor of two or more states.
2. The impeachment process is similar to that of the President of India.
3. Governor determines the amount payable by the Government of Assam, Meghalaya, Tripura and Mizoram to an autonomous Tribal District Council as royalty accruing from licenses for mineral exploration.

Which of the above statements is/are correct?

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

Solution: b)

According to 7th Constitutional Amendment Act 1956, the same person can be the Governor of two or more states.

Appointment: The governors and lieutenant-governors are appointed by the president.

Removal: The term of governor's office is normally 5 years but it can be terminated earlier by: Dismissal by the president on the advice of the prime minister of the country, at whose pleasure the governor holds office or Resignation by the governor. Thus, the term is subject to pleasure of the president.

There is no provision of impeachment, as it happens for the president.

Determines the amount payable by the Government of Assam, Meghalaya, Tripura and Mizoram to an autonomous Tribal District Council as royalty accruing from licenses for mineral exploration.

14) Consider the following statements regarding a separate state flag.

1. Supreme Court has said that there is no prohibition in the Constitution for the State to have its own flag.
2. Under the Constitution, a flag is enumerated in the concurrent list.
3. The Flag Code of India, 2002 does not impose prohibitions on a State flag.

Which of the above statements is/are correct?

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

Solution: c)

Supreme Court has said that there is no prohibition in the Constitution for the State to have its own flag. However, the manner in which the state flag is hoisted should not dishonour the national flag.

Under the Constitution, a flag is not enumerated in the Seventh Schedule. However, Article 51A rules that every citizen shall abide by the Constitution and respect its ideals and institutions, the national flag, and the national anthem.

Even the Flag Code of India, 2002 does not impose prohibitions on a State flag. The Code expressly authorises the flying of other flags under the condition that they should not be hoisted from the same masthead as the national flag or placed higher than it.

15) Consider the following statements.

1. The Department of Official Language was set up as an independent Department of the Ministry of Home Affairs for accelerating the progressive use of Hindi for the official purposes of the Union.
2. Constitution has not mentioned anything about the official language of India.
3. Kanthasth is the computer software developed by Department of Official Language for translating all kinds of official files from English to Hindi.

Which of the above statements is/are correct?

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

Solution: c)

With a view to ensuring compliance of the constitutional and legal provisions regarding official language and to promote the use of Hindi for the official purposes of the Union, the Department of Official Language was set up in June 1975 as an independent Department of the Ministry of Home Affairs. Since then, this Department has been making efforts for accelerating the progressive use of Hindi for the official purposes of the Union.

Part 17 of the constitution of India (Articles 343 to Article 351) makes elaborate provisions dealing with the official language of the Republic of India. The main provisions dealing with the official language of the Union are embodied in Articles 343 and 344 of the Constitution of India. The Official languages have been listed in the 8th schedule of Constitution of India.

The department has developed a computer software called “Kanthasth” for translating the all kinds of official files from English to Hindi and vice versa to make the translation work simpler and quicker.

An E-learning platform called the “Pravah” also being developed by the department for use in 16 Indian languages including English. Anybody can learn Hindi through his mother tongue with the help of this E-learning platform.

- 16) Consider the following statements regarding constitutional provisions with respect to the Indian citizenship.
1. No person shall be a citizen of India if he has voluntarily acquired the citizenship of any foreign state.
  2. Union Cabinet headed by the prime minister has the power to make any provision with respect to the acquisition and termination of citizenship and all other matters relating to citizenship.

Which of the above statements is/are correct?

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

Solution: a)

The constitutional provisions with respect to the citizenship are as follows:

1. No person shall be a citizen of India or be deemed to be a citizen of India, if he has voluntarily acquired the citizenship of any foreign state (Article 9).
2. Every person who is or is deemed to be a citizen of India shall continue to be such citizen, subject to the provisions of any law made by Parliament (Article 10).
3. Parliament shall have the power to make any provision with respect to the acquisition and termination of citizenship and all other matters relating to citizenship (Article 11).

- 17) Consider the following statements regarding Fundamental Rights guaranteed by the Constitution.

1. Fundamental Rights are available against the arbitrary action of the State and against the action of private individuals.
2. The Parliament can curtail or repeal them by an ordinary act.
3. The six rights guaranteed by Article 19 can be suspended when emergency is declared on the grounds of armed rebellion.

Which of the above statements is/are correct?

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

Solution: c)

Most of them are available against the arbitrary action of the State, with a few exceptions like those against the State's action and against the action of private individuals. When the rights that are available against the State's action only are violated by the private individuals, there are no constitutional remedies but only ordinary legal remedies.

They are not sacrosanct or permanent. The Parliament can curtail or repeal them but only by a constitutional amendment act and not by an ordinary act. Moreover, this can be done without affecting the 'basic structure' of the Constitution.

They can be suspended during the operation of a National Emergency except the rights guaranteed by Articles 20 and 21. Further, the six rights guaranteed by Article 19 can be suspended only when emergency is declared on the grounds of war or external aggression (i.e., external emergency) and not on the ground of armed rebellion (i.e., internal emergency).

- 18) Consider the following statements regarding Directive Principles of State Policy.

1. These are the constitutional instructions to the State in legislative, executive and administrative matters.
2. They seek to establish economic and social democracy in the country.
3. To secure for all citizens a uniform civil code throughout the country is part of socialistic principles.

Which of the above statements is/are correct?

- a) 1, 3

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

Solution: b)

The phrase 'Directive Principles of State Policy' denotes the ideals that the State should keep in mind while formulating policies and enacting laws. These are the constitutional instructions or recommendations to the State in legislative, executive and administrative matters.

The Directive Principles constitute a very comprehensive economic, social and political programme for a modern democratic State. They aim at realising the high ideals of justice, liberty, equality and fraternity as outlined in the Preamble to the Constitution. They embody the concept of a 'welfare state' and not that of a 'police state', which existed during the colonial era<sup>3</sup>. In brief, they seek to establish economic and social democracy in the country.

To secure for all citizens a uniform civil code throughout the country (Article 44)- Liberal–Intellectual Principle.

19) With reference to Right to Constitutional Remedies guaranteed under Article 32, consider the following statements:

1. The Supreme Court has ruled that Article 32 is a basic feature of the constitution.
2. Fundamental rights and other statutory rights can be enforced under Article 32.
3. The Supreme Court has both exclusive and original jurisdiction in case of enforcement of Fundamental Rights.

Rights.

4. Article 32 cannot be invoked to determine the constitutionality of an executive order or a legislation unless it directly infringes on any Fundamental Rights.

Which of the above statements is/are correct?

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

Solution: a)

- Statement 1 – The Supreme Court has ruled that Article 32 is a basic feature of the Constitution. Hence, it cannot be abridged or taken away even by way of an amendment to the Constitution.
- Statement 2 - Only the Fundamental Rights guaranteed by the Constitution can be enforced under Article 32 and not any other right like non-fundamental constitutional rights, statutory rights, customary rights and so on.
- Statement 3 - In case of the enforcement of Fundamental Rights, the jurisdiction of the Supreme Court is original but not exclusive. It is concurrent with the jurisdiction of the high court under Article 226.
- Statement 4 - Article 32 cannot be invoked simply to determine the constitutionality of an executive order or a legislation unless it directly infringes any of the fundamental rights.

20) Consider the following statements

1. Cabinet Secretariat settles inter-ministerial disputes.
2. Cabinet Secretary is ex-officio chairman of the Civil Services Board.
3. Parliament can abolish or create a Legislative Council if the concerned legislative assembly passes a resolution to that effect with simple majority

Which of the above statements is/are correct?

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

Solution: c)

Parliament can abolish or create a Legislative Council if the concerned legislative assembly passes a resolution to that effect with special majority.



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## 2. Geography

1) Consider the following statements regarding ocean temperature distribution.

1. Thermocline layer is characterised by rapid decrease in temperature with increasing depth.
2. In the Arctic and Antarctic circles, only one layer of cold water exists, which extends from surface to deep ocean floor.
3. The highest temperature is recorded at the equator.

Which of the above statements is/are correct?

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

Solution: c)

The thermocline layer lies below the first layer and is characterised by rapid decrease in temperature with increasing depth.

In the Arctic and Antarctic circles, the surface water temperatures are close to 0° C and so the temperature change with the depth is very slight. Here, only one layer of cold water exists, which extends from surface to deep ocean floor.

The oceans in the northern hemisphere record relatively higher temperature than in the southern hemisphere. The highest temperature is not recorded at the equator but slightly towards north of it.

2) Consider the following statements.

1. In ocean water, salinity variation is more in the surface water than at depth.
2. The maximum temperature of the oceans is always below the surface, because the heat cannot escape faster from this layer.

Which of the above statements is/are correct?

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

Solution: a)

Salinity at the surface increases by the loss of water to ice or evaporation, or decreased by the input of fresh waters, such as from the rivers. Salinity at depth is very much fixed, because there is no way that water is 'lost', or the salt is 'added.'

It is a well-known fact that the maximum temperature of the oceans is always at their surfaces because they directly receive the heat from the sun and the heat is transmitted to the lower sections of the oceans through the process of convection. It results into decrease of temperature with the increasing depth, but the rate of decrease is not uniform throughout. The temperature falls very rapidly up to the depth of 200 m and thereafter, the rate of decrease of temperature is slowed down.

3) Which of the following are the factors that affect ocean salinity.

