

1. Consider the following matches:

Macromolecule:	Description
1. Polysaccharides:	Long chain of sugar
2. Cellulose:	Polysaccharide
3. Inulin:	Fructose polymer

How many of the above pairs is/are correctly matched?

- A. Only one pair
- B. Only two pairs
- C. All three pairs
- D. None of the above

Your Answer :

Correct Answer : C

Answer Justification :

The acid insoluble pellet also has polysaccharides (carbohydrates) as another class of macromolecules. Polysaccharides are long chains of sugars. They are threads (literally a cotton thread) containing different monosaccharides as building blocks. For example, cellulose is a polymeric polysaccharide consisting of only one type of monosaccharide i.e., glucose. Cellulose is a homopolymer. Starch is a variant of this but present as a store house of energy in plant tissues. Animals have another variant called glycogen. Inulin is a polymer of fructose. In a polysaccharide chain (say glycogen), the right end is called the reducing end and the left end is called the non-reducing end.

Plant cell walls are made of cellulose. Paper made from plant pulp and cotton fibre is cellulosic. There are more complex polysaccharides in nature. They have as building blocks, amino-sugars and chemically modified sugars (e.g., glucosamine, N-acetyl galactosamine, etc.). Exoskeletons of arthropods, for example, have a complex polysaccharide called chitin. These complex polysaccharides are mostly homopolymers.

Q Source: Ch 9: 11th Biology NCERT

2. Consider the following statements.

1. Prokaryotic cells multiply more rapidly than the eukaryotic cells.
2. All prokaryotes have a cell wall surrounding the cell membrane including in the mycoplasma.

Select the correct answer using the codes below.

- A. 1 only ☒
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Your Answer :

☐

Correct Answer : A

Answer Justification :

The prokaryotic cells are represented by bacteria, blue-green algae, mycoplasma and PPLO (Pleuro Pneumonia Like Organisms). They are generally smaller and multiply more rapidly than the eukaryotic cells. They may vary greatly in shape and size. The four basic shapes of bacteria are bacillus (rod like), coccus (spherical), vibrio (comma shaped) and spirillum (spiral). The organisation of the prokaryotic cell is fundamentally similar even though prokaryotes exhibit a wide variety of shapes and functions.


All prokaryotes have a cell wall surrounding the cell membrane except in mycoplasma. The fluid matrix filling the cell is the cytoplasm. There is no well-defined nucleus. The genetic material is basically naked, not enveloped by a nuclear membrane. In addition to the genomic DNA (the single chromosome/circular DNA), many bacteria have small circular DNA outside the genomic DNA. These smaller DNA are called plasmids.

Q Source: Ch 8: Biology 11th NCERT

3. Consider the following statements about the cell cycle.

1. During the division of a cell, deoxyribonucleic acid (DNA) replication and cell growth do not take place.
2. DNA synthesis (creation of DNA molecules) naturally occurs during all stages of a cell cycle.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2 

Your Answer :

Correct Answer : D

Answer Justification :

Cell division is a very important process in all living organisms. During the division of a cell, DNA replication and cell growth also take place. All these processes, i.e., cell division, DNA replication, and cell growth, hence, have to take place in a coordinated way to ensure correct division and formation of progeny cells containing intact genomes.

The sequence of events by which a cell duplicates its genome, synthesises the other constituents of the cell and eventually divides into two daughter cells is termed cell cycle.

Although cell growth (in terms of cytoplasmic increase) is a continuous process, DNA synthesis occurs only during one specific stage in the cell cycle. The replicated chromosomes (DNA) are then distributed to daughter nuclei by a complex series of events during cell division. These

events are themselves under genetic control.

Q Source: Ch 10: 11th Biology NCERT

4. How many of the following may be classified as metabolite compounds in living organisms?

1. Lectins
2. Alkaloids
3. Polymeric substances

Select the correct answer using the codes below.

- A. Only one
- B. Only two
- C. All three ☒
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

The most exciting aspect of chemistry deals with isolating thousands of compounds, small and big, from living organisms, determining their structure and if possible synthesising them. If one were to make a list of biomolecules, such a list would have thousands of organic compounds including amino acids, sugars, etc. We can call these biomolecules as 'metabolites'. These are called primary metabolites. However, when one analyses plant, fungal and microbial cells, one would see thousands of compounds other than these called primary metabolites, e.g. alkaloids, flavonoids, rubber, essential oils, antibiotics, coloured pigments, scents, gums, spices. These are called secondary metabolites (Table 9.3 below).

While primary metabolites have identifiable functions and play known roles in normal physiological processes, we do not at the moment, understand the role or functions of all the 'secondary metabolites' in host organisms. However, many of them are useful to 'human welfare' (e.g., rubber, drugs, spices, scents and pigments).

TABLE 9.3 Some Secondary Metabolites

Pigments	Carotenoids, Anthocyanins, etc.
Alkaloids	Morphine, Codeine, etc.
Terpenoides	Monoterpenes, Diterpenes etc.
Essential oils	Lemon grass oil, etc.
Toxins	Abrin, Ricin
Lectins	Concanavalin A
Drugs	Vinblastin, curcumin, etc.
Polymeric substances	Rubber, gums, cellulose

Q Source: Ch 9: 11th Biology NCERT

5. One can sight how many of these birds at the Pulicat lake, the second largest brackish water lake in India?

1. Black-headed ibis
2. Asian openbill
3. Black-crowned night heron
4. Little cormorant

Select the correct answer using the codes below.

- A. Only two
- B. Only three
- C. All four ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

Pulicat lake is the second largest brackish water lake in the country; next only to Chilika lake.

Greater flamingos and pelicans are some of the famous migratory birds that visit this place.

The region in which Pulicat lake is situated receives rainfall from both South-West as well as North-East monsoon winds. Nelapattu Bird Sanctuary is a famous bird sanctuary located near this lake.

The lake is also home for black-headed ibis, Asian openbill, black-crowned night heron, and little cormorant. Other migratory birds that visit the sanctuary include northern pintail, common teal, little grebe, northern shoveler, Eurasian coot, Indian spot-billed duck, grey heron, Oriental darter, black-winged stilt, garganey and gadwall.

The presence of Barringtonia and Acacia nilotica species near the Pulicat lake region provides an ideal breeding site for spot-billed pelicans.


Flamingo Festival is held every year to promote tourism in Pulicat and Nelapattu.

Q Source: Revision Qs

6. Which of the following components in the central or innermost layers of the stem make the plant more resistant to the attacks of microorganisms and insects?

1. Tannins
2. Resins
3. Gums

Select the correct answer using the codes below.

- A. 1 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 1, 2 and 3 

Your Answer :

Correct Answer : D

Answer Justification :

Heartwood and sapwood In old trees, the greater part of secondary xylem is dark brown due to deposition of organic compounds like tannins, resins, oils, gums, aromatic substances and essential oils in the central or innermost layers of the stem.

These substances make it hard, durable and resistant to the attacks of microorganisms and insects. This region comprises dead elements with highly lignified walls and is called heartwood.

