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SIMPLIFYING IAS EXAM PREPARATION

INSTA STATIC QUIZ

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1. Polity

- 1) In the Indian Parliamentary model of Government
- The Executive is responsible to none but Constitutional ideals
 - The Judiciary controls the Executive
 - The Executive is responsible to the Legislature
 - The Legislature controls the Judiciary

Solution: c)

The relationship between the executive and the legislature in a parliamentary system is called responsible government.

Here the executive branch derives its democratic legitimacy from its ability to command the confidence of the legislative branch. Legislature also holds the executive accountable.

- 2) The Parliament exercises Budgetary control over the executive, that is, control 'before' the appropriation of grants through the enactment of the budget by
- Public Accounts Committee
 - Departmental Standing Committees
 - Committee on Public Undertaking
 - Estimate Committee

Solution: b)

The parliamentary control over the Executive in financial matters operates in two stages:

Budgetary control, that is, control before the appropriation of grants through the enactment of the budget; and Post-budgetary control, that is, control after the appropriation of grants through the three financial committees – PAC, Estimate Committee and CoPU.

The Departmental standing committees consider the demands for grants of the concerned ministries /departments before they are discussed and voted in the Lok Sabha. It also considers the annual reports of the Ministries and departments.

- 3) Consider the following statements regarding the Contingency Fund of India.
- The fund is established directly by the Constitution of India.
 - The fund is placed at the disposal of the President.
 - No such fund exists at the State level.

Which of the above statements is/are correct?

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

Solution: b)

Parliament may by law establish a Contingency Fund in the nature of an imprest to be entitled "the Contingency Fund of India" into which shall be paid from time to time such sums as may be determined by such law, and the said Fund shall be placed at the disposal of the President to enable advances to be made by him out of such Fund for the purposes of meeting unforeseen expenditure pending authorisation of such expenditure by Parliament by law under article 115 or article 116.

The Legislature of a State may by law establish a Contingency Fund in the nature of an imprest to be entitled "the Contingency Fund of the State" into which shall be paid from time to time such sums as may be determined by such law, and the said Fund shall be placed at the disposal of the Governor of the State to enable advances to

be made by him out of such Fund for the purposes of meeting unforeseen expenditure pending authorisation of such expenditure by the Legislature of the State by law under article 205 or article 206.

4) Consider the following statements.

1. The Chairperson of a Panchayat at the village level shall be elected in such manner as the Legislature of a State may, by law, provide.
2. The Chairperson of a Panchayat and other members of a Panchayat whether or not chosen by direct election from territorial constituencies in the Panchayat area shall have the right to vote in the meetings of the Panchayats.

Which of the above statements is/are correct?

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

Solution: c)

The Chairperson of a Panchayat and other members of a Panchayat whether or not chosen by direct election from territorial constituencies in the Panchayat area shall have the right to vote in the meetings of the Panchayats.

The Chairperson of -

a Panchayat at the village level shall be elected in such manner as the Legislature of a State may, by law, provide; and

a Panchayat at the intermediate level or district level shall be elected by, and from amongst, the elected members thereof.

5) The ideals of Liberty, equality and fraternity in Indian constitution have been borrowed from

- a) American Constitution
- b) British Constitution
- c) France Constitution
- d) Canadian Constitution

Solution: c)

Ideals of Liberty, equality and fraternity in Indian constitution is borrowed from France Constitution.

6) The act created for the first time, a Government of India having authority over the entire territorial area possessed by the British in India:

- a) Charter Act of 1833
- b) Act of 1891
- c) Act of 1909
- d) Government of India Act 1935

Solution: a)

Charter Act of 1833 was the final step towards centralisation in British India.

It made the Governor-General of Bengal as the Governor-General of India and vested in him all civil and military powers.

It deprived the governor of Bombay and Madras of their legislative powers.

It ended the activities of the East India Company as a commercial body, which became a purely administrative body. It provided that the company's territories in India were held by it 'in trust for His Majesty, His heirs and successors'.

7) The 'basic structure' doctrine was ruled by the Supreme Court in which of the following cases?

- a) Shankari Prasad Case

- b) Olga Tellis Case Vs. State of Maharashtra
- c) Kesavananda Bharati vs. State of Kerala
- d) Bhikaji Vs. Union of India case

Solution: c)

Article 368 of the Constitution deals with the powers of Parliament to amend the Constitution and its procedure. It states that the Parliament may, in exercise of its constituent power, amend by way of addition, variation or repeal any provision of the Constitution in accordance with the procedure laid down for the purpose. But, if the amendment alters the basic structure, for e.g. Judicial review, Parliamentary democracy, Rule of Law, Secularism etc. then the amendment can be declared ultra vires by the SC.

8) Consider the following statements.

1. There is no mention of District Courts in the Constitution.
2. The District Judges are appointed by the Governor in consultation with the High Court.
3. A person to be eligible for appointment as a District Judge must be an officer in judicial service of the

Union or the State.

Which of the above statements is/are incorrect?

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

Solution: a)

As per the constitution (A233), appointments of persons to be, and the posting and promotion of, district judges in any State shall be made by the Governor of the State in consultation with the High Court exercising jurisdiction in relation to such State.

A person not already in the service of the Union or of the State shall only be eligible to be appointed a district judge if he has been for not less than seven years an advocate or a pleader and is recommended by the High Court for appointment.

9) Collective privileges of each house of Parliament include

1. Prohibition of courts into inquiring into the proceedings of a House or its committees
2. Power of the house to punish members as well as outsiders for breach of its privileges or its contempt by even suspension and imprisonment
3. Right to publish its reports, debates and proceedings and also the right to prohibit others from publishing the same

Select the correct answer code:

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

Solution: a)

Some privileges of the Houses include:

- It has the right to publish its reports, debates and proceedings and also the right to prohibit others from publishing the same.
- It can punish members as well as outsiders for breach of its privileges or its contempt by reprimand, admonition or imprisonment (also suspension or expulsion, in case of members).
- It has the right to receive immediate information of the arrest, detention, conviction, imprisonment and release of a member.
- It can institute inquiries and order the attendance of witnesses and send for relevant papers and records.

- No person (either a member or outsider) can be arrested, and no legal process (civil or criminal) can be served within the premises of the House without the permission of the presiding officer.

10) Consider the following statements about Committee on Private Members' Bills and Resolutions

1. The committee classifies bills and allocates time for discussion on bills and resolutions introduced by private members.
2. This is a special committee of the Lok Sabha only.
3. In Lok Sabha it is chaired by the Deputy Speaker.

Which of the above statements is/are correct?

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

Solution: d)

This committee classifies bills and allocates time for the discussion on bills and resolutions introduced by private members (other than ministers). This is a special committee of the Lok Sabha and consists of 15 members including the Deputy Speaker as its chairman. The Rajya Sabha does not have any such committee. The same function in the Rajya Sabha is performed by the Business Advisory Committee of that House.

11) The "Sovereignty" of India means

1. No external power can dictate to the government of India.
2. Citizens cannot be discriminated against on any grounds.
3. There is freedom of speech and expression for Indian citizens.

Select the correct answer code:

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

Solution: b)

Sovereignty simply implies that India is a state that takes its own decisions ultimately guided by the people. No external agency dictates terms to India.

However, the notion of sovereignty does not seep into the framework of all democratic rights. For e.g. a sovereign state might very well discriminate between its citizens.

Same applies for freedom of speech and expression. A sovereign state may very well restrict freedom of speech, as it is not an absolute right, even though it is vital to a democracy.

12) Consider the following statements

1. 44th constitutional amendment added three new words—socialist, secular and integrity to preamble
2. The Preamble to the Indian Constitution is based on the Objectives Resolution.

Which of the above statements is/are correct?

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

Solution: b)

Preamble has been amended by the 42nd Constitutional Amendment Act (1976), which added three new words—socialist, secular and integrity.

The Preamble to the Indian Constitution is based on the 'Objectives Resolution', drafted and moved by Pandit Nehru, and adopted by the Constituent Assembly.

13) Which of the following article(s) of the Constitution has a bearing on Tribal rights?

1. Article 14
2. Article 15
3. Article 16
4. Article 30

Select the correct answer code:

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

Solution: d)

Article 14, 15, 16, 19, 25-30 protect tribal rights.

The **right to equality (A14-18)** includes equality before the law, the prohibition of discrimination on grounds of religion, race, caste, gender or place of birth, equality of opportunity in matters of employment, the abolition of untouchability and abolition of titles.

The **right to freedom of religion (A25-28)** includes freedom of conscience and free profession, practice, and propagation of religion, freedom to manage religious affairs, freedom from certain taxes and freedom from religious instructions in certain educational institutes.

The **Cultural and educational Rights (A29-30)** preserve the right of any section of citizens to conserve their culture, language or script, and right of minorities to establish and administer educational institutions of their choice.

14) The Directive Principles resemble the 'Instrument of Instructions' enumerated in the

- a) Government of India Act of 1935
- b) Montague Chelmsford Act 1919
- c) Objectives Resolution, 1946
- d) Nehru Report, 1928

Solution: a)

Dr B R Ambedkar had said 'the Directive Principles are like the instrument of instructions, which were issued to the Governor-General and to the Governors of the colonies of India by the British Government under the Government of India Act of 1935.'

What is called Directive Principles is merely another name for the instrument of instructions.

The only difference is that they are instructions to the legislature and the executive.

15) Consider the following statements about Public Account Committee.

1. This committee was first setup in 1911 under the provisions of the Government of India Act of 1909.
2. The members are elected according to the principle of proportional representation by means of single transferable vote.
3. It is vested with the power of disallowance of expenditures by the departments.

Which of the above statements is/are correct?

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

Solution: b)

This committee was set up first in 1921 under the provisions of the Government of India Act of 1919 and has since been in existence.

It is not vested with the power of disallowance of expenditures by the departments.

16) Consider the following statements

1. Beginning of Parliamentary System in India can be traced back to Indian Council Act, 1861
2. Charter Act of 1833 recommended for the appointment of Macaulay Committee on Indian Civil Service.
3. Charter Act of 1833 deprived the governor of Bombay and Madras of their legislative powers and the Governor General of India was given exclusive legislative powers for the entire British India.

Which of the above statements is/are correct?

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

Solution: c)

Beginning of Parliamentary System in India can be traced back to Charter Act of 1853.

- It separated, for the first time, the legislative and executive functions of the Governor General's council.
- It provided for addition of six new members called legislative councillors to the council.
- Charter Act of 1853 recommended for the appointment of Macaulay Committee on Indian Civil Service.

17) The Parliament under Article 368 can amend any part of the Constitution without affecting 'basic structure' of the Constitution, that includes:

1. Harmony and balance between Fundamental Rights and Directive Principles
2. Principle of equality
3. Free and fair elections
4. Independence of Judiciary

Select the correct answer code:

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

Solution: d)

Even though the basic structure doctrine was given by the SC, it is yet to define or clarify as to what constitutes the 'basic structure' of the Constitution. It is not mentioned anywhere in the constitution, and our understanding of the basic structure comes from the various judgements of the court.