1. Evaporation and precipitation
2. Fresh water flow
3. Freezing and thawing of ice
4. Wind
5. Ocean Currents

Select the correct answer code:

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

Solution: d)

Factors affecting ocean salinity are mentioned below:

- (i) The salinity of water in the surface layer of oceans depend mainly on evaporation and precipitation.
- (ii) Surface salinity is greatly influenced in coastal regions by the fresh water flow from rivers, and in polar regions by the processes of freezing and thawing of ice.
- (iii) Wind, also influences salinity of an area by transferring water to other areas.
- (iv) The ocean currents contribute to the salinity variations. Salinity, temperature and density of water are interrelated. Hence, any change in the temperature or density influences the salinity of water in an area.

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

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

Solution: d)

Mountains also cause air to rise. As the wind blows across a mountain range, air rises and cools and clouds can form on the windward side. This is why windward sides of mountain ranges tend to get heavy precipitation. When the air sinks on the leeward side of the mountain range, it is usually much drier and warmer than it was to begin with.

5) Which among the following crop requires high temperature, light rainfall, 210 frost-free days and bright sunshine?

- a) Jute
- b) Cotton
- c) Tea
- d) Coffee

Solution: b)

Ideal conditions for the cotton plants are Long vegetation periods (175 to 225 days) without frost, Constant temperatures between 18 and 30°, Ample sunshine and fairly dry conditions

6) Consider the following statements regarding Tropical Thorn Forests.

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

Which of the above statements is/are correct?

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

Solution: a)

Tropical thorn forests occur in the areas which receive rainfall less than 50 cm. These consist of a variety of grasses and shrubs. It includes semi-arid areas of south west Punjab, Haryana, Rajasthan, Gujarat, Madhya

Pradesh and Uttar Pradesh. In these forests, plants remain leafless for most part of the year and give an expression of scrub vegetation.

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

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

7) Consider the following statements.

1. The Himalayan ranges show a succession of vegetation from the tropical to the tundra, with evergreen broad leaf trees at the foothills of the Himalayas.
2. Deodar, a highly valued endemic species grows mainly in the western part of the Himalayan range.

Which of the above statements is/are correct?

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

Solution: b)

The Himalayan ranges show a succession of vegetation from the tropical to the tundra, which change in with the altitude. Deciduous forests are found in the foothills of the Himalayas.

Deodar, a highly valued endemic species grows mainly in the western part of the Himalayan range. Deodar is a durable wood mainly used in construction activity.

8) The southern slopes of the Himalayas carry a thicker vegetation cover because of

- a) Soils rich in alkaline content
- b) High incidence of sunlight compared to north facing slope
- c) Higher precipitation
- d) None of the above

Solution: c)

The southern slopes of the Himalayas carry a thicker vegetation cover because of relatively higher precipitation than the drier north-facing slopes.

9) Consider the following statements regarding Sunspots:

1. Sunspots are darker, cooler areas on the surface of the sun in a region called Corona.
2. They are regions of reduced surface temperature caused by concentrations of magnetic field flux that inhibit convection.

Which of the above statements is/are correct?

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

Solution: b)

Sunspots are temporary phenomena on the Sun's photosphere that appear as spots darker than the surrounding areas. They are regions of reduced surface temperature caused by concentrations of magnetic field flux that inhibit convection.

10) Consider the following statements regarding Shale Gas

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

Which of the above statements is/are correct?

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

Solution: c)

- Shale gas refers to natural gas that is trapped within shale formations. Shales are fine-grained sedimentary rocks that can be rich sources of petroleum and natural gas.
- Over the past decade, the combination of horizontal drilling and hydraulic fracturing has allowed access to large volumes of shale gas that were previously uneconomical to produce.

11) Consider the following statements about Mountains

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

Which of the above statements is/are incorrect?

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

Solution: c)

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

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

12) Consider the following pairs:

Tribes	Region
1. Pygmies	: Congo
2. Maasai	: Kenya
3. Bushman	: Atacama Desert

Which of the above pairs is/are correctly matched?

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

Solution: a)

The Bushmen are the indigenous peoples of Kalahari Desert located in Southern Africa covering Botswana, Namibia and South Africa.

13) Consider the following statements regarding Mount Leo Pargyil.

1. Leo Pargyil is the third highest peak of Himachal.
2. It lies in the Zaskar range.

Which of the above statements is/are incorrect?

- a) 1 only

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

Solution: d)

An Indian Army team successfully summited Mount Leo Pargyil. Leo Pargyil is the third highest peak of Himachal and is considered to be among the most challenging and technically difficult peak to scale. It lies in the Zaskar range.

Source

14) Consider the following statements about Polar vortex.

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

Which of the above statements is/are correct?

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

Solution: b)

The polar vortex is a large area of low pressure and cold air surrounding the Earth's North and South poles. The term vortex refers to the counter-clockwise flow of air that helps keep the colder air close to the poles. The polar vortex spins in the stratosphere, a layer of the atmosphere 10-48 km above the ground and above the troposphere, where most familiar weather patterns develop.

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

Source

15) Consider the following statements about Dew point.

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

Which of the above statements is/are correct?

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

Solution: c)

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

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

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

Select the correct answer code:

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

Solution: d)

The country's wetlands have been grouped into eight categories, viz. (i) the reservoirs of the Deccan Plateau in the south together with the lagoons and other wetlands of the southern west coast; (ii) the vast saline expanses of Rajasthan, Gujarat and the Gulf of Kachchh; (iii) freshwater lakes and reservoirs from Gujarat eastwards through Rajasthan (Keoladeo National Park) and Madhya Pradesh; (iv) the delta wetlands and lagoons of India's east coast (Chilika Lake); (v) the freshwater marshes of the Gangetic Plain; (vi) the floodplains of the Brahmaputra; the marshes and swamps in the hills of northeast India and the Himalayan foothills; (vii) the lakes and rivers of the montane region of Kashmir and Ladakh; and (viii) the mangrove forest and other wetlands of the island arcs of the Andaman and Nicobar Islands.

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

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

Which of the above statements is/are correct?

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

Solution: a)

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

18) Consider the following statements about earthquakes

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

Which of the above statements is/are correct?

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

Solution: d)

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

called the hypocenter. The energy waves travelling in different directions reach the surface. The point on the surface, nearest to the focus, is called epicentre. It is the first one to experience the waves. It is a point directly above the focus.

19) Which of the following sources help in studying about the interior of the earth?

1. Magnetic Field
2. Gravitation
3. Seismic activity
4. Mining activity

Select the correct answer code:

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

Solution: d)

Analysis of properties of matter indirectly provides information about the interior. We know through the mining activity that temperature and pressure increase with the increasing distance from the surface towards the interior in deeper depths. Moreover, it is also known that the density of the material also increases with depth. It is possible to find the rate of change of these characteristics. Knowing the total thickness of the earth, scientists have estimated the values of temperature, pressure and the density of materials at different depths.

Another source of information are the meteors that at times reach the earth. However, it may be noted that the material that becomes available for analysis from meteors, is not from the interior of the earth. The material and the structure observed in the meteors are similar to that of the earth. They are solid bodies developed out of materials same as, or similar to, our planet. Hence, this becomes yet another source of information about the interior of the earth.

The other indirect sources include gravitation, magnetic field, and seismic activity. Magnetic surveys also provide information about the distribution of magnetic materials in the crustal portion, and thus, provide information about the distribution of materials in this part. Seismic activity is one of the most important sources of information about the interior of the earth.

20) Consider the following statements with respect to 'Gas Hydrates'.

1. Gas hydrates are crystalline form of propane and water
2. Gas hydrates exist in shallow sediments of outer continental margins

Which of the above statements is/are correct?

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

Solution: b)

Gas hydrates are crystalline form of methane and water and exist in shallow sediments of outer continental margins. They are envisaged as a viable major energy resource for future.

Gas hydrates with their abundant resource potential is emerging as a potential fuel resource. The preliminary assessment of geological condition and limited available seismic data suggests high possibility of occurrence of large quantity of gas hydrates within the EEZ of India.

### 3. Economy

- 1) The Laffer Curve is the representation of
- Relationship Between Inflation and Unemployment
  - Inequality of wealth distribution
  - Relationship between tax rates and the amount of tax revenue collected by governments.
  - Relationship between Economic growth and Environmental Degradation

Solution: c)

The Laffer Curve is a theory developed by supply-side economist Arthur Laffer to show the relationship between tax rates and the amount of tax revenue collected by governments. The curve is used to illustrate Laffer's argument that sometimes-cutting tax rates can increase total tax revenue.

- 2) A 'wilful default' would be deemed to have occurred if which of the following events.
- Defaulting in meeting its repayment obligations to the lender even when it has the capacity to repay.
  - Not utilising the finance from the lender for the specific purposes for which finance was availed and diverting the funds for other purposes.
  - Disposed off the movable fixed assets or immovable property given for the purpose of securing a term loan without the knowledge of the bank.

Which of the above statements is/are correct?

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

Solution: d)

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

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

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

3) Consider the following statements regarding Devaluation of currency.

- Devaluation decreases the prices of imports purchased in the home country.
- Devaluation can be employed to eliminate balance-of-payments deficits.
- Devaluation will not be effective if the balance-of-payments disequilibrium is a result of basic structural flaws in a country's economy.

Which of the above statements is/are correct?

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

d) 1, 2, 3

Solution: c)

Devaluation, reduction in the exchange value of a country's monetary unit in terms of gold, silver, or foreign monetary units. Devaluation is employed to eliminate persistent balance-of-payments deficits. For example, a devaluation of currency will decrease prices of the home country's exports that are purchased in the import country's currency. While making the exported goods cheaper for other countries, devaluation also increases the prices of imports purchased in the home country. Devaluation will not be effective if the balance-of-payments disequilibrium is a result of basic structural flaws in a country's economy.