The heartwood does not conduct water but it gives mechanical support to the stem. The peripheral region of the secondary xylem, is lighter in colour and is known as the sapwood. It is involved in the conduction of water and minerals from root to leaves.

Q Source: Ch 6: Biology 11th NCERT

7. Consider the following countries:

1. Austria
2. Germany

3. Hungary
4. Italy
5. Slovenia

European Alps are spread across how many of the above countries?

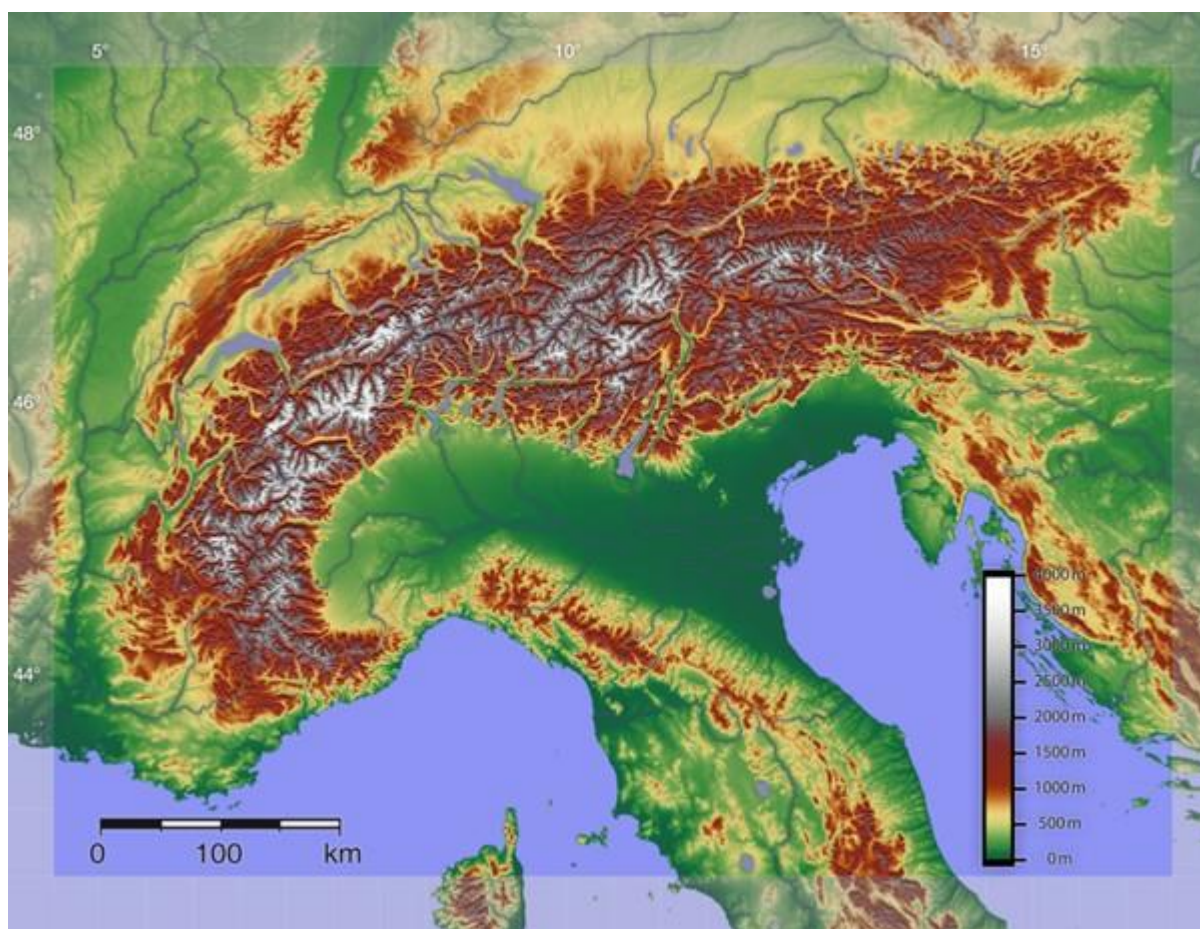
- A. Only two
- B. Only three
- C. Only four ✓
- D. All five

Your Answer :

Correct Answer : C

Answer Justification :

The Alps are the highest and most extensive mountain range that is entirely in Europe, stretching approximately 1,200 km across seven Alpine countries: France, Switzerland, Italy, Liechtenstein, Austria, Germany, and Slovenia.



Q Source: Map-based questions: Europe

8. Which of these countries in Europe borders only one other country?

1. Bulgaria
2. Ireland
3. Portugal
4. Spain

Select the correct answer using the codes below.

- A. 1, 2 and 3 only
- B. 2 and 3 only ✓
- C. 1 and 4 only
- D. 3 only

Your Answer :

Correct Answer : B

Answer Justification :

Portugal borders Spain and Ireland borders the UK (since Northern Ireland is a part of the UK.)



Q Source: Map-based questions: Europe

9. How many of the following growing mediums can be used in hydroponics?

1. Vermiculite
2. Coconut coir
3. Perlite

Select the correct answer using the codes below.

- A. Only one
B. Only two
C. All three ✓
D. None

Your Answer :

Correct Answer : C

Answer Justification :

In 1860, Julius von Sachs, a prominent German botanist, demonstrated, for the first time, that plants could be grown to maturity in a defined nutrient solution in complete absence of soil. This technique of growing plants in a nutrient solution is known as hydroponics.

It can include an aggregate substrate, or growing media, such as vermiculite, coconut coir, or perlite. Hydroponic production systems are used by small farmers, hobbyists, and commercial enterprises.

Since then, a number of improvised methods have been employed to try and determine the mineral nutrients essential for plants. The essence of all these methods involves the culture of plants in a soil-free, defined mineral solution. These methods require purified water and mineral nutrient salts.

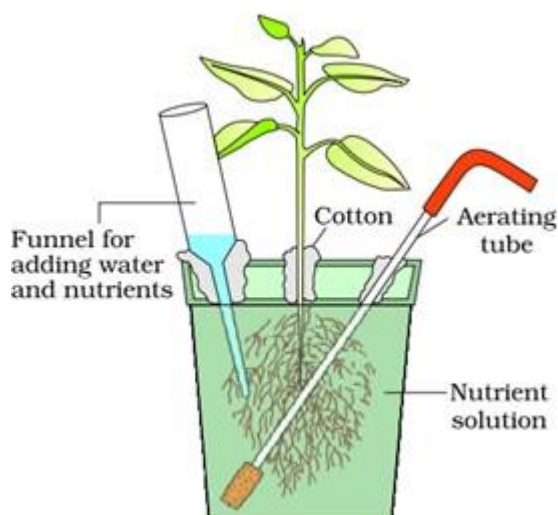



Figure 12.1 Diagram of a typical set-up for nutrient solution culture

Q Source: Ch 12: 11th Biology NCERT

10. There are shawls from Kashmir that are made two-sided with the same design embroidered in different colours on each side. A single shawl may take over two years to complete; identify them correctly:

- A. Phulkari
- B. Do-rukha 
- C. Sujni
- D. Pipli

Your Answer :

Correct Answer : B

Answer Justification :

Different kinds of Indian Embroidery:

There are shawls from Kashmir that are magically two-sided with the same design embroidered in different colours on each side. This is known as do-rukha. A single shawl may take over two years to complete.