The following have emerged as 'basic structure' of the Constitution:

- Supremacy of the Constitution; Sovereign, democratic and republican nature of the Indian polity; Secular character of the Constitution
- Separation of powers between the legislature, the executive and the judiciary; Federal character of the Constitution; Unity and integrity of the nation; Welfare state (socio-economic justice)
- Judicial review; Freedom and dignity of the individual; Parliamentary system; Rule of law; Harmony and balance between Fundamental Rights and Directive Principles; Principle of equality
- Free and fair elections; Independence of Judiciary; Limited power of Parliament to amend the Constitution; Effective access to justice; Principle of reasonableness; Powers of the Supreme Court under Articles 32, 136, 141 and 142; Powers of the High Courts under Articles 226 and 227.

18) A Partial Protection against Double Jeopardy is a

- a) Constitutional right
- b) Fundamental right
- c) Provision under CrPC
- d) Judicial convention

Solution: b)

A partial protection against double jeopardy is a Fundamental Right guaranteed under Article 20 (2) of the Constitution of India, which states "No person shall be prosecuted and punished for the same offence more than once".

19) Apart from the Minerva Mills case, which of the following cases deal with the primacy of fundamental rights vis-à-vis directive principles or vice versa?

1. Champakam Dorairajan (1951)
2. Golak Nath case (1967)
3. Kesavananda Bharati Case (1973)
4. ADM Jabalpur case (1976)

Select the correct answer code:

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

Solution: c)

In the Champakam Dorairajan case (1951), the Supreme Court ruled that in case of any conflict between the Fundamental Rights and the Directive Principles, the former would prevail. It declared that the Directive Principles have to conform to and run as subsidiary to the Fundamental Rights.

The above situation underwent a major change in 1967 following the Supreme Court's judgement in the Golaknath case (1967). In that case, the Supreme Court ruled that the Parliament cannot take away or abridge any of the Fundamental Rights, which are 'sacrosanct' in nature. In other words, the Court held that the Fundamental Rights cannot be amended for the implementation of the Directive Principles.

In the Kesavananda Bharati case (1973), the Supreme Court declared a particular provision of Article 31C as unconstitutional and invalid on the ground that judicial review is a basic feature of the Constitution and hence, cannot be taken away.

(ADM Jabalpur v Shivakant Shukla Case) – 1976: In this landmark judgment, the Supreme Court declared that the rights of citizens to move the court for violation of Articles 14, 21 and 22 would remain suspended during emergencies.

20) Consider the following statements regarding Select Committees.

1. Select Committees are formed for examining a particular Bill and its membership is limited to MPs from one House.
2. Select Committees of Lok Sabha are headed by the Speaker of Lok Sabha.
3. According to the Rules of Business of the houses of Parliament, Referring of Bills to parliamentary committees is mandatory.

Which of the above statements is/are incorrect?

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

Solution: c)

What is a Select Committee?

This is formed for examining a particular Bill and its membership is limited to MPs from one House.

They are chaired by MPs from the ruling party.

Since Select Committees are constituted for a specific purpose, they are disbanded after their report.

Referring of Bills to parliamentary committees is not mandatory.

21) Consider the following statements regarding Preamble

1. The 44th Constitutional Amendment Act, added three new words—socialist, secular and integrity-to the Preamble.
2. The Preamble is neither a source of power to legislature nor a prohibition upon the powers of legislature
3. In the Kesavananda Bharati case, the Supreme Court held that Preamble is a part of the Constitution.

Which of the above statements is/are correct?

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

Solution: a)

42nd Constitutional Amendment Act (1976), added three new words— socialist, secular and integrity- to the Preamble.

The Preamble is neither a source of power to legislature nor a prohibition upon the powers of legislature. It is non-justiciable, that is, its provisions are not enforceable in courts of law.

In the Kesavananda Bharati case, the Supreme Court held that Preamble is a part of the Constitution.

22) According to the Constitution, Territory of India includes which of the following categories

1. Territories of the states
2. Union territories
3. Territories that may be acquired by the Government of India at any time

Select the correct answer code:

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

Solution: d)

According to Article 1, the territory of India can be classified into three categories:

- (i) Territories of the states
- (ii) Union territories
- (iii) Territories that may be acquired by the Government of India at any time.

23) Article 1 of our Constitution says – “India that is Bharat, shall be a Union of states”. This declaration signifies

1. That the Union of India has resulted out of an agreement between the states.
2. The component units/states have no right to secede from the Union.

Which of the above statements is/are incorrect?

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

Solution: a)

- Article 1 describes India, that is, Bharat as a ‘Union of States’ rather than a ‘Federation of States’.

- According to Dr B R Ambedkar, the phrase 'Union of States' has been preferred to 'Federation of States' for two reasons: one, the Indian Federation is not the result of an agreement among the states like the American Federation; and two, the states have no right to secede from the federation.

24) Consider the following statements regarding National Legal Services Authority (NALSA).

1. The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society.
2. The President of India is the Patron-in-Chief of the Authority.

Which of the above statements is/are correct?

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

Solution: a)

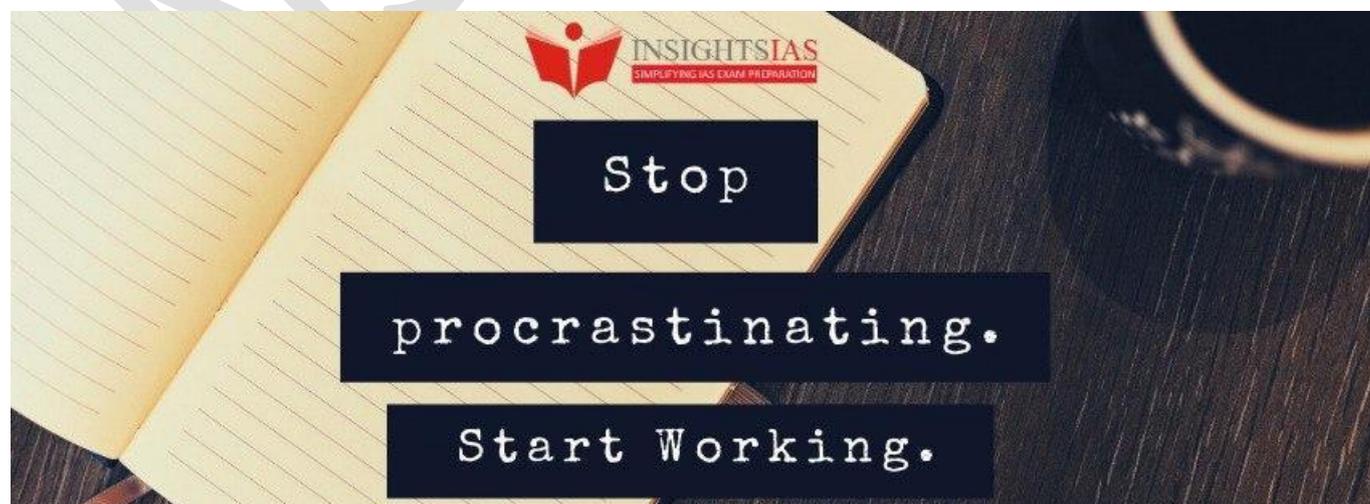
- The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society and to organize Lok Adalats for amicable settlement of disputes.
- The Chief Justice of India is patron-in-chief of NALSA while second senior most judge of Supreme Court of India is the Executive-Chairman.
- In every State, State Legal Services Authority has been constituted to give effect to the policies and directions of the NALSA and to give free legal services to the people and conduct Lok Adalats in the State.

25) Which of the following statement is not correct?

- a) Fundamental Rights are not sacrosanct
- b) Fundamental Rights promote the ideal of political democracy
- c) The six rights guaranteed by Article 19 can be suspended when the emergency is declared on the grounds of external aggression and armed rebellion
- d) Laws made to enforce fundamental rights can be made only by the parliament and not by state legislatures

Solution: c)

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).



2. Geography

1) Consider the following statements regarding Plate tectonics.

1. The driving force behind plate tectonics is convection in the mantle.
2. At transform boundaries, crust is neither produced nor destroyed as the plates slide horizontally past each other.
3. The Mid-Atlantic Ridges are a good example of convergent boundary.

Which of the above statements is/are correct?

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

Solution: a)

There are four types of plate boundaries:

- **Divergent boundaries** -- where new crust is generated as the plates pull away from each other.
- **Convergent boundaries** -- where crust is destroyed as one plate dives under another.
- **Transform boundaries** -- where crust is neither produced nor destroyed as the plates slide horizontally past each other.
- **Plate boundary zones** -- broad belts in which boundaries are not well defined and the effects of plate interaction are unclear.

Divergent boundaries occur along spreading centers where plates are moving apart and new crust is created by magma pushing up from the mantle. Picture two giant conveyor belts, facing each other but slowly moving in opposite directions as they transport newly formed oceanic crust away from the ridge crest.

Perhaps the **best known of the divergent boundaries is the Mid-Atlantic Ridge.**

2) Consider the following statements regarding the difference(s) between extrusive and intrusive rocks?

1. Extrusive rocks are fine grained, whereas intrusive rocks are coarse-grained.
2. Extrusive rocks form over a much longer duration of time compared to intrusive rocks.

Which of the above statements is/are incorrect?

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

Solution: b)

The key difference between intrusive and extrusive rocks is that the **intrusive rocks are formed from magma whereas the extrusive rocks are formed from lava.**

Intrusive rocks: With no air to cool the magma, **these rocks are formed very slowly.** Composition of these rocks reflects **presence of large crystals.** These crystals interlock to form the rock.

These rocks take a very large amount of time to solidify and they remain buried deep inside the surface of the earth being surrounded by country rocks that have been there already.

Very slow cooling means that **these rocks remain coarse-grained.**

Some of the perfect examples of intrusive rocks are the diorite, gabbro, and granite.

Much of the core of various mountain ranges around the world is made up of these intrusive rocks.

Extrusive Rocks: Sometimes, molten rocks find a way to come out of the surface of the earth through cracks and openings.

This magma flows in the form of lava and cools down quickly as it comes into contact with air.

Igneous rocks that are formed from the magma that pours out of the surface of the earth are called extrusive rocks.

As these rocks **cool down and solidify very quickly**, they do not get sufficient time to form large crystals. Thus, they have **small crystals and boast a fine texture**.

3) The climate of a place is not necessarily affected by its

- Latitude
- Longitude
- Altitude and Relief
- Continentality

Solution: b)

The factors affecting the climate of a region are **location, altitude, distance from the sea, and relief**. Climate isn't necessarily affected by longitude, but by latitude since it affects the availability of solar insolation. No geographical factor (pressure, temperature, wind etc.) depends necessarily on longitude.

4) Tropic of cancer does not pass through which of these Indian states?

- Bihar
- Rajasthan
- Madhya Pradesh
- Gujarat

Solution: a)

Other states that it passes through are: Chattisgarh, Jharkhand, West Bengal, Tripura, Mizoram.



5) Which of the following are not the tributaries of river Kaveri

- Kabini
- Bhima
- Amravati
- Koyna
- Manjra

Select the correct answer code:

- 1, 3
- 1, 2, 3
- 1, 4, 5
- 2, 4, 5

Solution: d)

Important tributaries of Kaveri river are Shimsa, Hemavathi, Honnuhole, Arkavathi, Kapila, Lakshmana Theertha, Kabini, Lokapavani, Bhavani, Noyil and Amaravathy.