4) Which of the following is the essential objective of 'Viability gap funding'?

- a) Funding of social sector projects like housing, sanitation by tapping international funds.
- b) Investments made by the angel investors in budding companies
- c) Financing of the projects having Public Private Partnership in the sectors of infrastructure.
- d) Investment of government in overall development of the agricultural sector.

Solution: c)

Viability literally means ability to survive successfully. VGF is an economic instrument (or scheme) of Government of India, launched in 2004 with the motive of supporting projects which come under public-private partnerships (PPP) model. Basically, it is a grant to support projects that are economically justified but are not financially viable.

5) Consider the following statements about GDP deflator.

- 1. GDP deflator reflects the prices of all domestically produced goods and services in the economy.
- 2. The GDP deflator also includes the prices of investment goods, government services and exports.
- 3. Monthly change in inflation cannot be tracked using GDP deflator.

Which of the above statements is/are correct?

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

Solution: d)

The Gross Domestic Product (GDP) deflator is a measure of general price inflation. It is calculated by dividing nominal GDP by real GDP and then multiplying by 100.

There are other measures of inflation too like Consumer Price Index (CPI) and Wholesale Price Index (or WPI); however, GDP deflator is a much broader and comprehensive measure. Since Gross Domestic Product is an aggregate measure of production, being the sum of all final uses of goods and services (less imports), GDP deflator reflects the prices of all domestically produced goods and services in the economy whereas, other measures like CPI and WPI are based on a limited basket of goods and services, thereby not representing the entire economy.

The GDP deflator also includes the prices of investment goods, government services and exports, and excludes the price of imports.

While WPI and CPI are available on monthly basis whereas deflator comes with a lag (yearly or quarterly, after quarterly GDP data is released). Hence, monthly change in inflation cannot be tracked using GDP deflator, limiting its usefulness.

Source

6) Reserve Tranche is the economic term used in the context with

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

Solution: d)

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

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

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

Solution: d)

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

8) The interest rate at which banks lend to favoured customers is known as

- a) Bank Rate
- b) Special lending Rate
- c) Reserved Rate
- d) Prime rate

Solution: d)

A prime rate or prime lending rate is an interest rate used by banks, usually the interest rate at which banks lend to favoured customers—i.e., those with good credit.

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

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

Select the correct answer code:

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

Solution: b)

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

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

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

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

10) Consider the following statements.

1. India's retail price inflation has fallen in the last 3 years.
2. Contraction in industrial activity and rising inflation can lead to stagflation in the economy.

Which of the above statements is/are correct?

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

Solution: b)

Retail inflation had surged to a 40-month high of 5.54% in November 2019, driven by rising food inflation.

This combination of contraction in industrial activity and rising inflation has led experts to fear that India is entering a phase of stagflation (a situation in which there is persistent high inflation combined with stagnant or declining demand).

Source

11) Which of the following measures by the government will lead to reduction in inflation?

1. Reducing government tax collection
2. Reducing government spending
3. Banning the export of essential items

Which of the above statements is/are correct?

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

Solution: b)

Inflation can be controlled by increasing the supplies of goods and services and reducing money incomes in order to control aggregate demand.

Fiscal measures to control inflation:

- The government should reduce unnecessary expenditure on non-development activities in order to curb inflation.
- To cut personal consumption expenditure, the rates of personal, corporate and commodity taxes should be raised
- Some protectionist measures (such as banning the export of essential items such as pulses, cereals and oils to support the domestic consumption, encourage imports by lowering duties on import items etc.).

12) Which of the following best describes 'Bank Rate'?

- a) It is the rate at which banks lend to their best customers based on the previous balance sheet record.
- b) It is the rate at which central bank lends money to the commercial banks.
- c) It is the rate at which bank penalizes the customers if they not paid interest regularly
- d) None of the statements (a), (b) and (c) are correct.

Solution: b)

- Bank rates influence lending rates of commercial banks. Higher bank rate will translate to higher lending rates by the banks.

13) Consider the following statements regarding Index of Eight Core Industries.

1. The Eight Core Industries comprise 50 per cent of the weight of items included in the Index of Industrial Production (IIP).
2. Refinery Products has the maximum weight in Index of Eight Core Industries.
3. The growth of the Eight Core Industries has been declining steadily since 2015.

Which of the above statements is/are correct?

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

Solution: c)

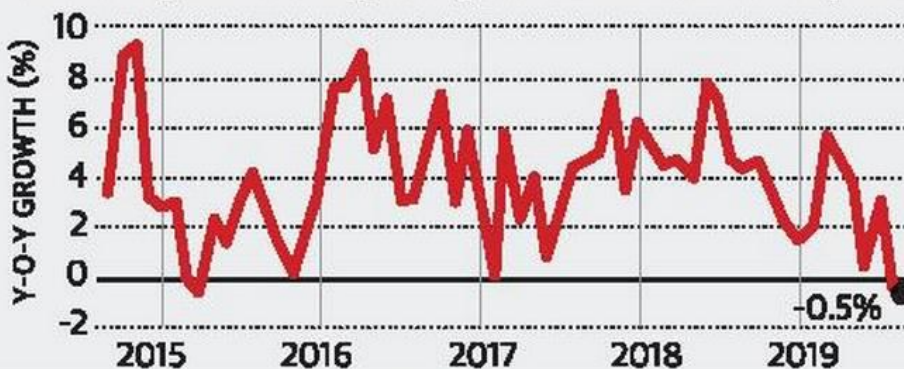
The Eight Core Industries comprise 40.27 per cent of the weight of items included in the Index of Industrial Production (IIP).

Petroleum Refinery production (weight: 28.04 per cent).

Growth in the eight core sectors in August slumped to the lowest in four years and four months. That is, the -0.5% registered in August 2019 was the lowest since April 2015.

## Four-year low

The volume of production in eight core industries grew at -0.5% in August 2019 – the lowest in 52 months. Five sectors registered a negative growth while the rest expanded



**Sector-wise growth: Coal -8.67%; Crude oil -5.46%; Natural gas -3.99%; Refinery products +2.58%; Fertilizers +2.93%; Steel +5.05%; Cement -4.91%; Electricity -2.99%**

Source Source

14) Consider the following statements regarding World Trade Organization (WTO).

1. The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations.
2. WTO can cut the cost of doing business internationally.
3. All the African countries are the members of WTO.

Which of the above statements is/are correct?

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

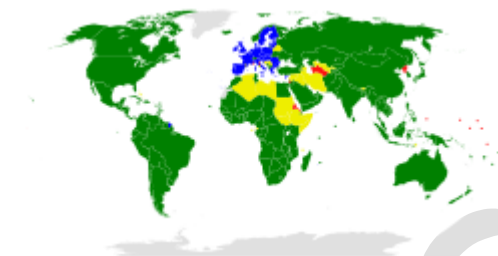
Solution: c)

The World Trade Organization (WTO) is an intergovernmental organization that is concerned with the regulation of international trade between nations. The WTO officially commenced on 1 January 1995 under the Marrakesh Agreement, signed by 123 nations on 15 April 1994, replacing the General Agreement on Tariffs and Trade (GATT), which commenced in 1948. It is the largest international economic organization in the world.

The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations.

The WTO can ...

- 1 ... cut living costs and raise living standards
- 2 ... settle disputes and reduce trade tensions
- 3 ... stimulate economic growth and employment
- 4 ... cut the cost of doing business internationally
- 5 ... encourage good governance
- 6 ... help countries develop
- 7 ... give the weak a stronger voice
- 8 ... support the environment and health
- 9 ... contribute to peace and stability
- 10 ... be effective without hitting the headlines



- Members
- Members, dually represented by the EU
- Observers
- Non-participant states

Source

15) Consider the following statements about domestic systemically important bank (D-SIB).

1. RBI declares only Public Sector Banks as domestic systemically important bank.
2. Banks become systemically important due to their size, cross-jurisdictional activities and interconnection.
3. Banks whose assets exceed 2% of GDP are considered part of this group.

Which of the above statements is/are correct?

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

Solution: c)

D-SIB means that the bank is too big to fail. According to the RBI, some banks become systemically important due to their size, cross-jurisdictional activities, complexity and lack of substitute and interconnection. Banks whose assets exceed 2% of GDP are considered part of this group. The RBI stated that should such a bank fail, there would be significant disruption to the essential services they provide to the banking system and the overall economy.

Source

16) Which of the following were the goals of the planning system in India between 1950-1990?

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

Select the correct answer code:

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

Solution: a)

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

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

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

Which of the above statements is/are correct?

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

Solution: c)

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

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

Current Repo Rate is 5.15% and MSF is 5.4% (MSF was originally intended to be 1% above the repo rate).

18) Consider the following statements about Real Estate investment Trusts (REITs).

1. REITs are mutual fund like institutions that enable investments mainly in completed and revenue generating real estate assets.
2. REITs are regulated by the securities market regulator in India.
3. A REIT can be launched as an initial public offer (IPO).

Which of the above statements is/are correct?

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

Solution: d)

REITs are similar to mutual funds. While mutual funds provide for an opportunity to invest in equity stocks, REITs allow one to invest in income-generating real estate assets.

They are collective investment vehicles that operate and manage property portfolios and give returns to investors. Securities and Exchange Board of India (Sebi) mandated that all REITS be listed on exchanges and make an initial public offer to raise money.

REITs can reduce the risk related to your property investments as 80 per cent of the value of the REIT should be in completed and rent-generating assets. They are required to be run by professional managements with specified years of experience notified by SEBI.