Punjab is famed for its traditional embroidery called phulkari—flowering work. Using threads in brilliant colours like flaming pinks, oranges, mustard yellows and creams, the reverse satin stitch is done on a brick-red khadi cloth. An all over embroidered shawl (dupatta) is called a bagh, literally resembling a garden of flowers.

Sujni, from Bihar, is a form of quilted embroidery with mainly narrative themes.

Kantha, embroidery from Bengal, is made of thousands of fine stitches, giving the fabric a puckered quilted look. In Bangladesh and India kantha was used to make quilts and coverlets. Old sarees were folded together and embroidered with coloured threads pulled from saree borders. Now kantha embroiderers make sarees and dupattas for the metro market.

Pipli in Orissa has its own unique form of appliqué—bold red, yellow and green dancing elephants and parrots, outlined with white or black chain-stitch on equally colourful base fabric. It was developed initially to make the rath procession hangings for the Puri Temple, but is now used for garden umbrellas, cushions and for other urban needs.

Q Source: Pg 92-93: Living Arts and Crafts Traditions of India 11th NCERT

11. Chemoautotrophs include

- 1. nitrosomonas
- 2. nitrococcus
- 3. nitrobacter

Select the correct answer using the codes below.

- A. 1 only

- B. 3 only
 C. 1 and 2 only
 D. 1, 2 and 3 ✓

Your Answer :

Correct Answer : D

Answer Justification :

Ammonia is first oxidised to nitrite by the bacteria Nitrosomonas and/or Nitrococcus. The nitrite is further oxidised to nitrate with the help of the bacterium Nitrobacter. These steps are called nitrification.

These nitrifying bacteria are chemoautotrophs. The nitrate thus formed is absorbed by plants and is transported to the leaves. In leaves, it is reduced to form ammonia that finally forms the amine group of amino acids. Nitrate present in the soil is also reduced to nitrogen by the process of denitrification. Denitrification is carried by bacteria Pseudomonas and Thiobacillus.

Q Source: Ch 12: 11th Biology NCERT

12. Consider the following statements.

1. The Frankia microbe prevents the formation of any nitrogen-fixing nodules on the roots of non-leguminous plants.
2. Rhizobium forms a symbiotic legume-bacteria relationship with leguminous plants.

Select the correct answer using the codes below.

- A. 1 only
 B. 2 only ✓
 C. Both 1 and 2
 D. Neither 1 nor 2

Your Answer :

Correct Answer : B

Answer Justification :

Several types of symbiotic biological nitrogen fixing associations are known. The most prominent among them is the legume-bacteria relationship.

Species of rod-shaped Rhizobium has such relationship with the roots of several legumes such as alfalfa, sweet clover, sweet pea, lentils, garden pea, broad bean, clover beans, etc. The most common association on roots is as nodules.

These nodules are small outgrowths on the roots. The microbe, Frankia, also produces nitrogen-fixing nodules on the roots of non-leguminous plants (e.g., Alnus). Both Rhizobium and Frankia are free-living in soil, but as symbionts, can fix atmospheric nitrogen

Q Source: Ch 12: 11th Biology NCERT

13. Consider the following statements.

1. Fenugreek is the dried seed of a leguminous plant.
2. Alnus, Alfalfa and sweet pea are all leguminous plants.

Select the correct answer using the codes below.

- A. 1 only ☒
- B. 2 only ☐
- C. Both 1 and 2 ☐
- D. Neither 1 nor 2 ☐

Your Answer :

Correct Answer : A

Answer Justification :

Legumes include alfalfa, sweet clover, sweet pea, lentils, garden pea, broad bean, clover beans etc. Fenugreek is the dried seed of the leguminous plant *Trigonella foenum-graeceum* (Fabiaceae).

The nitrogen-fixing symbiosis is predominant in leguminous plants belonging to the family Fabaceae.

Alnus is a non-leguminous plant.

Q Source: Ch 12: 11th Biology NCERT

14. Which of the following European nations borders the Black Sea?

- A. Romania ☒
- B. Serbia ☐
- C. Macedonia ☐
- D. Slovakia ☐

Your Answer :

Correct Answer : A

Answer Justification :



Q Source: Map-based questions: Europe

15. How many of the following nations border the Baltic Sea?

1. Sweden
2. Germany
3. Poland
4. Czech Republic

Select the correct answer using the codes below.

- A. Only two
- B. Only three ☒
- C. All four
- D. None

Your Answer :

Correct Answer : B

Answer Justification :



Q Source: Map-based questions: Europe

16. The most dominant element in terms of its percentage weight in both the earth's crust and human body is

- A. hydrogen
- B. oxygen ✓
- C. sodium
- D. magnesium

Your Answer :

Correct Answer : B

○

Answer Justification :

See the table below:

TABLE 9.1 A Comparison of Elements Present in Non-living and Living Matter*

Element	% Weight of	
	Earth's crust	Human body
Hydrogen (H)	0.14	0.5
Carbon (C)	0.03	18.5
Oxygen (O)	46.6	65.0
Nitrogen (N)	very little	3.3
Sulphur (S)	0.03	0.3
Sodium (Na)	2.8	0.2
Calcium (Ca)	3.6	1.5
Magnesium (Mg)	2.1	0.1
Silicon (Si)	27.7	negligible


* Adapted from CNR Rao, *Understanding Chemistry*, Universities Press, Hyderabad.

Q Source: Ch 9: 11th Biology NCERT

17. Consider the following statements.

1. A mycorrhiza is a symbiotic association of a fungus with a root system where the fungal filaments form a network around the young root.
2. Pinus seeds cannot germinate and establish without the presence of mycorrhizae.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

A mycorrhiza is a symbiotic association of a fungus with a root system. The fungal filaments

form a network around the young root or they penetrate the root cells. The hyphae have a very large surface area that absorb mineral ions and water from the soil from a much larger volume of soil that perhaps a root cannot do.