Manjra is the tributary of Godavari River.
Bhima and Koyna are the tributaries of Krishna River.

- 6) Valuable minerals in India are more likely to be associated with
- Blue quartz phenocrysts
 - Metamorphic and igneous rocks
 - Basaltic rocks of andesite and rhyolite type
 - Sedimentary and Hadean age rocks

Solution: b)

Quartz and Basalt both can be associated with sedimentary rocks, even though Quartz may occur in felsic igneous rocks or granite.

Bulk of the valuable minerals in India are products of pre-Palaeozoic age spanning from nearly 540-250 million years ago. Hadean age refers to the one right after formation of earth.

These minerals are mostly associated with metamorphic and igneous rocks of the peninsular India, and not sedimentary rocks.

- 7) Which of the following are block mountains:

- The Vosges mountain
- Satpura Mountains
- Mount Kilimanjaro

Select the correct answer code:

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

Solution: a)

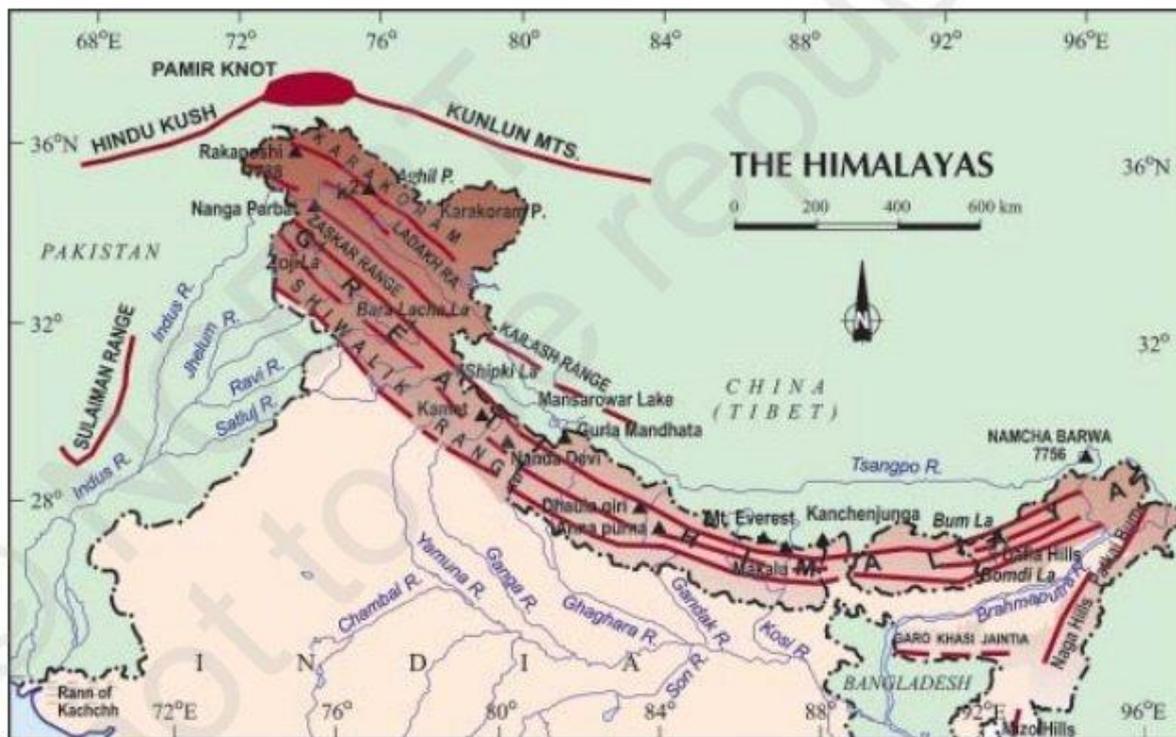
Block Mountains are created when large areas are broken and displaced vertically. The uplifted blocks are termed as horsts and the lowered blocks are called graben. The **Rhine valley and the Vosges mountain** in Europe are examples of such mountain systems. **Vindhyan and Satpura ranges** with Narmada rift valley is another example.

Volcanic mountains are formed due to volcanic activity. Mt.Kilimanjaro in Africa and Mt.Fujiyama in Japan are examples of such mountains.

- 8) Ladakh, a cold desert in the Greater Himalayas, is enclosed by
- Karakoram range in North and Zaskar range in South
 - Zaskar range in North and Karakoram range in South
 - Pir Panjal range in North and Zaskar range in South
 - Karakoram range in North and Pir Panjal range in South

Solution: a)

Pir Panjal is the further South of Zaskar and Karakoram.



9) The country with the longest coastline on the Black Sea is

- a) Georgia
- b) Bulgaria
- c) Turkey
- d) Azerbaijan

Solution: c)



10) Which of the following conditions are favourable for the formation of Deltas?

1. Coast should be sheltered, preferably tideless.
2. The sea adjoining the delta should be shallow.
3. There should be no large lakes in the river course.

Select the correct answer code:

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

Solution: d)

Other factors influencing formation of deltas:

Amount and type of sediment available, Changes in coast level, Impacts of climate on growth of vegetation and marine organisms. Moreover, there should not be streams that cut at right angles, that could wash sediments away. Also, if any large lake is present, all sediment on way be deposited in the lake itself and the delta will not be formed.

11) Which of the following processes help in the concentration of minerals on earth?

1. Hydrothermal deposits
2. Weathering
3. Water erosion

Select the correct answer code:

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

Solution: d)

Minerals can also form in several other ways:

- Precipitation from aqueous solution (i.e., from hot water flowing underground, from evaporation of a lake or inland sea, or in some cases, directly from seawater)
- Metamorphism — formation of new minerals directly from the elements within existing minerals under conditions of elevated temperature and pressure
- Weathering — during which minerals unstable at Earth's surface may be altered to other minerals
- Organic formation — formation of minerals within shells and teeth and bones by organisms.

Hydrothermal deposits are produced when groundwater circulates to depth and heats up either by coming near a hot igneous body at depth or by circulating to great depth along the geothermal gradient.

Such hot water can dissolve valuable substances throughout a large volume of rock. As the hot water moves into cooler areas of the crust, the dissolved substances are precipitated from the hot water solution.

The velocity of flowing water determines whether minerals are carried in suspension or deposited. For e.g. when the velocity of the water slows, large minerals or minerals with a higher density are deposited.

12) Assam shares its borders with which among the following states/countries?

1. Sikkim
2. China
3. Tripura
4. Meghalaya
5. Bhutan

Select the correct answer code:

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

Solution: b)



13) Arrange these geographical regions from the East to West.

1. Gulf of Aden
2. Laccadive Sea
3. Gulf of Thailand
4. South China Sea

Select the correct answer code:

- a) 4321
- b) 4312
- c) 2134
- d) 4123

Solution: a)



14) Which one of the following factors is responsible for the change in the regular direction of the ocean currents in the Indian Ocean?

- a) Indian ocean is generally warmer
- b) Indian ocean has monsoon drift
- c) Indian ocean is a land-locked ocean
- d) Indian ocean has greater variation in salinity

Solution: b)

Normally, **ocean currents are under the greater influence of prevailing winds**. Indian Ocean currents are largely under the influence of monsoon – A seasonal reversal of winds.

15) The drainage pattern of an area is the outcome of which of the following factors

1. Geological time period.
2. Nature of rocks
3. Structure of rocks
4. Topography
5. Amount of water flowing and periodicity of the flow.

Which of the above statements is/are correct?

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

Solution: c)

The flow of water through well-defined channels is known as 'drainage' and the network of such channels is called a 'drainage system'. The drainage pattern of an area is the outcome of the **ecological time period, nature and structure of rocks, topography, slope, amount of water flowing and the periodicity of the flow**.

16) Consider the following statements regarding Guar Cultivation.

1. The guar or cluster bean is an agricultural crop grown mainly in the irrigated areas of southern India.
2. India is the world's largest producer of guar.
3. Guar gum is used in the fracking process in the extraction of shale gas.

Which of the above statements is/are correct?

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

Solution: c)

The guar or cluster bean is an agricultural crop grown in **arid zones of West and North-West India**, Pakistan, Sudan and parts of USA. India grows over 850,000 tons, or 80% of the total guar produced all over the world. 75% of the guar gum or derivatives produced in India are exported, mainly to USA and to European countries. Rajasthan is the major guar producing state, accounting for 70% of the production. Guar is also grown in Gujarat, Haryana, Punjab and in some parts of Uttar Pradesh and Madhya Pradesh.

Guar gum, is used in fracking, a method of extracting shale gas that involves pumping pressurised gas into the ground. India is the world's largest producer of guar.

17) Consider the following statements

1. Port Blair is closer to Kolkata than it is to Chennai.
2. Duncan passage separates Middle Andaman from South Andaman.

Which of the above statements is/are correct?

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

Solution: a)

दूरीया Distance in Kms	समुद्र मार्ग Sea	वायुमार्ग Air
पोर्ट ब्लेयर तथा चेन्नई के बीच Between Port Blair & Chennai	1400	1372.02
पोर्ट ब्लेयर तथा कोलकता के बीच Between Port Blair & Kolkata	1230	1298.44

Duncan Passage is a strait in the Indian Ocean. It separates Rutland Island (part of Great Andaman) to the north, and Little Andaman to the south.

18) 'Zealandia' is a newly discovered continent is located in which of the following oceanic region?

- Southern Ocean
- North-east Indian Ocean
- North Atlantic Ocean
- South-west Pacific Ocean

Solution: d)

19) The countries bordering Kyrgyzstan are

- Kazakhstan
- China
- Afghanistan
- Uzbekistan

Select the correct answer code:

- 1, 2, 3
- 1, 2, 4
- 2, 3, 4
- 1, 2, 3, 4

Solution: b)

Kyrgyzstan is a landlocked country with mountainous terrain. It is bordered by Kazakhstan to the north, Uzbekistan to the west and southwest, Tajikistan to the southwest and China to the east. Its capital and largest city is Bishkek.

20) The drainage pattern of an area is the outcome of which of the following factors

- Geological time period.
- Nature of rocks
- Structure of rocks
- Topography
- Amount of water flowing and periodicity of the flow.

Which of the above statements is/are correct?

- 1, 2, 3
- 1, 2, 3, 4
- 1, 2, 3, 4, 5
- 2, 3, 4, 5

Solution: c)

The flow of water through well-defined channels is known as 'drainage' and the network of such channels is called a 'drainage system'. The drainage pattern of an area is the outcome of the ecological time period, nature and structure of rocks, topography, slope, amount of water flowing and the periodicity of the flow.

3. Economy

1) Inflation may result from

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

Select the correct answer code:

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

Solution: a)

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

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

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

2) If the total size of the economy is growing year after year, it implies that

1. GDP growth rate must be increasing steadily year after year.
2. Gross Capital formation in the economy must be increasing year after year.

Which of the above statements is/are incorrect?

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

Solution: c)

GDP at market prices calculates total value of goods and services produced within a year at market prices.

If it increases, it means entrepreneurs have decided to produce more goods and services.

This can happen even without an increase in actual investment, with the same machinery and labour.