A REIT can be launched as an initial public offer (IPO). An investor can apply for investment in the REIT through his demat account, either online or by filling up the IPO form and indicating demat account details. After the issue is closed, the REIT will allot units to eligible investors.

Source Source

19) Consider the following statements.

1. Economic capital framework refers to the risk capital required by the central bank while taking into account different risks.
2. RBI pays wealth tax to the Union Government for holding capital reserves.
3. RBI transfers surplus reserves to the Government of India in accordance with Section 47 of the Reserve Bank of India Act, 1934.

Which of the above statements is/are correct?

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

Solution: c)

Economic capital framework refers to the risk capital required by the central bank while taking into account different risks. The economic capital framework reflects the capital that an institution requires or needs to hold as a counter against unforeseen risks or events or losses in the future.

Although RBI was promoted as a private shareholders' bank in 1935 with a paid up capital of Rs 5 crore, the government nationalised RBI in January 1949, making the sovereign its "owner". What the central bank does, therefore, is transfer the "surplus" — that is, the excess of income over expenditure — to the government, in accordance with Section 47 (Allocation of Surplus Profits) of the Reserve Bank of India Act, 1934.

Does the RBI pay tax on these earnings or profits?

No. Its statute provides exemption from paying income-tax or any other tax, including wealth tax.

20) Consider the following statements regarding Development banks.

1. Development banks are financial institutions that provide only short-term credit for capital-intensive investments.
2. Such banks often lend at low and stable rates of interest with considerable social benefits.
3. Development banks are often supported by governments in the form of tax incentives for private sector banks and financial institutions to invest in securities issued by development banks.
4. IDBI was set up as an apex body of all development finance institutions.

Which of the above statements is/are correct?

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

Solution: c)

Development banks are financial institutions that provide long-term credit for capital-intensive investments spread over a long period and yielding low rates of return, such as urban infrastructure, mining and heavy industry, and irrigation systems.


Development banks are also known as term-lending institutions or development finance institutions.

Features of development banks:

1. Such banks often lend at low and stable rates of interest to promote long-term investments with considerable social benefits.
2. Fund generation: To lend for long term, development banks require correspondingly long-term sources of finance, usually obtained by issuing long-dated securities in capital market, subscribed by long-term savings institutions such as pension and life insurance funds and post office deposits.
3. Support by the government: Considering the social benefits of such investments, and uncertainties associated with them, development banks are often supported by governments or international institutions.
4. Such support can be in the form of tax incentives and administrative mandates for private sector banks and financial institutions to invest in securities issued by development banks.

In 1955, the World Bank prompted the Industrial Credit and Investment Corporation of India (ICICI) — the parent of the largest private commercial bank in India today, ICICI Bank — as a collaborative effort between the government with majority equity holding and India's leading industrialists with nominal equity ownership to finance modern and relatively large private corporate enterprises. In 1964, IDBI was set up as an apex body of all development finance institutions.

Source



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## 4. Art and Culture

1) According to Buddhist traditions, who among the following represents Manushi Buddhas or the past Buddhas?

- a) Dipankar
- b) Rishabhanatha
- c) Gautama
- d) Maitreya

Solution: a)

Generally, Buddhists believe that there has been a succession of many Buddhas in the distant past and that many more will appear in the future; Dīpankara, then, would be one of numerous previous Buddhas, while Gautama was the most recent, and Maitreya will be the next Buddha in the future.

2) The five great events in Buddha's life are represented by symbols. In this context, which of the following pairs are correctly matched?

Symbol	Event
1. Lotus and Bull :	Birth
2. Wheel :	Great Departure
3. Stupa :	Nirvana

Select the correct answer code.

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

Solution: a)

Buddha's Birth: Lotus & Bull

The Great Departure (Mahabhinishkramana): Horse

Enlightment (Nirvana ): Bodhi Tree

First Sermon (Dhammachakraparivartan): Wheel

Death (Parinirvana): Stupa

3) Consider the following statements regarding Mughal Era Miniature Painting.

- 1. These paintings focused on glorifying the ruler and showing his life.
- 2. They brought the technique of foreshortening, which means objects were drawn in a way that they look closer and smaller than they really are.

Which of the above statements is/are correct?

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

Solution: c)

The paintings made in the Mughal period had a distinctive style as they were drawing from Persian antecedents. There was a change in colour palette, themes and forms. The focus shifted from depicting the god to glorifying the ruler and showing his life. They focused on hunting scenes, historical events and other court related paintings.

These paintings were considered unique because of the use of brilliant colours.

They brought the technique of foreshortening to the Indian painter's repertoire. Under this technique, "objects were drawn in a way that they look closer and smaller than they really are."

4) Consider the following statements regarding Rajput style of painting.

1. The battles and the hunting scenes are very popular and predominant.
2. It uses Hindu symbols like the lotus, peacock and swan very frequently.

Which of the above statements is/are correct?

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

Solution: b)

Points of Difference	Rajput Style	Mughal Style
Type	Initially based on mural and fresco forms. In the later period, the miniature painting form became dominant.	It is based on the Persian miniature painting style.
Themes	It is usually devotional or religious in nature	It usually depicts the Mughal emperor and his household. The royal pomp and show, the battles and the hunting scenes are also very popular.
Peculiarity	It uses Hindu symbols like the lotus, peacock and swan very frequently.	They focus either on the person in the picture or on trees, camels and falcons.
Time period	17-18th century was the major period.	16th to 18th century.

5) Consider the following statements.

1. Tasvir Khana is a formal artistic studio where the artists were hired on salary and they developed their own styles.
2. The defining feature of paintings in Akbar's period is the use of 3 dimensional figures.
3. During Akbar's period, the artist was more focused at depicting the scenes of court life than the life of the masses.

Which of the above statements is/are correct?

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

Solution: d)

Akbar was responsible for establishment of an entire department devoted to the paintings and scribing of his documents. He established a formal artistic studio called Tasvir Khana where the artists were hired on salary and they developed their own styles.

Akbar also recognised the beauty of those Indian artists who had worked for previous rulers and invited them to work in his tasvir khana. Hence, the 'Indian influence' started in the Mughal paintings. The defining features of paintings in Akbar's period are the use of 3 dimensional figures and the continued use of foreshortening.

Furthermore, the artists encouraged the use of calligraphy in the paintings. One of the distinguishing features of this period was the transformation of popular art to the court art, i.e. the artist was more focused at depicting the scenes of court life than the life of the masses.

6) Consider the following statements regarding Madhubani paintings.

1. The paintings have a common theme and are usually drawn from religious motifs of the Hindus.
2. The paintings depict auspicious occasions like birth, marriage and festivals.
3. Traditionally, Watercolours are used on mill paper using brushes made of calf and squirrel hair.

Which of the above statements is/are correct?

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

Solution: c)

Traditionally done by the women of villages around Madhubani town, it is also called Mithila paintings. The art extends to the adjoining parts of Terai region in Nepal. The paintings have a common theme and are usually drawn from religious motifs of the Hindus, including Krishna, Rama, Durga, Lakshmi and Shiva. The figures in the painting are symbolic, for example, fish depicts good luck and fertility. The paintings are also made depicting auspicious occasions like birth, marriage and festivals. Traditionally, these were painted on walls using rice paste and vegetable colours on a base of cow dung and mud.

7) Consider the following pairs of traditional regional sarees of India.

Name	Produced mainly in
1. Jamdani	Rajasthan
2. Ilkal	Karnataka
3. Pochampalli	Andhra Pradesh

Which of the above pairs are correctly matched?

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

Solution: c)

Pochampalli – Andhra Pradesh - Silk and cotton saree with intricate motifs and geometric ikat style of dyeing.

Jamdani - West Bengal - Finest muslin with opaque patterns woven on a transparent background.

Ilkal - Karnataka - Use of kasuti embroidery with chariot and elephant as common motifs.

8) Consider the following statements.

1. People of Indus Valley Civilization were not patrons of Music.
2. The Jaimini Brahmana speaks collectively of dance and music.
3. That is a system of classification of the ragas in different groups.

Which of the above statements is/are correct?

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

Solution: c)

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.

That is a system of classification of the ragas in different groups.

9) Consider the following statements.

1. It is a monolithic rock-cut temple and a part of the Ellora caves.
2. It was built by Rashtrakutas based on Dravidian style of architecture.

The above statements refer to?

- a) Lingaraja Temple
- b) Brihadiswara Temple
- c) Kailasa Temple
- d) Virupaksha Temple

Solution: c)

The Kailasa temple (Cave 16) is one of the 34 cave temples and monasteries known collectively as the Ellora Caves. Its construction is generally attributed to the eighth century Rashtrakuta king Krishna I.

10) Consider the following statements

1. Bhavai is a traditional theatre form of Gujarat.
2. Tamaasha is a traditional folk theatre form of Maharashtra.

Which of the above statements is/are correct?

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

Solution: c)

11) Consider the following statements about Indian Puppetry.

1. There were presence of puppets at excavation sites at Harappa and Mohenjo-daro.
2. The oldest written reference to puppetry is found in the Tamil classic Silappadikaram.
3. Kathputli and Yampuri and examples of string puppet.

Which of the above statements is/are correct?

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

Solution: c)

The excavation sites at Harappa and Mohenjo-daro have yielded puppets with sockets attached to them, which suggest the presence of puppetry as an art form. However, the oldest written reference to puppetry is found in the Tamil classic Silappadikaram, written around 1<sup>st</sup> and 2<sup>nd</sup> century B.C.

Kathputli is a String puppet and Yampuri is a rod puppet.

12) Consider the following pairs:

Puppetry	State
1. Togalu Gombeyatta	Andhra Pradesh
2. Ravanchhaya	Rajasthan
3. Yampuri	Bihar
4. Kathputli	Odisha

Which of the above are incorrectly matched?