The fungus provides minerals and water to the roots, in turn the roots provide sugars and N-containing compounds to the mycorrhizae. Some plants have an obligate association with the mycorrhizae. For example, Pinus seeds cannot germinate and establish without the presence of mycorrhizae

Q Source: Ch 11: 11th Biology NCERT

18. Which of the following countries border Iraq?

1. Iran
2. Syria
3. Israel
4. Jordan

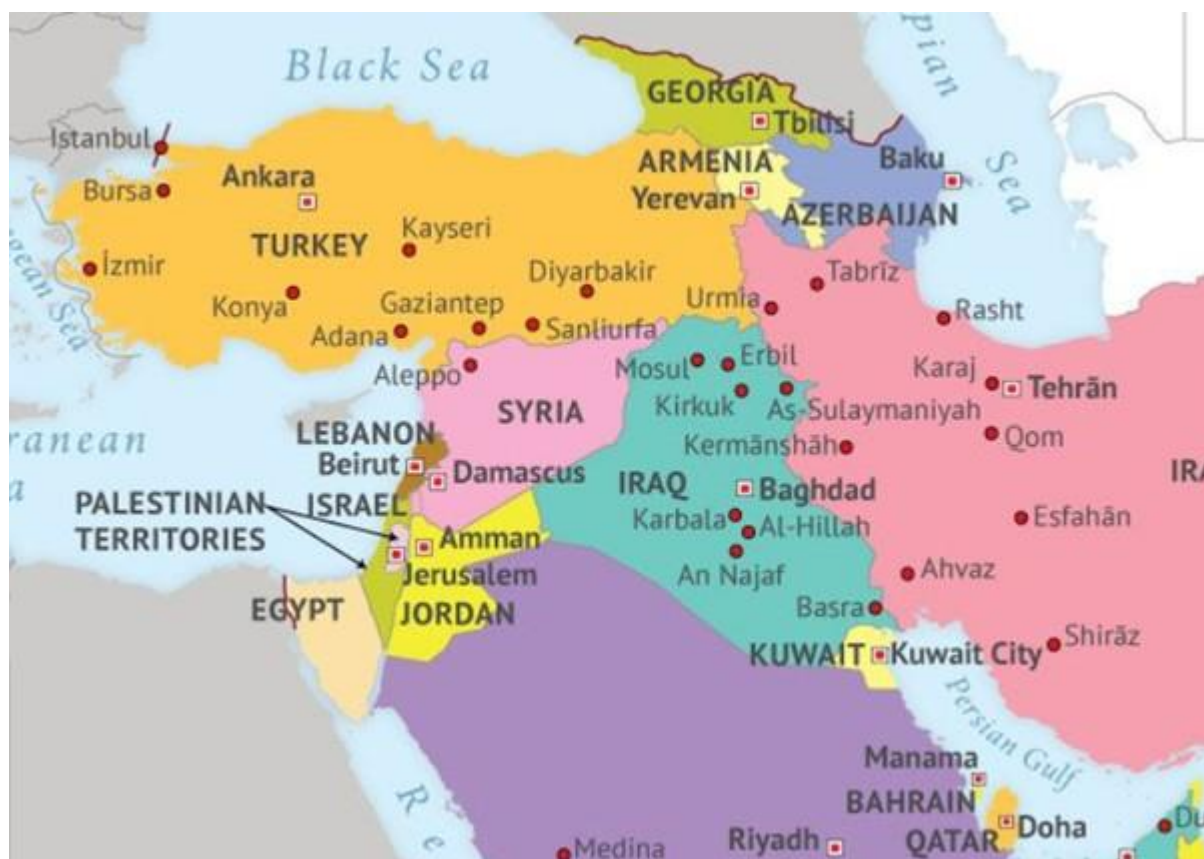
Select the correct answer using the codes below.

- A. 1, 2 and 4 only ☒
- B. 2 and 4 only ☐
- C. 1, 2, 3 and 4 ☐
- D. 1 and 3 only ☐

Your Answer :

Correct Answer : A

Answer Justification :



Q Source: Map based questions: West Asia

19. There are plants for which flowering is either quantitatively or qualitatively dependent on exposure to low temperature. This phenomenon is termed as

- A. vernalisation ☒
- B. stratification
- C. rudimentation
- D. geotropism

Your Answer :

Correct Answer : A

Answer Justification :

There are plants for which flowering is either quantitatively or qualitatively dependent on exposure to low temperature. This phenomenon is termed vernalisation. It prevents precocious reproductive development late in the growing season, and enables the plant to have sufficient time to reach maturity. Vernalisation refers specially to the promotion of flowering by a period of low temperature. Some important food plants, wheat, barley, rye have two kinds of varieties: winter and spring varieties. The 'spring' variety are normally planted in the spring and come to flower and produce grain before the end of the growing season.


Winter varieties, however, if planted in spring would normally fail to flower or produce mature grain within a span of a flowering season. Hence, they are planted in autumn. They germinate, and over winter come out as small seedlings, resume growth in the spring, and are harvested usually around mid-summer. Another example of vernalisation is seen in biennial plants. Biennials are monocarpic plants that normally flower and die in the second season. Sugarbeet, cabbages, carrots are some of the common biennials. Subjecting the growing of a biennial plant to a cold treatment stimulates a subsequent photoperiodic flowering response.

Q Source: Ch 15:11th Biology NCERT

20. Red blood cells (RBC) are the most abundant of all the cells in blood. Consider the following about them.

1. RBCs are formed in the red bone marrow in the adults.
2. RBCs found in mammals generally contain a nucleus.

Select the correct answer using the codes below.

- A. 1 only 
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Your Answer :

Correct Answer : A

Answer Justification :

Erythrocytes or red blood cells (RBC) are the most abundant of all the cells in blood. A healthy adult man has, on an average, 5 millions to 5.5 millions of RBCs mm⁻³ of blood. RBCs are formed in the red bone marrow in the adults. RBCs are devoid of nucleus in most of the mammals and are biconcave in shape.

They have a red coloured, iron containing complex protein called haemoglobin, hence the colour and name of these cells. A healthy individual has 12-16 gms of haemoglobin in every 100 ml of blood. These molecules play a significant role in transport of respiratory gases. RBCs have an average life span of 120 days after which they are destroyed in the spleen (graveyard of RBCs).

Q Source: Ch 18:11th Biology NCERT

21. How many of the following river basins (or part of the river basins) lies to the North of the Vindhya ranges?

1. Betwa
2. Palar
3. Bhima

Select the correct answer using the codes below.

- A. Only one ✓
- B. Only two
- C. All three
- D. None

Your Answer :

Correct Answer : A

Answer Justification :



Q Source: Map based questions: India

22. Consider the following statements.

1. Shawl weaving in Kashmir was introduced by the ruler Zain-ul-Abidin.
2. Kashmiri shahtoosh 'ring shawl' is made from the fleece of the wild Himalayan ibex.
3. Jamawar shawl from the region of Kashmir is the only of shawl that is not made from wool.

How many of the above statement(s) is/are correct?

- A. Only one
- B. Only two ✓
- C. All three
- D. None

Your Answer :

Correct Answer : B

Answer Justification :

In North India the angora rabbit is bred for its fine, long, very soft and silky hair. Its warmth, tensile strength and resistance to fire, give this wool its special quality.

The fame of the Kashmiri Jamawar shawl can be gauged from the fact that the English word 'shawl' is derived from the Persian 'shal'—a length of woven woollen fabric. Shawl weaving in Kashmir was introduced by the ruler Zain-ul-Abidin in the fifteenth century bringing in Turkistan weavers to teach the twill tapestry technique to local weavers. As many as fifty colours were used on one shawl. The rough goat wool dhablas worn by shepherds and camel herders in Kutch and the Thar Desert have been reinvented into wonderful contemporary shawls, home furnishings and throws. Today designers are translating indigenous motifs and colours from tribal shawls of the North-east and Kinnauri shawls of Himachal into softer merino and sheep wool. Jamawar shawl, Kashmir

The celebrated Kashmiri shahtoosh 'ring shawl' made from the fleece of the wild Himalayan ibex is so fine that a metre of this woollen shawl can pass through a man's signet ring. Production and sale is banned today for ecological reasons and to prevent the extinction of the ibex. Weaving it was a fine art, wearing it now a forbidden luxury.