If the size of economy grows proportionately larger each year, while the growth rate is positive, it may not necessarily be increasing. So, statement 1 is incorrect.

3) "Current account" transactions of India with the world include

1. Export-import balance for goods
2. Remittance flows
3. Trade in invisibles
4. Loan given by foreign governments

Select the correct answer code:

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

Solution: a)

The current account records exports and imports in goods and services and transfer payments.

- Trade in services denoted as invisible trade (because they are not seen to cross national borders).
- Transfer payments are receipts which the residents of a country receive 'for free', without having to make any present or future payments in return.
- They consist of remittances, gifts and grants. They could be official or private.

4) How would you distinguish between the revenue and capital receipts of the government?

1. Revenue receipts are non-redeemable unlike certain capital receipts.
2. Capital receipts are always debt creating unlike revenue receipts.

Which of the above statements is/are correct?

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

Solution: a)

The main difference between revenue receipts and capital receipts is that **in the case of revenue receipts, government is under no future obligation to return the amount, i.e., they are non-redeemable.** But in case of capital receipts which are borrowings, government is under obligation to return the amount along with Interest. **Capital receipts may be debt creating or non-debt creating.**

Examples of debt creating receipts are—Net borrowing by government at home, loans received from foreign governments, borrowing from RBI. Examples of non-debt capital receipts are—Recovery of loans, proceeds from sale of public enterprises (i.e., disinvestment), etc. These do not give rise to debt.

5) Consider the following statements regarding Rupee Appreciation.

1. Rupee can appreciate because of strong foreign portfolio investments into the country.
2. Avoiding the appreciation of the rupee can strengthen the domestic manufacturing industry.

Which of the above statements is/are correct?

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

Solution: c)

Rupee mostly appreciates against dollar due to higher flows into the market.

We need to avoid the appreciation of the rupee if we are to strengthen the domestic manufacturing industry. Any appreciation of the rupee facilitates more imports and less exports, adversely affecting domestic production.

6 'Primary Deficit' refers to

- a) Fiscal Deficit - Interest Payments
- b) Revenue deficit - Grants for capital creation
- c) Revenue deficit - Grants to states and local bodies
- d) Budgetary deficit - Capital deficit

Solution: a)

Primary Deficit is the difference between the current year's fiscal deficit and the interest paid on the borrowings of the previous year.

Primary Deficit indicates the borrowing requirements of the government, excluding interest. It is the amount by which the total expenditure of a government exceeds the total income. Note that primary deficit does not include the interest payments made. Also, primary deficit shows the borrowing requirements needed for meeting the expenditure of the government.

Primary deficit is measured to know the amount of borrowing that the government can utilize, excluding the interest payments.

- 7) A bank may decide to fulfil its Statutory Liquidity Ratio (SLR) obligations in which of the following forms?
1. Government security holdings
 2. Gold holdings or Sovereign Gold Bonds (SGBs)
 3. Vault Cash

Select the correct answer code:

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

Solution: d)

The RBI Act instructs that all commercial banks (and some other specified institutions) in the country have to keep a given proportion of their demand and time deposits (NDTL or net demand and time liabilities) as liquid assets in their own vault. This is called statutory liquidity ratio.

The word statutory here means that it is a legal requirement and liquid asset means assets in the form of **cash, gold and approved securities (government securities) or even SGBs.**

- 8) Which of the following is correct regarding 'double coincidence of wants'?
- a) Paying double the cost of the product when there is high demand.
 - b) Buying a product together by two agents in an economy for lesser rate.
 - c) Two economic agents have complementary demand for each other's surplus production.
 - d) None of the above

Solution: c)

Double coincidence of wants is a situation where two economic agents have complementary demand for each other's surplus production.

It is an economic phenomenon where two parties each hold an item the other wants, so they exchange these items directly without any monetary medium. This type of exchange is the foundation of a bartering economy.

- 9) Balance of Payments (BoP) consist of which of the following items?
1. Any borrowing of the Government of India from abroad
 2. Trade Balance
 3. FDI and FII received annually

Select the correct answer code:

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

Solution: d)

BoP consists of current account and capital account.

Current account includes trade, invisibles, remittances etc.

Capital account includes borrowings and long-term investments/debts of residents/foreigners with India.

Capital inflows like FDI, FII help bridge the trade deficit and neutralize BoP.

- 10) Which of the following is/are part of the Personal Disposable Income?

1. Non-tax Payments such as fines
2. Corporate Tax.
3. Personal Tax Payments.
4. Net Interest payments made by households

Select the correct answer code:

- a) 1, 2, 4
- b) 3 only
- c) 1, 2, 3, 4
- d) None of the above

Solution: d)

None of them are part of Personal Disposable Income.

In economics, personal income (PI) refers to an individual's total earnings from wages, investment enterprises, and other ventures. It is the sum of all the incomes received by all the individuals or household during a given period.

If we deduct the Personal Tax Payments (income tax, for example) and Non-tax Payments (such as fines) from PI, we obtain what is known as the Personal Disposable Income.

Personal Disposable Income (PDI) \equiv PI – Personal tax payments – Non-tax payments.

11) 'Monetary Base', managed by the Reserve Bank of India, consists of

1. Deposits held by the Government of India with RBI
2. Sum total of the capital of all financial institutions regulated by RBI
3. Notes and coins in circulation with the public

Select the correct answer code:

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

Solution: d)

Monetary Base is also called as High powered money.

It consists of currency (notes and coins in circulation with the public and vault cash of commercial banks) and deposits held by the Government of India and commercial banks with RBI.

If a member of the public produces a currency note to RBI the latter must pay her value equal to the figure printed on the note.

Similarly, the deposits are also refundable by RBI on demand from deposit-holders. These items are claims which the general public, government or banks have on RBI and hence are considered to be the liability of RBI.

12) Which of the following form a part of revenue expenditure?

1. Salaries
2. Defence expenditure
3. Major Subsidies
4. Expense towards new infrastructure projects

Select the correct answer code:

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

Solution: b)

Revenue expenditure is expenditure for the normal running of government departments and various services, interest charges on debt incurred by government, subsidies and so on. Broadly speaking, expenditure which does not result in the creation of assets is treated as revenue expenditure. All grants given to state governments and other parties are also treated as revenue expenditure even though some of the grants may be for creation of assets.

Capital expenditure usually denotes funds used by a company (government) to acquire, maintain or upgrade physical assets such as property, new infrastructural projects or buying new equipment.

When a government spends money on big-ticket projects, the expenses incurred are usually categorised as capital expenditure. Such expenses are not recurring in nature.

	<i>(As per cent of GDP)</i>
1. Revenue Receipts (a+b)	9.0
(a) Tax revenue (net of states' share)	7.3
(b) Non-tax revenue	1.6
2. Revenue Expenditure of which	10.9
(a) Interest payments	3.1
(b) Major subsidies	1.4
(c) Defence expenditure	1.0
3. Revenue Deficit (2-1)	1.9
4. Capital Receipts (a+b+c) of which	3.7
(a) Recovery of loans	0.1
(b) Other receipts (mainly PSU ¹ disinvestment)	0.4
(c) Borrowings and other liabilities	3.2
5. Capital Expenditure	1.8

13) Which of the following measures can be adopted to promote the Fiscal Consolidation?

1. Increasing subsidies
2. Increasing the tax base
3. Supporting export oriented industries

Select the correct answer code:

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

Solution: a)

Fiscal Consolidation refers to the policies undertaken by Governments (national and sub-national levels) to reduce their deficits and accumulation of debt stock.

Increasing the subsidies increases the expenditure of government. Thus, it will go against the principle of fiscal consolidation.

Increasing the tax base increases the tax collection. Thus, it increases the revenue for the government and promotes the fiscal consolidation.

Supporting the export oriented industries help in increasing the forex reserves of the country. Thus, help in promoting the fiscal consolidation.

14) Which of the following measures is/are likely to increase the taxation base in India?

1. Bringing agriculture income into the purview of Income tax.
2. Encouraging entrepreneurial activity
3. Promoting cash transactions

Select the correct answer code:

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

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

Solution: b)

A tax base is the total amount of assets or revenue that a government can tax.

To increase the tax base India should bring more sectors into the purview of tax regime. Thus, bringing agriculture sector into the purview of income tax likely to increase the tax base.

Encouraging entrepreneurial activity will increase the profit of existing companies as well as encourage the mushrooming of new companies. Thus, it is likely to increase the tax base.

Promoting cash transaction will increase the unaccounted money in the economy. Thus, lead to increase in the black money. Therefore, it is unlikely to increase the tax base.

15) Consider the following statements about Most-favoured-nation (MFN) principle.

1. MFN means that every time a country lowers a trade barrier or opens up a market, it has to do so for the same goods or services from all its trading partners.
2. Countries cannot set up a free trade agreement that applies only to goods traded within the group.
3. Countries can give developing countries special access to their markets.

Which of the above statements is/are correct?

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

Solution: c)

MFN means that every time a country lowers a trade barrier or opens up a market, it has to do so for the same goods or services from all its trading partners — whether rich or poor, weak or strong.

Some exceptions are allowed. For example, countries can set up a free trade agreement that applies only to goods traded within the group — discriminating against goods from outside. Or they can give developing countries special access to their markets. Or a country can raise barriers against products that are considered to be traded unfairly from specific countries. And in services, countries are allowed, in limited circumstances, to discriminate. But the agreements only permit these exceptions under strict conditions.

16) Gross Domestic Product of India does not explicitly include economic value of

1. Gross capital investments made during a financial year
2. Value of goods and services provided by NRIs

Which of the above statements is/are correct?

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

Solution: b)

GDP is the value of the final goods and services produced within a country within an year.

Indian nationals living abroad do not contribute to India's GDP. They do however contribute to India's GNP.

But, the gross capital investments made during a financial year directly accounts as a part of GDP since it creates infrastructure which has an economic value, e.g. a bridge, or a tunnel or a furnace.

17) Which of the following can occur in an economy due to deficit financing by the government?

1. Rise in employment rates
2. Inflation

3. Increase in money supply
4. Increased private investments

Select the correct answer code:

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

Solution: d)

The term 'deficit financing' is used to denote the direct addition to gross national expenditure through budget deficits, whether the deficits are on revenue or on capital account.

Deficit financing in India is said to occur when the Union Government's current budget deficit is covered by the withdrawal of cash balances of the government and by borrowing money from the Reserve Bank of India. Thus, in both cases, 'new money' comes into circulation.

It is said that deficit financing is inherently inflationary. Since deficit financing raises aggregate expenditure and, hence, increases aggregate demand, the danger of inflation looms large.

During inflation, private investors go on investing more and more with the hope of earning additional profits.

The deficit financing results in an increase in government expenditure which produces a favourable multiplier effect on national income, saving, employment, etc.

[Source](#)

18) Consider the following policy measures by the government:

1. Increasing foreign aid to underdeveloped nations
2. Increasing import duties
3. Providing export subsidies

Which of the policy measures given above may be used to reduce the Current Account Deficit (CAD)?

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

Solution: b)

The current account measures the flow of goods, services and investments into and out of the country. We run into a deficit if the value of the goods and services we import exceeds the value of those we export. The current account includes net income, including interest and dividends, and transfers, like foreign aid.

Therefore, increasing foreign aid to underdeveloped nations increases the current account deficit.