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

Solution: d)

Togalu Gombeyatta - shadow theatre of Karnataka. A unique feature of the Togalu Gombayetta puppets is the variation of puppet size based on social status, i.e. kings and religious figures are characterised by large puppets while common people and servants are shown by smaller puppets.

Ravanchhaya - shadow puppetry of Odisha region. The puppets are made of deer skin and depict bold, dramatic postures. They do not have any joints attached to them, making it a more complex art.

Yampuri - It is the traditional rod puppet of Bihar. The puppets are generally made of wood and are without any joints.

Kathputli - traditional string puppets of the Rajasthan. A unique feature of the puppets is the absence of legs. The strings are attached to the finger of the puppeteer.

13) Which of the following are prominent features of the Nagara Architecture, in contrast to other types of Hindu temple architecture?

1. Presence of large Gopurams
2. Absence of Mandapa
3. Shikhara above Sanctum

Select the correct answer code.

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

Solution: c)

Gopurams are absent in Nagara architecture. Mandapa's are present in Nagara architecture.

14) Which of these schools was the first to make faces and figures of the Buddha?

- a) Gandhara
- b) Mathura
- c) Pahari
- d) Malwa

Solution: b)

While the earlier Schools had used only symbols to depict the Buddha, the Mathura school became the first to make faces and figures of the Buddha.

15) Consider the following statements regarding Sattriya dance

1. It is associated with the propagation of the Vaishnava faith.
2. It has been recognized by the Sangeet Natak Akademi as an official classical dance of India.

Which of the above statements is/are correct?

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

Solution: c)

- It was introduced in the 15th century A.D by the Vaishnava saint and reformer of Assam, Mahapurusha Sankaradeva as a powerful medium for propagation of the Vaishnava faith.
- The dance form evolved and expanded as a distinctive style of dance later on. This neo-Vaishnava treasure of Assamese dance and drama has been, for centuries, nurtured and preserved with great commitment by the Sattras i.e. Vaishnava maths or monasteries.

- Because of its religious character and association with the Sattras, this dance style has been aptly named Sattriya.

16) Consider the following statements about the ritual theatre Ankia Nat.

1. It is the traditional one-act play of Uttar Pradesh.
2. It was started by the Saint Shankaradeva in the 16th century A.D.
3. It depicts incidents from the life of Lord Rama.
4. Masks are used to depict special expressions.

Which of the above statements is/are correct?

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

Solution: b)

It is the traditional one-act play of Assam. It was started by the famous Vaishnava Saint Shankaradeva in the 16th century A.D. It depicts incidents from the life of Krishna. One of the unique features of this form of theatre is the use of masks to depict special expressions.

17) With reference to Vachana sahitya, consider the following statements.

1. It is as old as Sangam literature of Tamil.
2. This form of literature consisted mainly of stories of kings in the form of pure prose

Which of the above statements is/are correct?

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

Solution: d)

- Vachana Sahitya is a form of rhythmic writing in Kannada that evolved in the 11th Century C.E. and flourished in the 12th century, as a part of the Lingayatha 'movement'.
- Vachanas literally means "(that which is) said". These are readily intelligible prose texts.

18) What does "Sandhara" type of temple in Ancient India mean?

- a) One without pradikshinapatha
- b) One with pradikshinapatha
- c) One which can be accessed from all sides
- d) None of the above

Solution: a)

While construction of stupas continued, Brahmanical temples and images of gods also started getting constructed. Often temples were decorated with the images of gods. Myths mentioned in the Puranas became part of narrative representation of the Brahmanical religion. Each temple had a principal image of a god. The shrines of the temples were of three kinds—(i) sandhara type (without pradikshinapatha), (ii) nirandhara type (with pradakshinapatha), and (iii) sarvatobhadra (which can be accessed from all sides).

19) Which of the following are the Intangible cultural heritage (ICH) elements from India that have been inscribed on the UNESCO's Representative List of the Intangible Cultural Heritage of Humanity.

1. Kutiyattam
2. Ramlila
3. Kalbelia folk dance
4. Mudiyettu

Select the correct code:

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

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

20) Consider the following statements regarding Indian National Trust for Art and Cultural Heritage (INTACH).

1. Indian National Trust for Art and Cultural Heritage (INTACH) works under the Ministry of Culture with a mandate to protect and conserve India's vast natural, built and cultural heritage.
2. INTACH has pioneered the conservation and preservation of intangible heritage as well.
3. The United Nations has awarded INTACH a special consultative status with United Nations Economic and Social Council.

Which of the above statements is/are correct?

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

Solution: c)

The Indian National Trust for Art and Cultural Heritage (INTACH) is a non-profit charitable organisation registered under the Societies Registration Act, 1860.

Today INTACH is recognized as one of the world's largest heritage organizations, with over 190 Chapters across the Country. In the past 31 years INTACH has pioneered the conservation and preservation of not just our natural and built heritage but intangible heritage as well.

Headquartered in New Delhi, it operates through various divisions such as Architectural Heritage, Natural Heritage, Material Heritage, Intangible Cultural Heritage and Heritage Education and Communication Services (HECS).

In 2007, the United Nations awarded INTACH a special consultative status with United Nations Economic and Social Council.

## 5. History

1) Which of the following are the effects of Alexander's invasion of India.

1. Political unification of north India under the Mauryas.
2. Rise of small independent states.
3. Increase in trade between India and West Asia.
4. Complete annexation of the north western India.

Which of the above statements is/are correct?

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

Solution: c)

The immediate effect of Alexander's invasion was that it encouraged political unification of north India under the Mauryas. The system of small independent states came to an end. Alexander's invasion had also paved the way for direct contact between India and Greece. The routes opened by him and his naval explorations increased the existing facilities for trade between India and West Asia. However, his aim of annexing the northwestern India to his empire was not fulfilled due his premature death. His authority in the Indus valley was a short-lived one because of the expansion of Mauryan Empire under Chandragupta Maurya.

2) Nanda dynasty was preceded by

- a) Mauryas
- b) Sisunagas
- c) Haryankas
- d) Guptas

Solution: b)

Nanda Dynasty was preceded by Sisunagas and succeeded by Maurya Empire.

3) Lingayats do not practice funerary rites such as cremation prescribed in the Dharmashastras because

- a) As per them such practices show the domination of brahmanism
- b) Such practices were seen to be impure by them which dilutes the sacredness of human body
- c) They believe on death a devotee will be united with Shiva and not return to this world
- d) None of the above

Solution: c)

Lingayats continue to be an important community in the region to date. They worship Shiva in his manifestation as a linga, and they usually wear a small linga in a silver case on a loop strung over the left shoulder. Lingayats believe that on death the devotee will be united with Shiva and will not return to this world. Therefore, they do not practice funerary rites such as cremation, prescribed in the Dharmashastras. Instead, they ceremonially bury their dead.

4) 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 Masulipatnam
- 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.

5) Consider the following statements regarding the Peasant movements after 1857.

1. Colonialism was target of these movements.
2. Territorial reach was limited.
3. There was no continuity of struggle or long-term organisation.
4. The peasants developed a strong awareness of their legal rights and asserted them in and outside the courts.

Which of the above statements is/are correct?

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

Solution: c)

#### CHANGED NATURE OF PEASANT MOVEMENTS AFTER 1857

- Peasants emerged as the main force in agrarian movements, fighting directly for their own demands.
- The demands were centred almost wholly on economic issues.
- The movements were directed against the immediate enemies of the peasant—foreign planters and indigenous zamindars and moneylenders.
- The struggles were directed towards specific and limited objectives and redressal of particular grievances.
- Colonialism was not the target of these movements.
- It was not the objective of these movements to end the system of subordination or exploitation of the peasants.
- Territorial reach was limited.
- There was no continuity of struggle or long-term organisation.
- The peasants developed a strong awareness of their legal rights and asserted them in and outside the courts.

6) Who among the following is known as Indian Machiavelli?

- a) Visakadatta
- b) Ashoka
- c) Kautilya
- d) Chandragupta Maurya

Solution: c)

Kautilya was called 'Indian Machiavelli'.

7) Kautilya's Arthashastra deals with

1. King and his council and the departments of Government
2. Civil and criminal law
3. Diplomacy and war

Select the correct answer code:

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

Solution: d)

The Arthashastra contains 15 books and 180 chapters but it can be divided into three parts: the first deals with the king and his council and the departments of government; the second with civil and criminal law; and the third with diplomacy and war. It is the most important literary source for the history of the Mauryas.

8) Which of the following statements about the administration under the Vijayanagara Empire is incorrect?

- a) The King was the highest court of appeal.
- b) The king enjoyed absolute authority in executive, judicial and legislative matters.
- c) The king was assisted by a council of ministers in his day to day administration.
- d) The succession to the throne was on the principle of merit.

Solution: d)

The succession to the throne was hereditary. However, sometimes usurpation to the throne took place as Saluva Narasimha came to power by ending the Sangama dynasty.

The Empire was divided into different administrative units called Mandalams, Nadus, sthalas and finally into gramas. The governor of Mandalam was called Mandaleswara or Nayak. Vijayanagar rulers gave full powers to the local authorities in the administration.

9) In Vedic societies, Gahapatis were

- a) Householders who made regular donations to religious sects
- b) Big land-owner or big farmer involved in farming and trade
- c) Preserver of the law and order in social congregations such as festivals
- d) The priest who performed daily rituals for the royal household

Solution: b)

The institutional development within the oligarchies of Vedic societies suggests a stabilized agrarian economy. In such a stable economy, there existed a hierarchy based on land ownership and distribution.