Q Source: Ch 8: Living Arts and Crafts Traditions of India 11th NCERT

23. Adriatic Sea is sandwiched between

- A. Italy, Croatia and Bosnia ✓
- B. Greece, Bulgaria and Macedonia
- C. Italy and France
- D. Spain, Hungary and Croatia

Your Answer :

Correct Answer : A

Answer Justification :



Q Source: Map-based questions: Europe

24. Consider the following statements.

1. Indian Coast Guard is the Central Coordinating Authority for combating marine oil spills in Indian waters and undertaking oil spill prevention and control.
2. The National Oil Spill Disaster Contingency Plan (NOS-DCP) comes under the purview of the Ministry of Shipping and Transport.

Select the correct answer using the codes below.

- A. 1 only ✓
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Your Answer :

Correct Answer : A

Answer Justification :

National Oil Spill Disaster Contingency Plan (NOS-DCP):

- This Plan was issued by the Ministry of Defence in 1996.
- It has designated Indian Coast Guard as the Central Coordinating Authority for combating marine oil spills in Indian waters and undertaking oil spill prevention and control.
- **However, the NOS-DCP comes under the purview of the National Disaster Management Authority, Ministry of Home Affairs.**
- It mandates the Coast Guard to coordinate with state departments, ministries, port authorities and environmental agencies to assist in oil spill cleaning operations.
- In 2015, the Coast Guard revised the NOS-DCP to meet international standards, setting up an Online Oil Spill Advisory system, etc.

Learning: Measures to Control Oil Spills:


- Booms are floating physical barriers, made of plastic, metal or other materials, which slow the spread of oil and keep it contained.
- Skimmers can physically separate spilled oil from the water's surface.
- Sorbents (materials that soak up liquids by either absorption or adsorption) can be used. Eg: Polyester-derived plastic, volcanic ash, etc.
- Dispersants (chemicals that disperse the oil into the water column) can be applied using aircraft or boats.
- In-situ burning of freshly spilled oil.
- Phosphorus-based and nitrogen-based fertilizers can be used for the microbes to grow and multiply quickly.
- Biological agents (hydrocarbon degrading bacteria like *Pseudomonas putida*) can be used to help break down oil into its chemical constituents.
- Using Elastomizers for chemical stabilisation of oil.

Q Source: Revision Qs

25. Consider the following statements.

1. The Deputy Speaker is usually elected in the first meeting of the Lok Sabha after the General elections, from amongst the members of the Lok Sabha.
2. It is as per the rules of Lok Sabha that the position of the Deputy Speaker must be given to the largest opposition party in India.

Select the correct answer using the codes below.

- A. 1 only 
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Your Answer :

Correct Answer : A

Answer Justification :

Article 93 of the Constitution provides for the election of both the Speaker and the Deputy Speaker.

The constitutional office of the Deputy Speaker of the Lok Sabha is more symbolic of parliamentary democracy than some real authority.

There is no need to resign from their original party though as a Deputy Speaker, they have to remain impartial.


Roles and functions: They act as the presiding officer in case of leave or absence caused by death or illness of the Speaker of the Lok Sabha.

Election:

- Usually, the Deputy Speaker is elected in the first meeting of the Lok Sabha after the General elections from amongst the members of the Lok Sabha.
- **It is by convention that position of Deputy Speaker is offered to opposition party in India.**
- There is a constitution-mandated panel of 10 members to preside over the proceedings of the Lok Sabha in the absence of Speaker.
- Delhi High Court directed the central government to explain its stand over the issue of not holding elections to the post of Deputy Speaker of LS. The position has remained vacant for last 830 days.
- Keeping the post of deputy speaker vacant is a violation of Article 93 of the Indian constitution.
- Currently, when Speaker is not presiding over the house, a member from the panel from the panel of Chairperson preside over the house.

Q Source: Revision Qs

26. Nachiarkoil in Thanjavur District of Tamil Nadu is an important bell-metal centre because

- A. it is next to the Cauvery River
- B. of the presence of light brown sand nearby, ideally suited for making moulds 
- C. of the patronage by Cholas and Pandyas
- D. none of the above

Your Answer :

Correct Answer : B

Answer Justification :

Nachiarkoil in Thanjavur District of Tamil Nadu is an important bell-metal centre. This is due to the presence of light brown sand called vandal on the banks of the Cauvery, ideally suited for making moulds.

Some of the articles made by casting are vases in different shapes, tumblers, water-containers, plain and decorated ornamental spittoons which are a speciality of this place, foodcases, bells, candle-stands, kerosene lamps, picnic carriers, and a large variety of oil lamps.


Q Source: Ch 4: Living Arts and Crafts Traditions of India 11th NCERT

27. Who among the following are a part of the Financial Stability and Development Council (FSDC)?

1. Governor, Reserve Bank of India
2. Chairperson, Securities and Exchange Board of India

3. Chairperson, Insurance Regulatory and Development Authority of India

Select the correct answer using the codes below.

- A. 1 and 2 only
- B. 1 only
- C. 3 only
- D. 1, 2 and 3 

Your Answer :

Correct Answer : D

Answer Justification :

Financial Stability and Development Council (FSDC) was set up by the Government as the apex level forum in December 2010.

The Chairman of the Council is the Union Finance Minister and its members include the following:

- The heads of financial sector Regulators (RBI, SEBI, PFRDA, IRDA & FMC)
- Finance Secretary and/or Secretary, Department of Economic Affairs,
- Secretary, Department of Financial Services, and
- Chief Economic Adviser.


The Council can invite experts to its meeting if required.

Q Source: Revision Qs

28. Consider the following statements.

1. Article 22 of the Constitution allows for preventive detention and restriction on personal liberty for reasons of state security and public order.
2. The State cannot arbitrarily resort to “preventive detention” to deal with ordinary “law and order” problems, as directed by the Supreme Court.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

The Supreme Court sometime ago passed an order on the use and applicability of Prevention Detention in the Country.

Important observations made by the Court:

1. Preventive detention could be used only to prevent public disorder.
2. The State should not arbitrarily resort to “preventive detention” to deal with all and sundry “law and order” problems, which could be dealt with by the ordinary laws of the country.
3. The court must ensure that the facts brought before it directly and inevitably lead to a harm, danger or alarm or feeling of insecurity among the general public or any section thereof at large.
4. Preventive detention must fall within the four corners of Article 21 (due process of law) read with Article 22 (safeguards against arbitrary arrest and detention) and the statute in question.

What is Preventive Detention?

It involves the detainment (containment) of a person in order to keep him/her from committing future crimes and/or from escaping future prosecution.

- **Article 22 (3) (b) of the Constitution allows for preventive detention and restriction on personal liberty for reasons of state security and public order.**

Q Source: Revision Qs

29. Consider the following matches:

Traditional element:	Description
1. Wooden kavads:	Small temple-like structures made in Assam
2. Warli paintings:	Decoration of house walls in Maharashtra
3. Tanjore painting:	Influenced by Maratha art forms

How many of the above pairs is/are correctly matched?