However, increasing import duties and providing export subsidies help in reducing the current account deficit.

19) Consider the following statements regarding Cess and Tax.

1. Cess is charged over and above direct and indirect taxes.
2. Cess collected for a particular purpose cannot be used for or diverted to other purposes
3. While all taxes go to the Consolidated Fund of India (CFI), cess will go to Public Account of India.

Which of the above statements is/are correct?

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

Solution: a)

Cess is a form of tax levied or collected by the government for the development or welfare of a particular service or sector.

It is charged over and above direct and indirect taxes.

Cess collected for a particular purpose cannot be used for or diverted to other purposes.

It is not a permanent source of revenue for the government, and it is discontinued when the purpose levying it is fulfilled.

Examples: Education Cess, Swachh Bharat Cess, Krishi Kalyan Cess etc.

While all taxes go to the Consolidated Fund of India (CFI), cess may initially go to the CFI but has to be used for the purpose for which it was collected.

If the cess collected in a particular year goes unspent, it cannot be allocated for other purposes. The amount gets carried over to the next year and can only be used for the cause it was meant for.

20) Consider the following statements regarding indirect taxes.

1. Indirect tax is a tax levied by the Government on goods and services and not on the profit or revenue of an individual.

2. Indirect taxes are termed regressive taxing mechanism because they are charged at higher rates than direct taxes.

3. Cascading effect of tax is a situation wherein the end-consumer of any goods or service has to bear the burden of the tax to be paid on the previously calculated tax and as a result would suffer an increased price.

Which of the above statements is/are correct?

a) 1, 2

b) 1, 3

c) 2, 3

d) 1, 2, 3

Solution: b)

Indirect Tax is a tax levied by the Government on goods and services and not on the income, profit or revenue of an individual and it can be shifted from one taxpayer to another.

Indirect taxes are charged the same for all income groups.

Few indirect taxes: Customs Duty, **Central Excise Duty, Service Tax, Sales Tax and Value Added Tax (VAT).**

Cascading effect of tax is a situation wherein the end-consumer of any goods or service has to bear the burden of the tax to be paid on the previously calculated tax and as a result would suffer an increased or inflated price.

4. Art and Culture

1) Consider the following statements regarding Pietra dura.

1. It consists of a series of long pillars used to support dome like structures.
2. It was used on a large scale in the Taj Mahal by Shah Jahan.

Which of the above statements is/are correct?

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

Solution: b)

Akbar's tomb at Sikandara near Agra was completed by Jahangir. Nur Jahan built the tomb of Itimaddaulah at Agra. It was constructed wholly of white marble with floral designs made of semi-precious stones on the walls. This type of decoration was called pietra dura.

This method became more popular during the reign of Shah Jahan. The pietra dura method was used on a large scale in the Taj Mahal by Shah Jahan.



2) Consider the following statements

1. The Pala School of painting produced some of the earliest examples of miniature painting in India.
2. Pala School of painting witnessed the last great phase of Buddhism in its painting.

Which of the above statements is/are correct?

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

Solution: c)

The Pala School of painting produced some of the earliest examples of miniature painting in India. This school of painting dates back to 7th to 11th century.

It was executed under the Palas of Bengal in the eastern India. This period witnessed the last great phase of Buddhism and of the Buddhist art in India.

3) Consider the following statements.

1. The Nayaka paintings depict episodes from the Mahabharata and the Ramayana.
2. The Nayaka paintings style were developed in ideological opposition to the Vijayanagara arts and architecture.

Which of the above statements is/are correct?

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

d) Neither 1 nor 2

Solution: a)

They also show scenes from Krishna-leela. In Tiruvarur, there is a panel narrating the story of Muchukunda. In Chidambaram there are panels of paintings narrating stories related to Shiva and Vishnu— Shiva as bhikshatana murti, Vishnu as Mohini, etc.

In the Sri Krishna temple at Chengam in Arcot District there are sixty panels narrating the story of the Ramayana which represent the late phase of Nayaka paintings.

The examples cited above suggest that Nayaka paintings were more or less an extension of the Vijayanagara style with minor regional modifications and incorporations.

4) Tirumalaipuram paintings were patronized under:

- a) Pallavas
- b) Pandyas
- c) Cholas
- d) Vijayanagar Kingdom

Solution: b)

- When the Pandyas rose to power, they too patronised art. Tirumalaipuram caves and Jaina caves at Sittanavasal are some of the surviving examples.
- A few fragmented layers of paintings can be seen in Tirumalaipuram. In Sittanavasal, the paintings are visible on the ceilings of shrines, in verandas, and on the brackets.
- On the pillars of the veranda are seen dancing figures of celestial nymphs. The contours of figures are firmly drawn and painted in vermilion red on a lighter background.
- The body is rendered in yellow with subtle modelling. Supple limbs, expression on the faces of dancers, rhythm in their swaying movement, all speak of the artists' skill in creative imagination in visualising the forms in the architectural context.

5) Consider the following statements.

1. Yakshagana is a traditional theatre form of Kerala.
2. Yakshagana is a temple art form that depicts mythological stories and Puranas.

Which of the above statements is/are correct?

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

Solution: b)

Yakshagana is a traditional theatre form of Karnataka.

It is a temple art form that depicts mythological stories and Puranas.

It is performed with massive headgears, elaborate facial make-up and vibrant costumes and ornaments.

Usually recited in Kannada, it is also performed in Malayalam as well as Tulu (the dialect of south Karnataka).

It is performed with percussion instruments like chenda, maddalam, jagatta or chengila (cymbals) and chakratala or elathalam (small cymbals).

6) What is the major theme running common between the Central Indian and Rajasthani schools of painting?

- a) They are rooted in the Indian traditions.
- b) They are highly secular in nature.
- c) They are unaffected by historical developments and carry a unique style.
- d) They use light colours to portray extra-terrestrial themes.

Solution: a)

Unlike Mughal painting which is primarily secular, **the art of painting in Central India, Rajasthani and the Pahari region etc. is deeply rooted in the Indian traditions**, taking inspiration from Indian epics, religious texts like the Puranas, love poems in Sanskrit and other Indian languages, Indian folk-lore and works on musical themes. **The cults of Vaishnavism, Saivism and Sakti exercised tremendous influence on the pictorial art of these places.** Among these the cult of Krishna was the most popular one which inspired the patrons and artists.

7) Which of the following are the features of Apabhramsa School of painting

1. Jainism was the main theme of these paintings.
2. Pointed nose and double chin in human depiction.
3. Absence of animals and birds

Select the correct answer code:

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

Solution: b)

Apabhramsa School of Art

This school traces its origin to Gujarat and Mewar region in Rajasthan. It was the predominant school of painting in western India during 11th to 15th century. The most common themes of these paintings were Jain and in the later period the Vaishanava School appropriated them too.

The features of the human figures depicted in the paintings have fish-shaped bulging eyes; a pointed nose and a double chin.

The animal and bird figurines in the paintings are represented as toys. The most famous example is of Kalpasutra and the Kalakacharya Katha from 15th century.



8) The subjects covered by Natya Shastra include

1. Dramatic composition
2. Musical composition
3. 'Rasa' theory

Select the correct answer code:

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

Solution: c)

The text consists of 36 chapters with a cumulative total of 6000 poetic verses describing performance arts. The subjects covered by the treatise include dramatic composition, structure of a play and the construction of a stage

to host it, genres of acting, body movements, make up and costumes, role and goals of an art director, the musical scales, musical instruments and the integration of music with art performance.

The Nāṭya Śāstra is notable as an ancient encyclopaedic treatise on the arts, one which has influenced dance, music and literary traditions in India. It is also notable for its aesthetic "Rasa" theory, which asserts that entertainment is a desired effect of performance arts but not the primary goal, and that the primary goal is to transport the individual in the audience into another parallel reality, full of wonder, where he experiences the essence of his own consciousness, and reflects on spiritual and moral questions.

9) Consider the following statements about Kuchipudi.

1. It is mentioned in Natya Shastra.
2. As per tradition, the dance must be accompanied by live vocals and not music.
3. It is recognized as an Indian classical dance.

Which of the above statements is/are correct?

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

Solution: c)

Kuchipudi has its roots in the ancient Hindu Sanskrit text of Natya Shastra. Like all major classical dances of India, it was also developed as a religious art linked to traveling bards, temples and spiritual beliefs. The Kuchipudi style was conceived by Siddhendra Yogi, a talented Vaishnava poet of 17th century.

It begins with an invocation to Lord Ganesha followed by nritya (non-narrative and abstract dancing); shabdham (narrative dancing) and natya. The dance is accompanied by song which is typically Carnatic music. The singer is accompanied by musical instruments like mridangam, violin, flute and tambura.

It is one of the ten major Indian classical dances.

10) Gadhika and Naikkar Kali are the tribal art forms of which state

- a) Tamil Nadu
- b) Odisha
- c) Telangana
- d) Kerala

Solution: d)

Some of the Tribal art forms of Kerala:

Gadhika
Dance and Songs of Irular
Kaanipattu
Kannokupattu
Urali tirbe's Malankoothu
Kumbhapattu
Naikkar Kali
Paliya Nritham
Malappulayattam
Mannankoothu
Mudiyattam

11) Consider the following statements regarding Thanjavur painting.

1. It largely depicts the social and economic life of common man.
2. The paintings are notable for their adornment in the form of semi-precious stones and glass.

Which of the above statements is/are incorrect?

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

Solution: a)

Thanjavur painting is a classical South Indian painting style, which was inaugurated from the town of Thanjavur (anglicized as Tanjore) and spread across the adjoining and geographically contiguous Tamil country.

The art form draws its immediate resources and inspiration from way back about 1600 AD, a period when the Nayakas of Thanjavur under the suzerainty of the Vijayanagara Rayas encouraged art—chiefly, classical dance and music—as well as literature, both in Telugu and Tamil and **painting of chiefly Hindu religious subjects in temples. It is distinguished by its famous gold coating.**

The paintings are **mostly of Gods and Goddesses** because this art of painting flourished at a time when fine-looking and striking temples were being constructed by rulers of several dynasties.

12) Consider the following pairs:

Folk Painting	State/Region
1. Madhubani	Bihar
2. Pattachitra	Andhra Pradesh
3. Patua	West Bengal

Which of the above pairs is/are correctly matched?

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

Solution: a)

Madhubani art is practiced in the Mithila region, Bihar. Painting is done with fingers, twigs, brushes, nib-pens, and matchsticks, etc. Using natural dyes and pigments, and is characterised by eye-catching geometrical patterns.

Pattachitra or Patachitra is a general term for traditional, clothbased scroll painting, based in the eastern Indian states of **Odisha and West Bengal.** Pattachitra art form is known for its intricate details as well as mythological narratives and folktales inscribed in it.

The **Patuas** are an artisan community found in the state of **West Bengal,** Bihar, Jharkhand and Odisha in India and parts of Bangladesh.

13) Consider the following statements.

1. Lai Haraoba is one of main festivals still performed in Manipur which has its roots in the pre-Vaishnavite period.
2. Lai Haraoba is the earliest form of dance which forms the basis of all stylised dances in Manipur.

Which of the above statements is/are correct?