Sources mention wealthy householders (gahapatis) employing slaves and hired labourers to work on their lands. The existence of gahapatis suggests the breaking up of clan ownership of land and the emergence of individual holdings.

10) Which one of the following was not an objective of the Indian National Congress in its initial years?

- a) To weld Indians into a nation.
- b) To gain independence from the British.
- c) To create a common all-India national-political leadership.
- d) To create a common political platform or programme for the countrymen for their political activities

Solution: b)

In the initial years, independence from the British was not an agenda for INC.

11) Consider the following statements regarding Edicts of Asoka.

1. The inscriptions of Asoka were first deciphered by James Prinsep.
2. They were completely written in Pali language.
3. In some parts of India, Asokan inscriptions were found in Karoshti script.

Which of the above statements is/are correct?

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

Solution: c)

The inscriptions of Asoka were first deciphered by James Prinsep in 1837. They are written in Pali language and in some places Prakrit was used. The Brahmi script was employed for writing. In the northwestern India Asokan inscriptions were found in Karoshti script.

12) The Edicts of Asoka deal with

1. Asoka's Dhamma and his efforts to promote the Dhamma within his kingdom.
2. Details about Asoka's war with Kalinga.
3. Instructions given to his officials.

Select the correct answer code:

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

Solution: d)

The Edicts of Asoka deal with Asoka's Dhamma and also instructions given to his officials. The XIII Rock Edict gives details about his war with Kalinga. The Pillar Edict VII gives a summary of his efforts to promote the Dhamma within his kingdom. Thus the Asokan inscriptions remain valuable sources for the study of Asoka and the Mauryan Empire.

13) The Charter Act of 1793 had reserved all Civil services posts for the covenanted servants of the Company. The reasons for exclusion of Indians was due to the belief that.

1. Only the English could establish administrative services serving British interests.
2. Indians were incapable, untrustworthy and insensitive to the British interests.
3. High competition among the Europeans themselves for lucrative posts.

Select the correct answer code:

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

Solution: d)

The Charter Act of 1793 had reserved all posts worth 500 pounds per annum for the covenanted servants of the Company. The reasons for exclusion of Indians were—

- the belief that only the English could establish administrative services serving British interests.
- the belief that the Indians were incapable, untrustworthy and insensitive to the British interests.
- the fact there was high competition among the Europeans themselves for lucrative posts, so why offer them to the Indians.

14) Consider the following pairs.

Governor-General

1. Cornwallis
2. Wellesley
3. William Bentinck
4. Dalhousie

Events in their Rule

1. Introduction of Civil services
2. Telegraph and postal reforms
3. Introduction of English as official language
4. Introduction of Subsidiary Alliance

Which of the above pairs are correctly matched?

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

Solution: b)

Cornwallis – Europeanisation of administrative machinery and Introduction of Civil services.

Wellesley - Introduction of Subsidiary Alliance, 1798.

William Bentinck – Educational reforms and introduction of English as the official language.

Dalhousie - Telegraph (4000 miles of telegraph lines to connect Calcutta with Bombay, Madras and Peshawar) and postal (Post Office Act, 1854) reforms.

15) Amongst the following Pre-Congress associations, the earliest to form was

- a) The British Indian Association
- b) The Bombay Association
- c) The Madras Mahajana Sabha
- d) Poona Sarvojanik Sabha

Solution: a)

These were some of the early Political Associations that paved the way for organized struggle in India:

- The British Indian Association – 1851
- The Bombay Association — 1852,
- Poona Sarvojanik Sabha—1870
- The Madras Mahajana Sabha—1884

16) Consider the following statements.

1. Asoka embraced Buddhism under the influence of Buddhist monk, Upagupta.
2. According to some scholars, Asoka's conversion to Buddhism was immediate.
3. Asoka appointed special officers called Dharma Mahamatras to speed up the progress of Dhamma.

Which of the above statements is/are correct?

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

Solution: b)

Asoka embraced Buddhism under the influence of Buddhist monk, Upagupta.

According to some scholars, his conversion to Buddhism was gradual and not immediate. About 261 B.C. Asoka became a Sakya Upasaka (lay disciple) and two and a half years later, a Bikshu (monk). Then he gave up hunting, visited Bodh-Gaya, and organized missions. He appointed special officers called Dharma Mahamatras to speed up the progress of Dhamma.

17) The main features of Asoka's Dhamma as mentioned in his various Edicts includes

1. Prohibition of animal sacrifices and festive gatherings.
2. Tolerance among all the religious sects.
3. Conquest through war
4. Maintenance of constant contact with people through the system of Dhammayatras.

Select the correct answer code:

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

Solution: a)

The main features of Asoka's Dhamma as mentioned in his various Edicts may be summed as follows:

1. Service to father and mother, practice of ahimsa, love of truth, reverence to teachers and good treatment of relatives.
2. Prohibition of animal sacrifices and festive gatherings and avoiding expensive and meaningless ceremonies and rituals.

3. Efficient organization of administration in the direction of social welfare and maintenance of constant contact with people through the system of Dhammayatras.
4. Humane treatment of servants by masters and prisoners by government officials.
5. Consideration and non-violence to animals and courtesy to relations and liberality to Brahmins.
6. Tolerance among all the religious sects.
7. Conquest through Dhamma instead of through war.

18) Diwan-i-Khairat, established by Firoz Shah Tughlaq is

- a) Department of slave
- b) Rest house for merchants
- c) Hospitals for travellers
- d) Office for charity

Solution: d)

Contributions by Firoz Shah Tughlaq:

1. established the Diwan-i-Khairat — office for charity.
2. established the Diwan-i-Bundagan — department of slave
3. established Sarais (rest house) for the benefits of merchants and other travellers
4. adopted the Iqtadari framework.
5. Established four new towns, Firozabad, Fatehabad, Jaunpur and Hissar.
6. established hospitals known as Darul-Shifa, Bimaristan or Shifa Khana.

19) Consider the following statements.

1. Charter Act of 1813 promoted modern sciences in the country.
2. Macaulay's Minute led to the promotion of mass education.
3. Hunter Education Commission report is considered as the 'Magna Carta of English Education in India'.

Which of the above statements is/are incorrect?

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

Solution: c)

The Charter Act of 1813 incorporated the principle of encouraging learned Indians and promoting knowledge of modern sciences in the country.

Macaulay held the view that "Indian learning was inferior to European learning". The government soon made English as the medium of instruction in its schools and colleges and opened a few English schools and colleges instead of a large number of elementary schools, thus neglecting mass education.

In 1854, Charles Wood prepared a despatch on an educational system for India. Considered the "Magna Carta of English Education in India", this document was the first comprehensive plan for the spread of education in India.

20) With reference to the East India Association founded in London, consider the following statements.

1. East India Association was founded by Surendranath Banerjee.
2. East India Association superseded the London Indian Society.
3. East India Association was an extremist organization that had its main goal of organizing an armed struggle against the British in India.

Select the correct answer code:

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

Solution: c)

East India Association was founded by Dadabhai Naoroji in 1866, in collaboration with Indians and retired British officials in London. It was a moderate organisation.

The London Indian Society was superseded by East India Association.

21) Consider the following statements regarding 1857 Sepoy Mutiny

1. It was during the reign of Governor General Lord Dalhousie
2. The mutiny did not spread to South India.

Which of the above statements is/are correct?

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

Solution: b)

1857 Sepoy Mutiny occurred during the reign of Lord Canning.

22) After the Battle of Buxar (1764), the East India Company appointed Residents in Indian states. They were

- a) Representative natives of the Princely states who were also a part of the British Legislative council
- b) Heads of Contingent army units placed under Subsidiary alliance in the states.
- c) Political and commercial agents of the company in the states.
- d) Ex-Governors of British Presidencies who controlled the states.

Solution: c)

They were political or commercial agents and their job was to serve and further the interests of the Company. Through the Residents, the Company officials began interfering in the internal affairs of Indian states. They tried to decide who was to be the successor to the throne, and who was to be appointed in administrative posts.

23) Muhammad Ali Jinnah in March 1929 gave fourteen points for safeguarding the rights and interests of the Muslims. Which of the following were included in the fourteen points?

1. Federal Constitution with residual powers to provinces.
2. One-third Muslim representation in the central legislature.
3. Separation of Sindh from Bombay.
4. Not separate electorates, but joint electorates with reserved seats for Muslims.

Which of the above statements is/are correct?

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

Solution: c)

The fourteen points were as follows.

1. Federal Constitution with residual powers to provinces.
2. Provincial autonomy.
3. No constitutional amendment by the centre without the concurrence of the states constituting the Indian federation.
4. All legislatures and elected bodies to have adequate representation of Muslims in every province without reducing a majority of Muslims in a province to a minority or equality.
5. Adequate representation to Muslims in the services and in self-governing bodies.

6. One-third Muslim representation in the central legislature.
7. In any cabinet at the centre or in the provinces, one-third to be Muslims.
8. Separate electorates.
9. No bill or resolution in any legislature to be passed if three-fourths of a minority community consider such a bill or resolution to be against their interests.
10. Any territorial redistribution not to affect the Muslim majority in Punjab, Bengal and NWFP.
11. Separation of Sindh from Bombay.
12. Constitutional reforms in the NWFP and Baluchistan.
13. Full religious freedom to all communities.
14. Protection of Muslim rights in religion, culture, education and language.

24) Which of the following is/are correct about Pathshalas under British India?

1. These were institutions working on the principle of decentralized governance with minimum of rules
2. Wood's Despatch was against the system of Pathshalas.