- A. Only one pairs
- B. Only two pairs ✓
- C. All three pairs
- D. None of the above

Your Answer :

Correct Answer : B

Answer Justification :

Statement 1: Artists in Chittorgarh, Rajasthan make wooden temples with doors that can be opened up to reveal elaborately painted stories of historical or religious importance. These wooden kavads are used for worship and on festive occasions.

Statement 2: Warli tribals of Thane district in Maharashtra decorate their house walls with paintings depicting their lives: planting saplings, carrying grain, dancing, travelling to market and other routine activities of their daily lives. Symbols of the sun, moon and stars along with plants, animals, insects and birds show their belief in the integration of all forms of life. On ritual and ceremonial occasions Warli home walls are plastered with dung. Rice paste is used with red ochre powder to tell stories and to invoke the blessings of their goddess of fertility, Palaghata.

Statement 3: Tanjore Painting is an interesting combination of art and craft that grew in the region of Thanjavur, Tamil Nadu under Maratha influence. The main colours are red, yellow, black, and white. The distinctive features were aristocratic or religious figures adorned with jewellery and surrounded by elaborate architectural arches and doorways. Originally done on wood, it is encrusted with semi-precious stones. Later the paintings were executed on glass. The glass paintings are coloured from outside inwards. The outlines and final touches have to be done first since the artist paints the picture from the reverse side of the glass.

Q Source: Ch 9: Living Arts and Crafts Traditions of India 11th NCERT

30. Consider the following statements.

1. In monocotyledonous plants, the primary root lives as long as the plant lives as it replaces a large number of small roots constituting the fibrous root system of the plant.
2. In dicotyledonous plants, the direct elongation of the radicle leads to the formation of primary root which grows inside the soil.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only ✓
- C. Both 1 and 2
- D. Neither 1 nor 2

Your Answer :

Correct Answer : B

Answer Justification :

In majority of the dicotyledonous plants, the direct elongation of the radicle leads to the formation of **primary root** which grows inside the soil.

It bears lateral roots of several orders that are referred to as **secondary**, **tertiary**, etc. roots. The primary roots and its branches constitute the tap root system, as seen in the mustard plant.

In monocotyledonous plants, the primary root is short lived and is replaced by a large number of roots. These roots originate from the base of the stem and constitute the fibrous root system,

as seen in the wheat plant. In some plants, like grass, Monstera and the banyan tree, roots arise from parts of the plant other than the radicle and are called adventitious roots. The main functions of the root system are absorption of water and minerals from the soil, providing a proper anchorage to the plant parts, storing reserve food material and synthesis of plant growth regulator

Q Source: Ch 5: 11th Biology NCERT

31. How many of the following crops have “prop roots” that get swollen and store food?

1. Carrot
2. Turnip
3. Sweet potato

Select the correct answer using the codes below.

- A. Only one
- B. Only two
- C. All three ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

Roots in some plants change their shape and structure and become modified to perform functions other than absorption and conduction of water and minerals. They are modified for support, storage of food and respiration.

Tap roots of carrot, turnip and adventitious roots of sweet potato, get swollen and store food. Can you give some more such examples? Have you ever wondered what those hanging structures that support a banyan tree are?

These are called prop roots. Similarly, the stems of maize and sugarcane have supporting roots coming out of the lower nodes of the stem. These are called stilt roots. In some plants such as Rhizophora growing in swampy areas, many roots come out of the ground and grow vertically upwards. **Such roots, called pneumatophores, help to get oxygen for respiration**

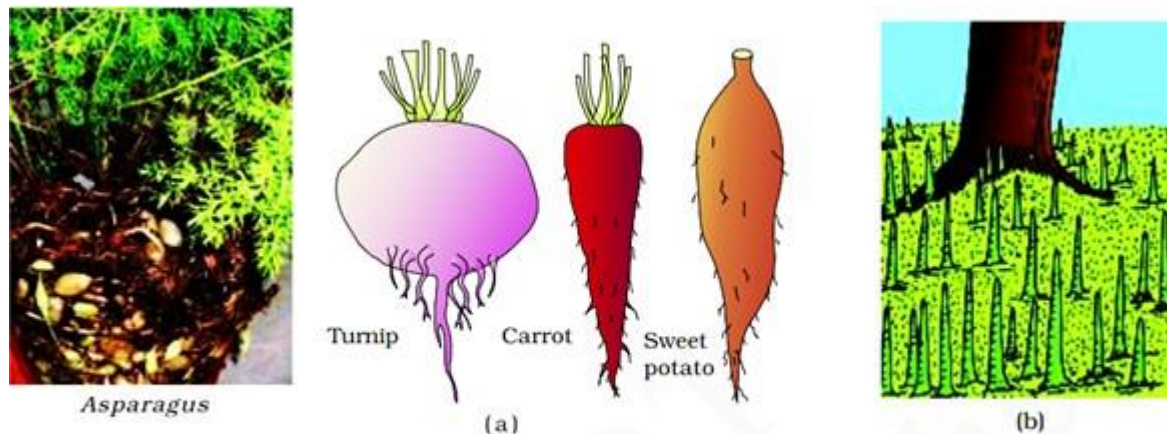


Figure 5.5 Modification of root for : (a) storage (b) respiration: pneumatophore in *Rhizophora*

Q Source: Ch 5: 11th Biology NCERT

32. Ultraviolet-B (UV-B) radiation can adversely affect plants by

1. impairing photosynthesis
2. increasing plants' susceptibility to disease by damaging plant proteins

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 ☒
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

With the depletion of ozone layer, more UV radiation filters into troposphere. UV radiations lead to ageing of skin, cataract, sunburn and skin cancer in humans.

Many phytoplankton cannot tolerate the bright, unfiltered solar radiation at the ocean's surface and are impaired especially by the high-energy, short-wavelength radiation in the UV range of the spectrum.


UV-B impairs photosynthesis in many species. Overexposure to UV-B reduces size, productivity, and quality in many of the crop plant species. UV-B increases plants' susceptibility to disease by sometimes causing mutations or damaging plant proteins.

Q Source: Page 406: Chemistry Unit 14: XIth NCERT

33. Consider the following statements.

1. The Jharnapatachitra of West Bengal is a long vertical paper scroll used to convey stories from religious epics.
2. The Patachitra of Orissa depicts stories from the Geet Govind and devotional stanzas by ancient poets.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

S1: The jharnapatachitra of West Bengal is a long vertical paper scroll used to tell stories from religious epics. The artists compose songs that they sing while they slowly unroll each scene of the painting. Old fabric is pasted on the back of the scroll to make it stronger. These village storytellers travelled from village to village listening to news and passing on information much like television today. The Gujarat earthquake of 2001 and the tsunami of 2004 inspired such singer artists to present ballads of these natural disasters.


S2: The patachitra of Orissa depicts stories from the famous poem, the Geet Govind, and devotional stanzas by ancient poets, singers and writers. The pat was earlier made as a temple offering. Stories are drawn in sections on palm leaf as etchings or as paintings on paper and silk. Deep red, ochre, black and rich blue colours from minerals, shell and organic lac are used in these paintings. Modern developments have encouraged them to paint on wooden boxes, picture frames etc. for contemporary use.