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

Solution: c)

Lai Haraoba is one of the main festivals still performed in Manipur which has its roots in the pre-Vaishnavite period. **Lai Haraoba** is the **earliest form of dance** which forms the basis of all stylised dances in Manipur. Literally meaning - the merrymaking of the gods, it is performed as a ceremonial offering of song and dance. The principal performers are the **maibas** and **maibis** (priests and priestesses) who re-enact the theme of the creation of the world.

14) Nyaya-Vaisheshika systems of philosophy are encompassed by

- a) Mimamsa School
- b) Vedanta School
- c) Yoga School
- d) Samkhya School

Solution: a)

Mimamsa philosophy is basically the analysis of interpretation, application and the use of the text of the Samhita and Brahmana portions of the Veda.

According to Mimamsa philosophy, Vedas are eternal and possess all knowledge, and religion means the fulfilment of duties prescribed by the Vedas.

This philosophy encompasses the Nyaya-Vaisheshika systems and emphasizes the concept of valid knowledge.

15) Consider the following statements about Bengal School of Painting that flourished throughout India during the British Raj in the early 20th century.

1. They followed modern western art forms and dismissed the ancient Indian art as primitive.
2. It only painted themes related to Indian freedom struggle so as to generate nationalistic consciousness.

Which of the above statements is/are correct?

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

Solution: d)

This new group of painters rejected the art of Raja Ravi Varma as imitative and westernized. They declared that such a style was unsuitable for depicting the nation's ancient myths and legends.

They turned to the **inspiration to medieval Indian traditions of the miniature paintings and ancient art of mural paintings in Ajanta Caves**. The paintings of Ajanta and Bagh, Mogul, Rajput and Pahari miniatures provided the models.

The continuity of earlier traditions was sought to be maintained by borrowing from legends and classical literature like the Ramayana, the Mahabharata, Gita, and Puranas, the writings of Kalidasa and Omar Khayyam. Also known as 'Indian style of painting' in its early days, it was associated with Indian nationalism and led by Rabindranath Tagore, but was also promoted and supported by British arts administrators like E. B. Havell; eventually it led to the development of the modern Indian painting.

16) Consider the following statements regarding Harappan Civilization.

1. Most of the potteries found in the sites of Harappan Civilization are handmade.
2. Both men and women wore ornaments, while there were some ornaments which were worn only by women.
3. Both cotton and wool fabrics were used by Harappans.

Which of the above statements is/are correct?

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

Solution: d)

Most of the potteries that have been found are very fine wheel-made wares, with a very few being handmade.

The Harappans used a large variety of materials, from precious metals and gemstones to bones and even baked clay, to make ornaments. Both men and women wore ornaments like necklaces, fillets, armlets and finger rings. Girdles, earrings and anklets were worn **only by women**.

For fabric, the Harappans used cotton and wool, which were spun by rich and poor alike.

17) Which of these ragas is usually performed late in the morning?

- a) Raga Darbari
- b) Todi
- c) Raga Bhopali
- d) Bhimpalasi

Solution: b)

Todi should be performed in the late morning. It is a Hindustani classical raga which gave its name to the Todi thaat, one of the ten types of classical music according to the musicologist Bhatkhande. Todi is nearly always shown as a gentle, beautiful woman, holding a veena and standing in a lovely green forest, surrounded by deer.

Raga Bhopali should be sung after sunset.

Bhimpalasi should be sung in late Afternoon.

Raga Darbari is a raga in the Kanada family, which is thought to have originated in Carnatic music and brought into North Indian music by Miyan Tansen, the 16th-century composer in emperor Akbar's court.

18) "Maseetkhani" style is associated with the family of

- a) Tansen
- b) Jahangir
- c) Ibrahim Lodi
- d) Dara Sikoh

Solution: a)

The "Senia" style of Sitar playing started with the legendary great master of Sitar, Ustad Maseet Sen from the family of Tansen, the originator of "Maseetkhani" style.

The word "Senia" is related to Tansen, the father of Indian Classical Music. The word "Gharana" implies a style of music. The followers of Tansen's school of music are widely known as the followers of "Senia gharana" (i.e. "Seniya" style/school of music).

19) Which of the following was/were the changes effected in Indian Paintings with the arrival of European artists?

1. Inculcation of the idea of Realism
2. Introduction of the technique of water colours.

Select the correct answer code:

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

Solution: a)

From the eighteenth century a stream of European artists came to India along with the British traders and rulers. The artists brought with them new styles and new conventions of painting. They began producing pictures which became widely popular in Europe and helped shape Western perceptions of India.

European artists brought with them the idea of realism. This was a belief that artists had to observe carefully and depict faithfully what the eye saw. What the artist produced was expected to look real and lifelike.

European artists also brought with them the technique of oil painting – a technique with which Indian artists were not very familiar. Oil painting enabled artists to produce images that looked real.

20) This type of scroll painting is one of the most famous paintings of Rajasthan. It depicts exploits of local deities which are often carried from place to place and are accompanied by traditional singers, who narrate the theme depicted on the scrolls. This refers to?

- a) Phad
- b) Rangavalli
- c) Mandand
- d) Patachitrakala

Solution: a)

It is a type of scroll painting mainly found in the Bhilwara district. **The main themes of the phad paintings depict the deities and their legends and the stories of erstwhile Maharajas.**

Therefore, they depict the heroic deeds of a heroic figure, the daily life of a peasant, rural life, animals and birds, flora and fauna.

These paintings are created using bright colours and subtle colours. The outlines of the paintings are first drawn in black and later filled with colours.

Raw colours are used for these paintings. The unique features of phad paintings are the bold lines and a two-dimensional treatment of figures with the entire composition arranged in sections.



5. History

- 1) Consider the following statements regarding the teachings of Jainism.
1. As per Mahavira, even inanimate objects have souls and varying degrees of consciousness.
 2. Jainism believes in extreme penance and asceticism to attain ultimate knowledge.

Which of the above statements is/are incorrect?

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

Solution: d)

Mahavira regarded all objects, both animate and inanimate, have souls and various degrees of consciousness. They possess life and feel pain when they are injured. Even the practice of agriculture was considered sinful as it causes injury to the earth, worms and animals. Similarly the doctrine of asceticism and renunciation was also carried to extreme lengths by the practice of starvation, nudity and other forms of self-torture.

- 2) Consider the following officials of the Mauryan Empire and their respective roles.
1. Nagarika: City superintendent
 2. Gopa: Jurist
 3. Rajukas: District Administration
 4. Yuktas: Central treasury

Which of the above are correctly matched?

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

Solution: a)

Both Kautilya and Megasthenes provided the system of Municipal administration in Mauryan Empire. Arthashastra contains a full chapter on the role of **Nagarika or city superintendent**. His chief duty was to maintain law and order.

The **district administration was under the charge of Rajukas**, whose position and functions are similar to modern collectors. He was assisted by **Yuktas or subordinate officials**.

Village administration was in the hands of Gramani and his official superior was called **Gopa who was in charge of ten or fifteen villages**.

- 3) Consider the following statements regarding Pallava administration.
1. The land grants given to the temples by Pallavas were called as Brahmadeya.
 2. Land given to Brahmanas was exempted from tax.
 3. Traders and artisans were required to pay taxes.

Which of the above statements is/are correct?

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

Solution: b)

The King provided **land-grants to the temples known as Devadhana** and also to the **Brahmans known as Brahmadeya**.

Land tax was the primary source of the government revenue. **The Brahmadeya and Devadhana lands were exempted from tax.**

Traders and artisans such as carpenters, goldsmiths, washer-men, oil-pressers and weavers paid taxes to the government.

- 4) Consider the following statements regarding the Rampa Rebellion of 1879.
1. It was a rebellion against the British in the hill tracts of Vizagapatam.
 2. It was led by the Zamindars.
 3. Ban of toddy tapping was an important factor behind the rebellion.

Which of the above statements is/are correct?

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

Solution: c)

It was an insurrection by the hill tribes in the Rampa region of the Vizagapatam Hill Tracts Agency of Vizagapatam District **against the British government of the Madras Presidency and Zamindars.**

The hill tracts of Vizagapatam were inhabited by hill tribes who led a more or less independent way of life for centuries.

These tribes paid a regular tribute to a zamindar or mansabdar who was a subject of British India.

The then zamindar of the region was an oppressive tyrant. There were smaller riots and uprisings before, but to make matters worse, the Madras government introduced a law making toddy tapping illegal and introducing a toddy tax, this wouldn't have been a great deal to the Hill tribes, but toddy tapping was part of their culture.

This led to a full-scale rebellion in early 1879.

- 5) The aim of Public Safety Bill, 1928 was to
- a) Regulate the manufacture, sale, possession, and carrying of firearms.
 - b) Allow British subjects to be tried by Indian judges.
 - c) Deport the foreigners suspected of propagating socialist and communist ideas.
 - d) Abolish oppressive social practices among various religious groups.

Solution: c)

Public safety bill aimed to stop Communist movement in India by cutting it off from British & foreign communist organizations. It called to deport the foreigners suspected of propagating socialist and communist ideas.

- 6) Which of the following are the causes for the rise of Jainism and Buddhism?
1. Religious unrest in India in the 6th century B.C.
 2. The sacrificial ceremonies advocated in the Later Vedic period were found to be too expensive.
 3. The teachings of Upanishads was not easily understood by all.

Select the correct answer code:

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

Solution: d)

The primary cause for the rise of Jainism and Buddhism was the religious unrest in India in the 6th century B.C. The complex rituals and sacrifices advocated in the Later Vedic period were not acceptable to the common people. The sacrificial ceremonies were also found to be too expensive. The superstitious beliefs and mantras confused the people. The teachings of Upanishads, an alternative to the system of sacrifices, were highly philosophical in nature and therefore not easily understood by all.

7) Consider the following statements about the dynasties during the Sangam Age.

1. Hereditary monarchy was the form of government during the Sangam period.
2. Each of the Sangam dynasties had a royal emblem – such as carp for the Pandyas.

Which of the above statements is/are incorrect?

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

Solution: d)

During the Sangam period **hereditary monarchy** was the form of government. The king had also taken the advice of his minister, court-poet and the imperial court or avai.

Each of the Sangam dynasties had a royal emblem – carp for the Pandyas, tiger for the Cholas and bow for the Cheras.

8) Tolkappiyam refers to four castes namely arasar, anthanar, vanigar and vellalar. Consider the following statements about the roles of these castes.

1. Arasar: Ruling Class
2. Anthanars: Untouchables
3. Vanigars: Soldiers
4. Vellalas: Agriculturists

Select the correct answer code:

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

Solution: a)

Anthanars played a significant role in the Sangam polity and religion. Vanigars carried on trade and commerce. The vellalas were agriculturists.

9) The Poligar revolt of early 19th Century was rooted in

- a) General discontentment with foreign rule
- b) Oppressive land revenue system
- c) Control of tribal forests and river streams by British government
- d) Enmity of tribals with non-tribals

Solution: b)

The Polygar Wars or Palaiyakkara Wars were fought between the Polygars of the former Tirunelveli Kingdom in Tamil Nadu and the British East India Company forces between 1799 to 1805 over pending taxes, oppressive land revenue system etc.

The British finally won after carrying out gruelling protracted jungle campaigns against the Polygar armies and finally defeated them.