Select the correct answer code:

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

Solution: a)

In the 1830s, William Adam, a Scottish missionary, toured the districts of Bengal and Bihar. He had been asked by the Company to report on the progress of education in vernacular schools. Adam found that there were over 1 lakh pathshalas in Bengal and Bihar.

These were small institutions with no more than 20 students each. But the total number of children being taught in these pathshalas was considerable—over 20 lakh. These institutions were set up by wealthy people, or the local community. At times they were started by a teacher (guru).

The system of education was flexible. Few things that you associate with schools today were present in the pathshalas at the time. There were no fixed fee, no printed books, no separate school building, no benches or chairs, no blackboards, no system of separate classes, no rollcall registers, no annual examinations, and no regular time-table.

After 1854 the Company decided to improve the system of vernacular education. It felt that this could be done by introducing order within the system, imposing routines, establishing rules, ensuring regular inspections.

It appointed a number of government pandits, each in charge of looking after four to five schools. The task of the pandit was to visit the pathshalas and try and improve the standard of teaching.

Each guru was asked to submit periodic reports and take classes according to a regular timetable. Teaching was now to be based on textbooks and learning was to be tested through a system of annual examination.

Wood's Despatch regularized the Pathshalas.

25) The Lahore Session of the Indian National Congress (1929) is very important in history, because:

1. The Congress passed a resolution demanding complete independence.
2. The rift between the extremists and moderates was resolved in that Session.
3. A resolution was passed rejecting the two-nation theory in that Session

Which of the statements given above is/are correct?

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

Solution: a)

The following major decisions were taken at the Lahore session.

- The Round Table Conference was to be boycotted.
- Complete independence was declared as the aim of the Congress.
- Congress Working Committee was authorised to launch a programme of civil disobedience including non-payment of taxes and all members of legislatures were asked to resign their seats.
- January 26, 1930 was fixed as the first Independence (Swarajya) Day, to be celebrated everywhere.

The Lucknow session of the Indian National Congress, presided over by a Moderate, Ambika Charan Majumdar, readmitted the Extremists led by Tilak to the Congress fold.

Jinnah's Two Nations Theory came up in March 1940, whereas the Lahore Session of the Indian National Congress was held in 1929.



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## 6. Environment

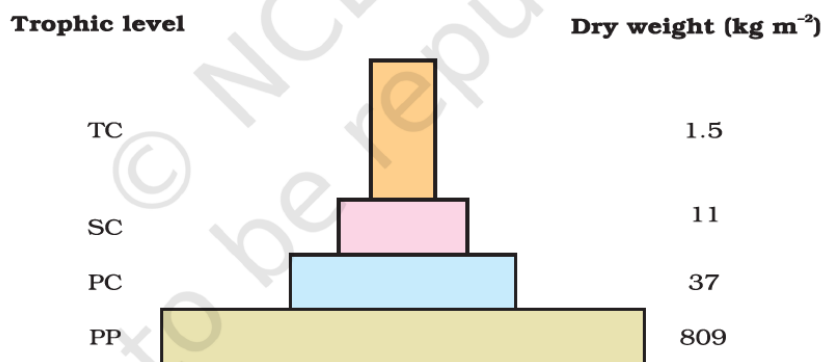
1) Consider the following statements regarding Ecological Pyramids.

1. Pyramid of biomass shows a sharp decrease in biomass at higher trophic levels.
2. Small standing crop of phytoplankton supporting large standing crop of zooplankton is an example for Inverted pyramid of biomass.
3. Primary producers convert only 1% of the energy in the sunlight available to them into Net Primary Productivity.

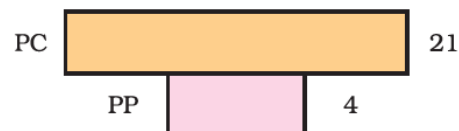
Which of the above statements is/are correct?

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

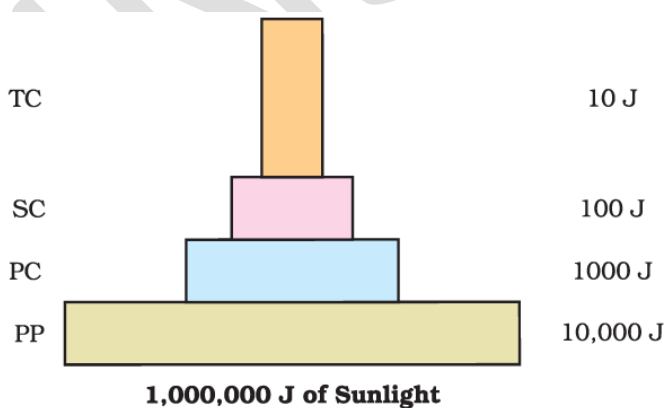
Solution: d)



**Figure 14.4 (b)** Pyramid of biomass shows a sharp decrease in biomass at higher trophic levels



**14.4 (c)** Inverted pyramid of biomass-small standing crop of phytoplankton supports large standing crop of zooplankton



**(d)** An ideal pyramid of energy. Observe that primary producers convert only 1% of the energy in the sunlight available to them into NPP

2) Consider the following statements.

1. In all ecosystems, all the pyramids, of number, of energy and biomass are upright.
2. Energy at a lower trophic level is always more than at a higher level.
3. Ecological pyramids take into account the same species belonging to two or more trophic levels.

Which of the above statements is/are incorrect?

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

Solution: c)

In most ecosystems, all the pyramids, of number, of energy and biomass are upright, i.e., producers are more in number and biomass than the herbivores, and herbivores are more in number and biomass than the carnivores. Also, energy at a lower trophic level is always more than at a higher level.

There are certain limitations of ecological pyramids such as it does not take into account the same species belonging to two or more trophic levels.

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

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

Select the correct code:

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

Solution: b)

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

4) Consider the following biosphere reserves.

1. Nokrek
2. Great Nicobar
3. Gulf of Mannar
4. Simlipal

Which of the above are not included in the world network by UNESCO?

- a) 2, 3
- b) 1, 2, 3, 4
- c) 1, 3, 4
- d) None

Solution: d)

All the above have been included in world network of UNESCO's biosphere reserve.

5) Consider the following statements.

1. Bioleaching is used essentially for the recovery of copper, uranium and gold.

2. Bioaugmentation can be involved in bioremediation.
3. Biosparging can be used to reduce concentrations of petroleum constituents that are dissolved in groundwater.

Which of the above statements is/are incorrect?

- a) 1 only
- b) 2 only
- c) 3 only
- d) None

Solution: d)

Bioleaching is a simple and effective technology for metal extraction from low-grade ores and mineral concentrates. At present bioleaching is used essentially for the recovery of copper, uranium and gold, and the main techniques employed are heap, dump and in situ leaching. Bioleaching has also some potential for metal recovery and detoxification of industrial waste products, sewage sludge and soil contaminated with heavy metals.

Biosparging is an in-situ remediation technology that uses indigenous microorganisms to bio-degrade organic constituents in the saturated zone. In biosparging, air (or oxygen) and nutrients (if needed) are injected into the saturated zone to increase the biological activity of the indigenous microorganisms. Biosparging can be used to reduce concentrations of petroleum constituents that are dissolved in groundwater, adsorbed to soil below the water table, and within the capillary fringe. Although constituents adsorbed to soils in the unsaturated zone can also be treated by biosparging, bioventing is typically more effective for this situation.

Bioremediation strategies can involve natural attenuation, bioaugmentation, or biostimulation and can take place in situ or ex situ.

6) Consider the following statements.

1. Sudden and unpredictable change in the species composition of a given area is called ecological succession.
2. During succession some species colonise an area and populations of other species decline and even disappear.

Which of the above statements is/are correct?

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

Solution: b)

The gradual and fairly predictable change in the species composition of a given area is called ecological succession. During succession some species colonise an area and whereas populations of other species decline and even disappear.

7) Consider the following statements.

1. The composition and structure of all communities constantly change in response to the changing environmental conditions.
2. Community that is in near equilibrium with the environment is called a climax community.
3. The change in the composition and structure of the communities is not dependent with the changes in the physical environment.

Which of the above statements is/are correct?

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

Solution: a)

An important characteristic of all communities is that their composition and structure constantly change in response to the changing environmental conditions. This change is orderly and sequential, parallel with the changes in the physical environment. These changes lead finally to a community that is in near equilibrium with the environment and that is called a climax community.

8) Consider the following statements.

1. The entire sequence of communities that successively change in a given area are called sere.
2. The present-day communities in the world is because of succession that has occurred over millions of years.
3. Succession is not possible in an area where there is no living Organisms.

Which of the above statements is/are correct?

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

Solution: c)

The entire sequence of communities that successively change in a given area are called sere(s).

The present-day communities in the world have come to be because of succession that has occurred over millions of years since life started on earth. Actually, succession and evolution would have been parallel processes at that time.

Succession is hence a process that starts in an area where no living organisms are there – these could be areas where no living organisms ever existed, say bare rock; or in areas that somehow, lost all the living organisms that existed there. The former is called primary succession, while the latter is termed secondary succession.

9) The formation of ozone hole in the Antarctic region has been a cause of concern. What could be the reason for the formation of this hole?

- a) Increased temperature at polar region due to global warming.
- b) Presence of prominent tropospheric turbulence and inflow of chlorofluorocarbons.
- c) Absence of polar front and stratospheric clouds and inflow of methane and chlorofluorocarbons.
- d) Presence of prominent polar front and stratospheric clouds and inflow of chlorofluorocarbons.

Solution: d)

Polar Stratospheric Clouds or nacreous clouds contain water, nitric acid and/or sulfuric acid.