Q Source: Ch 9: Living Arts and Crafts Traditions of India 11th NCERT

34. Consider the following statements.

1. The main components of the photochemical smog result from the action of sunlight on unsaturated hydrocarbons and nitrogen oxides.
2. Photochemical smog contains no oxidising agents and is thus called as reducing smog.

Which of the above is/are not correct?

- A. 1 only
- B. 2 only 
- C. Both 1 and 2
- D. Neither 1 nor 2

Your Answer :

Correct Answer : B

Answer Justification :

Photochemical smog occurs in warm, dry and sunny climate. The main components of the photochemical smog result from the action of sunlight on unsaturated hydrocarbons and nitrogen oxides produced by automobiles and factories.

Photochemical smog has high concentration of oxidising agents and is, therefore, called as oxidising smog.

The common components of photochemical smog are ozone, nitric oxide, acrolein, formaldehyde and peroxyacetyl nitrate (PAN).

Photochemical smog causes serious health problems. Both ozone and PAN act as powerful eye irritants.

Ozone and nitric oxide irritate the nose and throat and their high concentration causes headache, chest pain, dryness of the throat, cough and difficulty in breathing.

Photochemical smog leads to cracking of rubber and extensive damage to plant life. It also causes corrosion of metals, stones, building materials, rubber and painted surfaces.

Q Source: Page 403: Chemistry Unit 14: XIth NCERT

35. Kalamkari paintings are distinguished from most other kinds of painting by being

1. drawn on only printed cloth, not painted ones.
2. drawn exclusively with a pen
3. entirely secular

Select the correct answer using the codes below.

- A. 2 only ✓
- B. 1 and 2 only
- C. 1, 2 and 3
- D. 1 and 3 only

Your Answer :

Correct Answer : A

Answer Justification :

Making a Kalamkari: Kalamkari or vrathapani from Andhra Pradesh demonstrates the variety of natural materials used to create a work of art. Kalamkari means 'pen work' in Persian and refers to both printed and painted cloth. In the seventeenth century Persian influences led to artists experimenting with the depiction of trees, fruits, flowers and ornamental birds.

Using a Kalam to Paint: The painting is made exclusively with a pen, the kalam made out of a


bamboo sliver wound at one section with wool and then dyed with natural colours. Black ink is used to make outlines, and jaggery, rusted iron filings and water are used for making colours to fill in details. Painted Stories: The art of painting stories on cloth is located in Sri Kalahasti, a town in Andhra Pradesh. Originally large paintings on cloth served as pictorial renderings of the great epics, the Ramayana and the Mahabharata for temples. Paintings were also made to illustrate spiritual poems of eminent writers.

Q Source: Ch 9: Living Arts and Crafts Traditions of India 11th NCERT

36. Polychlorinated biphenyls can be biodegraded by how many of the following:

1. algae
2. fungi
3. bacteria

Select the correct answer using the codes below.

- A. Only one
- B. Only two
- C. All three 
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

Polychlorinated biphenyls were once widely deployed as dielectric and coolant fluids in electrical apparatus, carbonless copy paper and in heat transfer fluids. Because of their longevity, PCBs are still widely in use, even though their manufacture has declined drastically since the 1960s, when a host of problems were identified

PCB production was banned by the Stockholm Convention on Persistent Organic Pollutants in 2001.

Generally, PCBs are not very soluble in water, but readily soluble in fats. This solubility in fat explains why PCBs can build up in animal fat and along the food chain.

But, typically, PCBs are either broken down in the environment by sunlight or by microorganisms. Sunlight plays an important role in the breakdown of PCBs when they are in the air, shallow water, or surface soils. Microorganisms, such as bacteria, algae, or fungi, biodegrade PCBs when found in soil or sediments.

The bromine analogues of PCBs are polybrominated biphenyls (PBBs), which have analogous applications and environmental concerns.

Q Source: AR: Page 407: Chemistry Unit 14: XIth NCERT

37. Consider the following statements.

1. Most of the organic toxins are water insoluble and non-biodegradable.
2. If an organic toxin spreads in an ecosystem, its highest concentration is likely to occur in the highest trophic level.

Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2 ✓
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

Most of the organic toxins are water insoluble and non-biodegradable.

These high persistent toxins are, therefore, transferred from lower trophic level to higher trophic level through food chain (shown below).

Over time, the concentration of toxins in higher animals reaches a level which causes serious metabolic and physiological disorders.

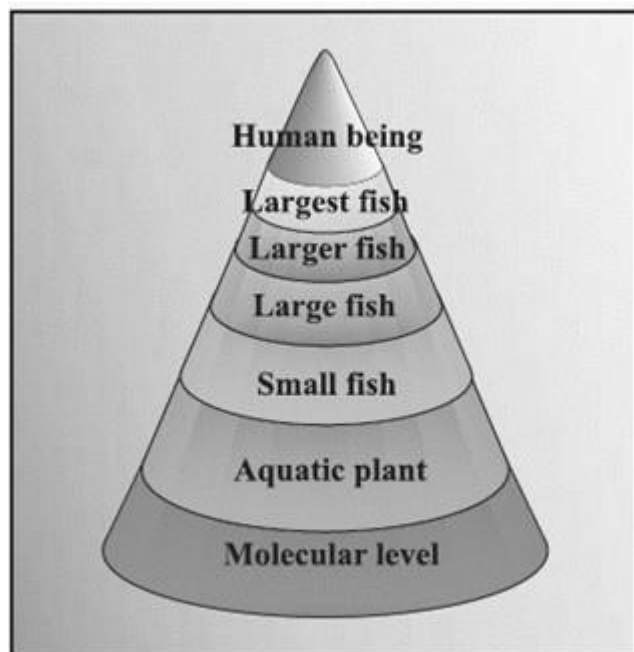


Fig. 14.3 At each trophic level, the pollutant gets 10 times concentrated.

Q Source: Page 409: Chemistry Unit 14: XIth NCERT

38. Match the following styles of traditional garments from various regions of India to the state/UT that they are associated with:

Garment:	State/UT
1. Himru:	Kashmir
2. Ikat:	Gujarat
3. Kanjeevaram:	Tamil Nadu

How many of the above pairs is/are correctly matched?

- A. Only one pair ✓
- B. Only two pairs
- C. All three pairs
- D. None of the above

Your Answer :

Correct Answer : A

Answer Justification :

Mashru and Himru (Gujarat): Himroo, also known as kum khuab is a distinctive, luxurious fabric, once used as dress material by the nobles of the olden days. Bold patterns and colours are the specialities of Mashru fabrics.

Ikat silk saree (Orissa): Odisha Ikat is a kind of ikat, a resist dyeing technique, originating from Indian state of Odisha, adapted from ikat in Indonesia. Also known as "Bandha of Odisha", it is a geographically tagged product of Odisha since 2007. It is made through a process of tie-dyeing the warp and weft threads to create the design on the loom prior to weaving. It is unlike any other ikat woven in the rest of the country because of its design process, which has been called "poetry on the loom"

Kanjeevaram saree, Tamil Nadu, has been recognized as a Geographical indication by the Government of India in 2005-2006.