The British victory over the Polygars brought large parts of the territories of Tamil Nadu under British control, enabling them to get a strong hold in Southern India.

10) Consider the following statements about Charter Act of 1833.

1. It vested all civil and military powers on the Governor-General of India.
2. It introduced an open competition system of selection and recruitment of civil servants.
3. It ended the activities of the East India Company as a commercial body, which became a purely administrative body.

Which of the above statements is/are correct?

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

Solution: c)

Features of the Charter Act of 1833:

1. It made the Governor-General of Bengal as the **Governor-General of India and vested in him all civil and military powers**. Thus, the act created, for the first time, a Government of India having authority over the entire territorial area possessed by the British in India. Lord William Bentick was the first governor-general of India.
2. It deprived the governor of Bombay and Madras of their legislative powers. The Governor-General of India was given exclusive legislative powers for the entire British India. The laws made under the previous acts were called as Regulations while laws made under this act were called as Acts.
3. It ended the activities of the East India Company as a commercial body, which became a purely administrative body. It provided that the company's territories in India were held by it 'in trust for His Majesty, His heirs and successors'.

Charter Act of 1853 introduced an open competition system of selection and recruitment of civil servants.

11) Consider the following statements regarding Rig Vedic Aryans.

1. There are no evidences of the use of Iron by Rig Vedic Aryans.
2. Trade was conducted on barter system.
3. Copper coins called nishka were used as media of exchange in large transactions.

Which of the above statements is/are correct?

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

Solution: b)

The Rig Vedic Aryans were pastoral people and their main occupation was cattle rearing. Their wealth was estimated in terms of their cattle. When they permanently settled in North India they began to practice agriculture. With the **knowledge and use of iron** they were able to clean forests and bring more lands under cultivation.

Trade was another important economic activity and rivers served as important means of transport. **Trade was conducted on barter system**. In the later times, **gold coins called nishka** were used as media of exchange in large transactions.

12) Match the following officials of the Rashtrakuta Empire and their respective jurisdictions.

- | | |
|-----------------|--------------|
| 1. Rashtrapatis | A. Villages |
| 2. Bhogapatis | B. Provinces |
| 3. Vishayapatis | C. Districts |

Select the correct answer code:

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

Solution: c)

The Rashtrakuta Empire was divided into several **provinces called rashtras under the control of rashtrapatis**.

They were further divided into vishayas or **districts governed by vishayapatis**.

The next subdivision was bhukti consisting of 50 to 70 **villages under the control of bhogapatis**.

13) Kupyadhyaksha in the Mauryan empire was an officer in charge of

- a) Prisons
- b) Forest department
- c) Taxation
- d) Health clinics

Solution: b)

In the administration of Chandra Gupta Maurya, there was a regular Forest Department administered by the Kupyadhyaksha (Superintendent of Forest Products). His duty was to increase the productivity of forests, to sell trees after fixing their price, classifying strong trees etc.

14) Consider the following events:

- 1. First Anglo-Mysore war
- 2. First Anglo Burmese war
- 3. First Anglo Sikh war
- 4. First Anglo Maratha war

Which of the following is the correct chronological sequence of the above events?

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

Solution: a)

First Anglo-Mysore war - (1766–1769)

First Anglo Maratha war - (1775–1782)

First Anglo Burmese war - (1824–1826)

First Anglo Sikh war - (1845–46)

15) The Kheda peasant movement was mainly concerned with?

- a) Implementation of ceiling laws in the Kutch region
- b) Remission of taxes for the farmers following the failure of harvest
- c) Better working conditions for the landless labourers
- d) None of the above

Solution: b)

The Kheda peasant struggle is also known as no-tax peasant struggle. It was a satyagraha launched in March 1919 under the leadership of Gandhiji, Sardar Vallabhbhai Patel, Indulal Yajnik, N.M. Joshi, Shankerlal Pareekh and several others.

16) Consider the following statements regarding Paleolithic sites.

- 1. These sites were generally located near water sources.
- 2. Some of the famous sites of Paleolithic age are Soan valley and Potwar Plateau on the northwest India.
- 3. Horticulture was started during this period.

Which of the above statements is/are correct?

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

Solution: b)

Paleolithic or Old Stone Age sites are generally located near water sources.

Some of the famous sites of Old Stone Age in India are:

- a. The Soan valley and Potwar Plateau on the northwest India.
- b. The Siwalik hills on the north India.
- c. Bhimpetka in Madhya Pradesh.
- d. Adamgarh hill in Narmada valley.
- e. Kurnool in Andhra Pradesh and
- f. Attirampakkam near Chennai.

Domestication of animals, horticulture and primitive cultivation started during Mesolithic or Middle Stone Age.

- 17) Aryavarta, Madhyadesa and Dakshinapatha refer to
- a) Kingdoms of Aryans in the eastern Gangetic plains.
 - b) Titles given to the rulers of Kuru Kingdom.
 - c) Divisions of India referred in the later vedic texts.
 - d) None of the above

Solution: c)

The later Vedic texts refer to the three divisions of India – Aryavarta (northern India), Madhyadesa (central India) and Dakshinapatha (southern India).

18) Consider the following statements regarding Permanent Settlement.

1. Permanent Settlement was an agreement, where East India Company had fixed the revenue that each zamindar had to pay.
2. Revenue collection was the only motive behind introducing the Permanent Settlement and British officials did not have any intention to resolve the problems faced by the farmers.
3. Charles Cornwallis was the Governor General of Bengal when the Permanent Settlement was introduced.

Which of the above statements is/are correct?

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

Solution: b)

The Permanent Settlement had come into operation in 1793. The East India Company had fixed the revenue that each zamindar had to pay.

In introducing the Permanent Settlement, British officials hoped to resolve the problems they had been facing since the conquest of Bengal. By the 1770s, the rural economy in Bengal was in crisis, with recurrent famines and declining agricultural output. Officials felt that agriculture, trade and the revenue resources of the state could all be developed by encouraging investment in agriculture.

Charles Cornwallis was the Governor General of Bengal when the Permanent Settlement was introduced there in 1793.

19) Consider the following statements regarding Permanent Settlement.

1. The Permanent Settlement was introduced first in Bengal and it was confined to Northern India.
2. Charter Act of 1833 gave statutory backing to Permanent Settlement.

Which of the above statements is/are correct?

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

Solution: d)

The Permanent Settlement was introduced first in Bengal and Bihar and later in the south district of Madras and Varanasi. The system eventually spread over northern India by a series of regulations dated 1 May 1793. These regulations remained in place until the Charter Act of 1833.

20) Consider the following statements regarding Ryotwari system.

1. The Ryotwari system was a land revenue system in British India, introduced by Thomas Munro.
2. In this system, the peasants were regarded as the owners of the land and the taxes were directly collected by the government from the peasants.
3. By introducing Ryotwari system, the role of moneylenders was reduced substantially which benefitted the farmers.

Which of the above statements is/are correct?

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

Solution: a)

The Ryotwari system was a land revenue system in British India, introduced by Thomas Munro in 1820. It allowed the government to deal directly with the cultivator ('ryot') for revenue collection and gave the peasant freedom to cede or acquire new land for cultivation. The peasants were regarded as the owners of the land. Here there were no middlemen as in the Zamindari system. But, since high taxes had to be paid in cash the problem of moneylenders came into the show. They further burdened the peasants with heavy interests.

6. Environment

1) Which of these activities are usually restricted (partially or fully) in National parks?

1. Hunting of wild animals
2. Destruction of habitat
3. Construction of tourist lodges
4. Collecting minor forest products

Select the correct answer code:

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

Solution: d)

National parks and sanctuaries are areas of significant ecological, floral, faunal or natural significance.

Hunting of wild animals, encroachment and/or destruction of habitat, construction of tourist lodges and other such activities are prohibited in protected areas.

A National park is a protected area which is reserved for the conservation of only animals, where no human interference in any form of harvesting of timber, collecting minor forest products and private ownership rights is allowed.

But, a wildlife sanctuary is a protected area which is reserved for the conservation of only animal and human activities like harvesting of timber, collecting minor forest products and private ownership rights are allowed as long as they do not interfere with the well-being of animals.

They are notified by the State Governments; and protected by the Forest Departments under the provisions of the Wildlife (Protection) Act, 1972 & its amendments, Indian Forest Act of 1927, Forest (Protection) Act of 1980, Biological Diversity Act, 2002 and the Forest Rights Act, 2006.

2) Consider the following statements regarding World Wildlife Fund (WWF).

1. It has an office/branch even in Antarctica.
2. It was established right after the Rio Earth Summit, 1992.
3. WWF-India is India's nodal agency for implementing the conservation goals under the Sustainable Development Goals (SDGs).

Which of the above statements is/are incorrect?

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

Solution: d)

It does not have any office in Antarctica, so it is based in only 6 continents.

It was set up as a Charitable Public Trust in 1961 (Rio Summit in 1992). It was then known as the World Wildlife Fund-India, much before the terms 'wildlife' and 'environment' had caught the attention of the government or the public.

NITI Aayog is the nodal agency for SDGs.

3) Why do exotic species post a threat to an indigenous ecosystem such as in a Lake or an isolated island in the Andamans?

1. Such species compete with the local or native species for food.
2. They may be predators of local species.
3. Such species may cause diseases in native species.

Select the correct answer code:

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

Solution: c)

Exotic species introduced to new environments often reset the ecological conditions in that new habitat, threatening the species that exist there; this is the reason that they are also termed invasive species.

Invasive species that are closely related to rare native species have the potential to hybridize with the native species; harmful effects of hybridization have led to a decline and even extinction of native species.

Invasive species can change the food web in an ecosystem by destroying or replacing native food sources. The invasive species may provide little to no food value for wildlife.

Lakes and islands are particularly vulnerable to extinction threats from introduced species.

4) The Ocean/Sea that has the most coral species is?

- a) Pacific Ocean
- b) Atlantic Ocean
- c) Indian Ocean
- d) Mediterranean Sea

Solution: a)

Reef-building corals are restricted in their geographic distribution by factors such as the temperature and the salinity (salt content) of the water. The water must also be clear to permit high light penetration.

Because of these environmental restrictions, reefs generally are confined to tropical and semitropical waters. The diversity of reef corals (the number of species), decreases in higher latitudes up to about 30° north and south, beyond which reef corals are usually not found.

Generally, there are about twice as many coral species in Pacific Ocean reefs as in Atlantic Ocean reefs.

5) What are the sources that add nitrogen oxides into the atmosphere?

1. Bacteria living in soil
2. Reaction of Ultraviolet radiation with ozone
3. Lightning stroke

Select the correct answer code:

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

Solution: b)

Nitrous oxide emissions occur naturally through many sources associated with the nitrogen cycle, which is the natural circulation of nitrogen among the atmosphere, plants, animals, and microorganisms that live in soil and water.

Nitrous oxide is actually removed from the atmosphere when it is absorbed by certain types of bacteria or destroyed by ultraviolet radiation or chemical reactions.

A natural source of nitrogen oxides occurs from a lightning stroke. The very high temperature in the vicinity of a lightning bolt causes the gases oxygen and nitrogen in the air to react to form nitric oxide. The nitric oxide very quickly reacts with more oxygen to form nitrogen dioxide.