They are formed mainly during the event of polar vortex in winter; more intense at south pole.

The Cl-catalyzed ozone depletion is dramatically enhanced in the presence of polar stratospheric clouds (PSCs).

10) Consider the following statements about Global Footprint Network.

1. The Global Footprint Network is an attached office of UNEP, promoting and driving sustainable policy decisions.
2. Global Footprint Network's goal is to create a future where all humans can live well, within the means of one planet Earth.
3. Global Footprint Network calculates Earth Overshoot Day every year.

Which of the above statements is/are correct?

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

Solution: b)

The Global Footprint Network is an international think tank promoting and driving sustainable policy decisions in a world of limited resources. Together with its various partners, Global Footprint Network (GFN) coordinates research, develops methodological standards, and provides decision makers with a menu of tools to help the human economy operate within Earth's ecological limits.

Global Footprint Network calculates Earth Overshoot Day every year using Ecological Footprint accounting, which adds up all of people's competing demands on nature, including demand for food, timber, and fibers (cotton); absorption of carbon emissions from burning fossil fuels; and buildings, roads and other infrastructure. August 1 is the earliest Earth Overshoot Day since the world went into ecological overshoot in the 1970s.

The Global Footprint Network was founded in 2003 with the aim to safeguard a sustainable world for all people in which they can live a fulfilled life within natural ecological boundaries. The headquarters of the Global Footprint Network is located in Oakland (USA), with further offices in Switzerland, Belgium and the Philippines.

11) Consider the following statements.

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

Which of the above statements is/are correct?

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

Solution: d)

Examples of areas where primary succession occurs are newly cooled lava, bare rock, newly created pond or reservoir. The establishment of a new biotic community is generally slow. Before a biotic community of diverse organisms can become established, there must be soil. Depending mostly on the climate, it takes natural processes several hundred to several thousand years to produce fertile soil on bare rock.

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

12) Consider the following statements.

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

Which of the above statements is/are correct?

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

Solution: d)

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

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

13) Consider the following statements regarding Keystone species.

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

Which of the above statements is/are correct?

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

Solution: c)

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

A keystone species is a plant or animal that plays a unique and crucial role in the way an ecosystem functions. Top predators (Lion, Tiger, Crocodile, and Elephant) are considered as keystone species because it regulates all other animal population indirectly. Hence top predators are given much consideration in conservation. If keystone species are lost, it will lead to the degradation of whole ecosystem. For example certain plant species (ebony tree, Indian-laurel) exclusively depends upon bats for its pollination. If the bat population is reduced then regeneration of particular plants becomes more difficult.

14) Identify the national park based on following features:

1. It is a part of world's 'hottest hotspots' of biological diversity.
2. It is home to unique, threatened and endangered species like the lion-tailed macaques
3. Rivers Tunga, Bhadra and Netravati, originate from the heart of this National Park.

Select the correct answer code:

- a) Kudremukh National Park
- b) Bandipur National Park
- c) Mudumalai National Park
- d) Silent Valley National Park

Solution: a)

The Kudremukh National Park is the second largest Wildlife Protected Area (600.32 km<sup>2</sup>) belonging to a tropical wet evergreen type of forest in the Western Ghats. Kudremukh National Park is located in Dakshina Kannada, Udupi District and Chikkamagaluru districts of the State of Karnataka.

15) Herpetologists study on

- a) Fishes
- b) Birds
- c) Insects
- d) Amphibians and reptiles

Solution: d)

Source

16) Consider the following statements.

1. The Pioneer species are hardy species which are the first to colonize barren environments.
2. Lichens are the pioneer species that secrete acids to dissolve rock, helping in weathering and soil formation.
3. All ecological succession whether taking place in water or on land, leads to a similar climax community.

Which of the above statements is/are correct?

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

Solution: d)

The species that invade a bare area are called pioneer species. In primary succession on rocks these are usually lichens which are able to secrete acids to dissolve rock, helping in weathering and soil formation.

All succession whether taking place in water or on land, proceeds to a similar climax community.

17) Consider the following statements regarding Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

1. CITES is legally binding on state parties to the convention, which are obliged to adopt their own domestic legislation to implement its goals.
2. It is administered by IUCN.
3. Trade is not permissible for the species covered under Appendix I of CITES.

Which of the above statements is/are incorrect?

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

Solution: d)

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

1. It was signed on March 3, 1973 (Hence world wildlife day is celebrated on march 3).
2. It is administered by the United Nations Environment Programme (UNEP).
3. Secretariat— Geneva (Switzerland).
4. CITES is legally binding on state parties to the convention, which are obliged to adopt their own domestic legislation to implement its goals.

The species covered by CITES are listed in three Appendices, according to the degree of protection they need. Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.

Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival.

Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade.

Source

18) Consider the following statements about United Nations Environment Assembly.

1. The United Nations Environment Assembly was created in 1992 at the Earth Summit in Rio de Janeiro.
2. The United Nations Environment Assembly is the world's highest-level decision-making body on the environment.

3. The Assembly meets annually to set priorities for global environmental policies and develop international environmental law.

Which of the above statements is/are incorrect?

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

Solution: c)

The United Nations Environment Assembly was created in June 2012, when world leaders called for UN Environment to be strengthened and upgraded during the United Nations Conference on Sustainable Development, also referred to as RIO+20.

The United Nations Environment Assembly is the world's highest-level decision-making body on the environment. It addresses the critical environmental challenges facing the world today. Understanding these challenges and preserving and rehabilitating our environment is at the heart of the 2030 Agenda for Sustainable Development. The Environment Assembly meets biennially to set priorities for global environmental policies and develop international environmental law. Through its resolutions and calls to action, the Assembly provides leadership and catalyses intergovernmental action on the environment.

Source

19) The cells of all organisms are made up primarily of six major elements that occur in similar proportions in all life-forms. Which of the following is/are not one of these elements?

- 1. Phosphorus
- 2. Sulfur
- 3. Nitrogen

Select the correct answer code:

- a) 1 only
- b) 2 only
- c) 1, 2
- d) All the above are one of the six elements

Solution: d)

The cells of all organisms are made up primarily of six major elements that occur in similar proportions in all life-forms. These elements—hydrogen, oxygen, carbon, nitrogen, phosphorus, and sulfur—form the core protoplasm of organisms, and the first four of these elements make up about 99 percent of the mass of most cells.

20) Bio-ethanol can be derived through the process of bio-refining from

- 1. Corn
- 2. Rice straw
- 3. Coconut
- 4. Sea weeds
- 5. Water hyacinth

Select the correct answer code:

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

Solution: a)

Bio-ethanol can be derived from all the sources mentioned above.

21) Consider the following statements.

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

Which of the above statements is/are correct?

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

Solution: b)

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

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

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

22) Which of the following are considered as 'Ecosystem Services'?

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

Select the correct code:

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

Solution: d)

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

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

23) Consider the following statements regarding Renewable Energy Policy Network for the 21st Century (REN21)

1. REN21 is an international non-profit association and is based at International Solar Alliance (ISA).
2. Its goal is to facilitate knowledge exchange, policy development and joint action towards a rapid global transition to renewable energy.

Which of the above statements is/are correct?

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

d) None

Solution: b)

REN21 is the global renewable energy policy multi-stakeholder network that connects a wide range of key actors. REN21's goal is to facilitate knowledge exchange, policy development and joint action towards a rapid global transition to renewable energy.

REN21 brings together governments, nongovernmental organisations, research and academic institutions, international organisations and industry to learn from one another and build on successes that advance renewable energy. To assist policy decision making, REN21 provides high quality information, catalyses discussion and debate and supports the development of thematic networks.

REN21 is an international non-profit association and is based at the United Nations Environment Programme (UNEP) in Paris, France.

24) Consider the following statements

1. Aichi biodiversity targets was adopted at the Nairobi conference of the Convention on Biological Diversity (CBD).
2. The IUCN Species Programme provides advice to Parties, other governments and partners on the implementation of Aichi Biodiversity Targets.

Which of the above statements is/are correct?

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

Solution: b)

The 'Aichi Target' adopted by the Convention on Biological Diversity (CBD) at its Nagoya conference. In the COP-10 meeting, the parties agreed that previous biodiversity protection targets are not achieved,

The IUCN Species Programme provides advice to Parties, other governments and partners on the implementation of the Strategic Plan for Biodiversity and its Aichi Biodiversity Targets (2011 – 2020).

25) Consider the following statements regarding Black Carbon.

1. Black carbon is the sooty black material emitted from gas and diesel engines, coal-fired power plants, and other sources that burn fossil fuel.
2. Black carbon has an atmospheric lifetime of more than 100 years.
3. Black carbon deposits in the Arctic increases the Earth's ability to reflect the warming rays of the sun.

Which of the above statements is/are correct?

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

Solution: b)

Black carbon is the sooty black material emitted from gas and diesel engines, coal-fired power plants, and other sources that burn fossil fuel. It comprises a significant portion of particulate matter or PM, which is an air pollutant.

Black carbon is a global environmental problem that has negative implications for both human health and our climate. Inhalation of black carbon is associated with health problems including respiratory and cardiovascular

disease, cancer, and even birth defects. Black carbon also contributes to climate change causing changes in patterns of rain and clouds.

As black carbon deposits in the Arctic, the particles cover the snow and ice, decreasing the Earth's ability to reflect the warming rays of the sun, while absorbing heat and hastening melt.

Black carbon stays in the atmosphere for only several days to weeks, whereas carbon dioxide (CO<sub>2</sub>) has an atmospheric lifetime of more than 100 years.



  
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