6) Bioreactors can be used to

1. Treat sewage and wastewater
2. Grow phototrophic organisms like algae

Which of the above statements is/are incorrect?

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

Solution: d)

A bioreactor may also refer to a device or system meant to **grow cells or tissues in the context of cell culture**. These devices are being developed for use in tissue engineering or biochemical engineering. It can be used to treat sewage and wastewater.

A photobioreactor (PBR) is a bioreactor which incorporates some type of light source (that may be natural sunlight or artificial illumination). Photobioreactors are used to grow small phototrophic organisms such as cyanobacteria, algae, or moss plants.

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

1. Oxidation of volcanic gases
2. Chemical weathering
3. Surface reaction of O₃ (Ozone)

Select the correct answer code:

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

Solution: b)

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

The processes that lead to loss of oxygen are:

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

8) What is/are the differences between a primary pollutant and a secondary pollutant?

1. A primary pollutant is an air pollutant emitted directly from a source unlike a secondary pollutant.
2. A primary pollutant has a much shorter life in the atmosphere than a secondary pollutant.
3. A primary pollutant is characterized as less potent or harmful than a secondary pollutant.

Select the correct answer code:

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

Solution: a)

A primary pollutant is an air pollutant emitted directly from a source. A secondary pollutant is not directly emitted as such, but forms when other pollutants (primary pollutants) react in the atmosphere.

Examples of a secondary pollutant include ozone, which is formed when hydrocarbons (HC) and nitrogen oxides (NO_x) combine in the presence of sunlight; nitrogen dioxide (NO₂), which is formed as nitric oxide (NO) combines with oxygen in the air; and acid rain, which is formed when sulfur dioxide or nitrogen oxides react with water.

9) Consider the following statements regarding fine particulate matter (PM_{2.5}).

1. They are visible to the naked eye causing haze in the traffic.
2. Their levels are most likely to be elevated on days with little or no wind or air mixing.
3. They can bypass the nose and throat and can easily enter the circulatory system.

Which of the above statements is/are correct?

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

Solution: b)

PM_{2.5} is an atmospheric particulate matter of diameter of fewer than 2.5 micrometres, which is around 3 per cent the diameter of a human hair. It causes respiratory problems and reduces visibility. **PM_{2.5} particles can only be detected with the help of an electron microscope because they are so small.** This prevents their dispersion in the atmosphere and increases concentration.

The circulatory system, also called the cardiovascular system is an organ system that permits blood to circulate and transport nutrients (such as amino acids and electrolytes), oxygen, carbon dioxide, hormones, and blood cells to and from the cells in the body to provide nourishment.

Due to their smaller size, the PM_{2.5} particles can easily bypass the nose and throat and can easily enter the circulatory system. The particles can also lead to cause chronic diseases such as asthma, heart attack, bronchitis and other respiratory problems.

10) Consider the following statements regarding *Kelps*

1. Kelps are large brown algae seaweeds that can survive freezing temperatures and long periods of darkness, and even grow under sea ice.
2. Kelp forests help protect coastlines by decreasing the power of waves during storms and reducing coastal erosion.
3. It is an important source of potash and iodine.

Which of the above statements is/are correct?

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

Solution: d)

Kelps are *large brown algae seaweeds* that make up the order Laminariales. There are about 30 different genera. Kelps have adapted to the severe conditions. **These cool water species have special strategies to survive freezing temperatures and long periods of darkness, and even grow under sea ice.**

In regions with cold, nutrient-rich water, they can attain *some of the highest rates of primary production of any natural ecosystem on Earth.*

Kelp forests also help protect coastlines by decreasing the power of waves during storms and reducing coastal erosion.

Kelp forests throughout the world play an important role in coastal economies, supporting a broad range of tourism, recreational and commercial activities.

Kelp is a coveted food source in many countries, full of potassium, iron, calcium, fibre and iodine.

11) The terms “Absorptive Capacity” and “Carrying capacity” are used in the discourse of

- a) Evolutionary biology
- b) Geographical determinism
- c) Employment elasticity
- d) Sustainable Development

Solution: d)

The environment performs four vital functions (i) it supplies resources: resources here include both renewable and non-renewable resources. (ii) it assimilates waste (iii) it sustains life by providing genetic and bio diversity and (iv) it also provides aesthetic services like scenery etc. The environment is able to perform these functions without any interruption as long as the demand on these functions is within its carrying capacity. This implies that the resource extraction is not above the rate of regeneration of the resource and the wastes generated are within the assimilating capacity of the environment.

Absorptive capacity means the ability of the environment to absorb degradation.

12) Bacterium that can be used for bio-remediation operations include

1. Nitrosomonas
2. Rhodococcus
3. Paenibacillus

Select the correct answer code:

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

Solution: d)

Species of Pseudomonas, Mycobacterium, Haemophilus, Rhodococcus, Paenibacillus and Ralstonia, are some of the most extensively studied bacteria for their bioremediation capability.

Nitrosomonas are also useful in bioremediation.

13) Which one of the following is the correct sequence of ecosystems in the order of decreasing productivity?

- a) Oceans, lakes, grasslands, mangroves
- b) Mangroves, oceans, grasslands, lakes
- c) Mangroves, grasslands, lakes, oceans
- d) Oceans, mangroves, lakes, grasslands

Solution: c)

Production/unit area depends on the number and diversity of producers.

Mangroves are one of the high productive regions in the world whereas ocean has least productivity.

14) Consider the following statements regarding Black carbon.

1. It is formed through the incomplete combustion of fossil fuels.
2. It is a short-lived climate pollutant.
3. If deposited on snow, it could accelerate the heating of snow.

Which of the above statements is/are correct?

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

Solution: d)

Black carbon consists of pure carbon in several linked forms formed through the incomplete combustion of fossil fuels, biofuel, and biomass, and is emitted in both anthropogenic and naturally occurring soot.

As BC particles absorb heat, they warm the surrounding air, become lighter and rise to greater heights by a process called self-lift and persist in the air.

Because BC particles strongly absorb solar and terrestrial radiation and heats up the atmosphere it can upset the monsoon system. If deposited on snow, it could accelerate the heating of snow and quicken the melting of glaciers.

BC is a short-lived climate pollutant.

15) Excessive generation of fly ash can lead to which of these harmful environmental effects?

1. It can result in leaching of toxic heavy metals in ground water.
2. It contains crystalline silica which can cause silicosis.

Which of the above statements is/are correct?

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

Solution: c)

Fly ash is a byproduct from burning pulverized coal in electric power generating plants. Fly ash contains trace concentrations of heavy metals and other substances that are known to be detrimental to health. Ash that is stored or deposited outdoors can eventually leach toxic compounds into underground water aquifers.

Fly ash contains crystalline silica which is known to cause lung disease, in particular silicosis.

16) Increased Snow cover on a water body can lead to

1. Sudden spurt in phytoplankton population which are not dependent on photosynthesis
2. Improved oxygen exchange and nutrient recycling in the lake
3. A condition of winterkill causing large scale death of fishes and organisms

Select the correct answer code:

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

Solution: b)

Phytoplankton float on top surface of water bodies and require sunlight to thrive. Ice cover will reduce their breeding grounds and population.

The snow cover blocks exchange of nutrients and oxygen from the atmosphere, however the same may continue within the water stream. But it is worse than before.

Snow cover of ice on water body can effectively cut off light, plunging the waters into darkness.

Hence photosynthesis stops but respiration continues. Thus, in shallow lakes, oxygen gets depleted, and due to lack of oxygen there is large scale death of fishes and other organisms. This condition is known as winterkill.

17) Which of the following common plants are useful for wastewater treatment?

1. Lemon grass
2. Water hyacinth
3. Canna indica

Select the correct answer code:

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

Solution: c)

The European Union and Government of India co-funded project Integrating Bio-treated Wastewater Reuse with Enhanced Water Use Efficiency to Support the Green Economy in EU and India.

It has shown remarkable success in reducing water scarcity and helping safe reuse of wastewater in agriculture. By constructing wetlands with plant species such as **Canna indica**, **lemon grass** (*Cymbopogon*), napier (*Pennisetum purpureum* X *Pennisetum americanum*), para grass (*Urochloa mutica*), typha (*Typha latifolia*), **water hyacinth** (*Eichhornia crassipes*), **water lettuce** (*Pistia stratiotes*) and a weed species *Agaratum Conyzoides* the chemical oxygen demand in wastewaters have been reduced by 30-92%.

18) Consider the following statements

1. Phytoremediation is use of plants to remove contaminants from soil and water.
2. All contaminants are easily treated by bioremediation.

Which of the above statements is/are correct?

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

Solution: a)

Bioremediation is a treatment that uses naturally occurring organisms to break down hazardous substances into less toxic or non-toxic substances. It uses microorganisms to degrade organic contaminants in soil, groundwater, sludge, and solids. Bioremediation may be conducted in situ or ex situ.

Phytoremediation is use of plants to remove contaminants from soil and water.

Not all contaminants are easily treated by bioremediation using microorganisms. For example, heavy metals such as cadmium and lead are not readily absorbed or captured by microorganisms.

19) Arsenic contamination of water is a high-profile problem in the Ganges Delta because

1. Arsenic is not found naturally within earth's crust and has been infused artificially due to industrial pollution.
2. Use of deep tubewells for water supply is drawing arsenic closer to the surface.

Which of the above is/are correct?

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

Solution: b)

Arsenic is a natural component in the earth's crust. It is widely distributed throughout the environment in the air, water and land.

Arsenic contamination of groundwater is a form of groundwater pollution which is often due to naturally occurring high concentrations of arsenic in deeper levels of groundwater. It is a high-profile problem due to the use of deep tubewells for water supply in the Ganges Delta, causing serious arsenic poisoning to large numbers of people.

20) Consider the following statements regarding Forest landscape restoration (FLR).

1. Forest landscape restoration (FLR) is the ongoing process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes.
2. FLR also includes planting new trees, agro-forestry, and managing natural regeneration.

Which of the above statements is/are correct?

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

Solution: c)

Forest landscape restoration (FLR) is the ongoing process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes. FLR is more than just planting trees – it is restoring a whole landscape to meet present and future needs and to offer multiple benefits and land uses over time.

FLR manifests through different processes such as: new tree plantings, managed natural regeneration, agroforestry, or improved land management to accommodate a mosaic of land uses, including agriculture, protected wildlife reserves, managed plantations, riverside plantings and more.

[Source](#)

When things didn't fall in line even in my third Mains, I emailed [InsightsonIndia](#) to seek guidance for the next attempt. [InsightsIAS](#) Offline program suited all my requirements. Thus, I moved in and stayed nearby [Insights](#) institute.

I followed offline prelims test series of [Insights](#) and also, prelims cum mains integrated study plan that was given to core batch students. I scheduled my day in accordance with the test series timetable (please make your own timetable which suits you the best). In my timetable I ensured 8 hours of sleep, one hour of sports and 5 minutes break in between. Make a realistic timetable which is practically possible to implement, set achievable targets and be honest to yourself in following it.

I improved immensely by getting the personal feedback by [Vinay Sir](#), and was able to top the UPSC CSE-2016.

NANDINI K R

AIR 01, CSE 2016