Q Source: Ch 8: Living Arts and Crafts Traditions of India 11th NCERT

39. Cholera would not be possible without osmosis because

- 1. osmosis allows choleric bacteria to reverse the ionic orientation of the cells in our bodies
- 2. osmosis prevents two cells from reaching the same water potential

Select the correct answer using the codes below.

- A. 1 only ✓
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Your Answer :

Correct Answer : A

Answer Justification :

In Osmosis, water will move from its region of lower chemical potential (or concentration) to its region of lower chemical potential until equilibrium is reached.

- At equilibrium the two chambers should have the same water potential. For e.g. If you put a carrot in salty water, the salt water will "draw" the water from inside the carrot thus drying it.
- Cholera would not be possible without osmosis. The choleric bacteria populate in our intestines and begin to reverse the intestinal cells' ionic orientation. In other words, it changes the way ions and, subsequently, water is transported in our intestines.
- When our ions' orientations are switched, the intestinal cells are no longer able to absorb water into the body. It actually flows out. Now osmosis happens in the other direction and water moves from our intestinal cells into our intestines. This is what causes cholera's deadly watery diarrhoea.
- This is why cholera can kill you so quickly, because it does not rely on how much water you consume.

Q Source: AR: Page 180: Biology: XIth NCERT

40. Consider the following statements.

1. India is the only source of tussar silk that comes from the Antheria Assamia moth
2. Tussar silk is finer and has a greater sheen than mulberry silk.
3. Tussar silk is cultivated all over India except in north-eastern states.

How many of the above statement(s) is/are correct?

- A. Only one ✓
- B. Only two
- C. All three
- D. None

Your Answer :

Correct Answer : A

Answer Justification :

India is the only source of tussar silk that comes from the Antheria Assamia moth, which feeds on the leaves of the Som and Wali trees.

Tussar silk has a coarse, uneven texture and a slightly yellowish brown colour. Since it is less strong in texture and cannot be refined it does not have the same sheen or fineness as mulberry silk.

Women weavers of Assam make their traditional meklachador costumes with golden moga and eri silk, which come from worms that feed on Ashoka and castor leaves rather than mulberry

leaves.

Q Source: Ch 8: Living Arts and Crafts Traditions of India 11th NCERT

41. Influences of ethylene on plants include

1. horizontal growth of seedlings
2. swelling of the plants' axis
3. promotion of the abscission of plant organs like leaves and flowers

Which of the above is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 1, 2 and 3 ✓

Your Answer :

Correct Answer : D

Answer Justification :

Ethylene is a simple gaseous Plant growth regulator (PGR). It is synthesised in large amounts by tissues undergoing senescence and ripening fruits.

Influences of ethylene on plants include horizontal growth of seedlings, swelling of the axis etc. Ethylene promotes abscission of plant organs especially of leaves and flowers.

Ethylene is highly effective in fruit ripening. It enhances the respiration rate during ripening of the fruits. This rise in rate of respiration is called respiratory climactic.

Q Source: Chapter 15: Biology: XIth NCERT

42. Consider the following statements with regards to plants with C4 mechanism of photosynthesis as against the C3 mechanism.

1. C4 plants are more efficient than C3 plants in terms of fixing carbon.
2. C4 plants lose less water than a C3 plant for the same amount of carbon fixed.

Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2 ✓
- D. None of the above

Your Answer :

Correct Answer : C

Answer Justification :

The majority of plants and crop plants are C3 plants, referring to the fact that the first carbon compound produced during photosynthesis contains three carbon atoms. Under high temperature and light, however, oxygen has a high affinity for the photosynthetic enzyme Rubisco.

Oxygen can bind to Rubisco instead of carbon dioxide, and through a process called photorespiration, oxygen reduces C3 plant photosynthetic efficiency and water use efficiency. In environments with high temperature and light, that tend to have soil moisture limitations, some plants evolved C4 photosynthesis. A unique leaf anatomy and biochemistry enables C4 plants to bind carbon dioxide when it enters the leaf and produces a 4-carbon compound that transfers and concentrates carbon dioxide in specific cells around the Rubisco enzyme, significantly improving the plant's photosynthetic and water use efficiency.

As a result in high light and temperature environments, C4 plants tend to be more productive than C3 plants. Examples of C4 plants include corn, sorghum, sugarcane, millet, and switchgrass. However, the C4 anatomical and biochemical adaptations require additional plant energy and resources than C3 photosynthesis, and so in cooler environments, C3 plants are typically more photosynthetically efficient and productive.

To summarize, C3 plants are numerous and they use the C3 pathway. C4 plants mostly dwell in warm water and moist climate. C4 cycle is the alternate pathway of calvin cycle which takes place during the dark phase of photosynthesis.

The evolution of the C4 photosynthetic system is probably one of the strategies for maximising the availability of CO₂ while minimising water loss.

C4 plants are twice as efficient as C3 plants in terms of fixing carbon (making sugar). However, a C4 plant loses only half as much water as a C3 plant for the same amount of CO₂ fixed.

Q Source: AR: Page 189: Biology: XIth NCERT

43. Consider the following statements.

1. Magnesium is found in chlorophyll.
2. Iron cannot be taken up in ferrous and ferric forms by plants.
3. Copper cannot be absorbed through plant leaves.

How many of the above statement(s) is/are correct?

- A. Only one ✓
- B. Only two
- C. All three
- D. None

Your Answer :

Correct Answer : A

Answer Justification :


Magnesium forms a part of the chlorophyll molecule - essential in photosynthesis.

Iron is taken up in ferrous and ferric forms by plants. It acts as a catalyst in the production of chlorophyll.

Cu²⁺ (copper) can be absorbed through leaves. It becomes very toxic if too much applied. It is also a catalyst in chlorophyll formation.

Q Source: AR: Chapter 12: Biology: XIth NCERT

44. Which of the following is NOT a covering made from natural fibres produced traditionally in India?

- A. Moonj
- B. Sarkanda
- C. Sikki
- D. Khorasan 

Your Answer :

Correct Answer : D

Answer Justification :


A great variety of baskets, mats and floor coverings are made from grass and reed fibres which are referred to in local languages as moonj, sarkanda, kora, sikki, chipkiang, madur kathi, rice straw, kauna reed. Reeds grow naturally in marshy land and in ponds.

Kauna is the local name for a reed or rush belonging to the family Cyperaceae which is cultivated in the wetlands of the Imphal valley. It has a cylindrical, soft and spongy stem which is woven into mats, square and rectangular cushions and mattresses by the women of the Meitei community of Manipur.

Khorasan is a wool rug, so D is the answer.

Q Source: Ch 6: Living Arts and Crafts Traditions of India 11th NCERT

45. Sagar Samridhi program launched by the government recently relates to

- A. mineral mining in deep ocean beds
- B. giving fishing rights to indigenous communities
- C. removal of sediments and debris from the bottom of ocean beds 

D. none of the above

Your Answer :

Correct Answer : C

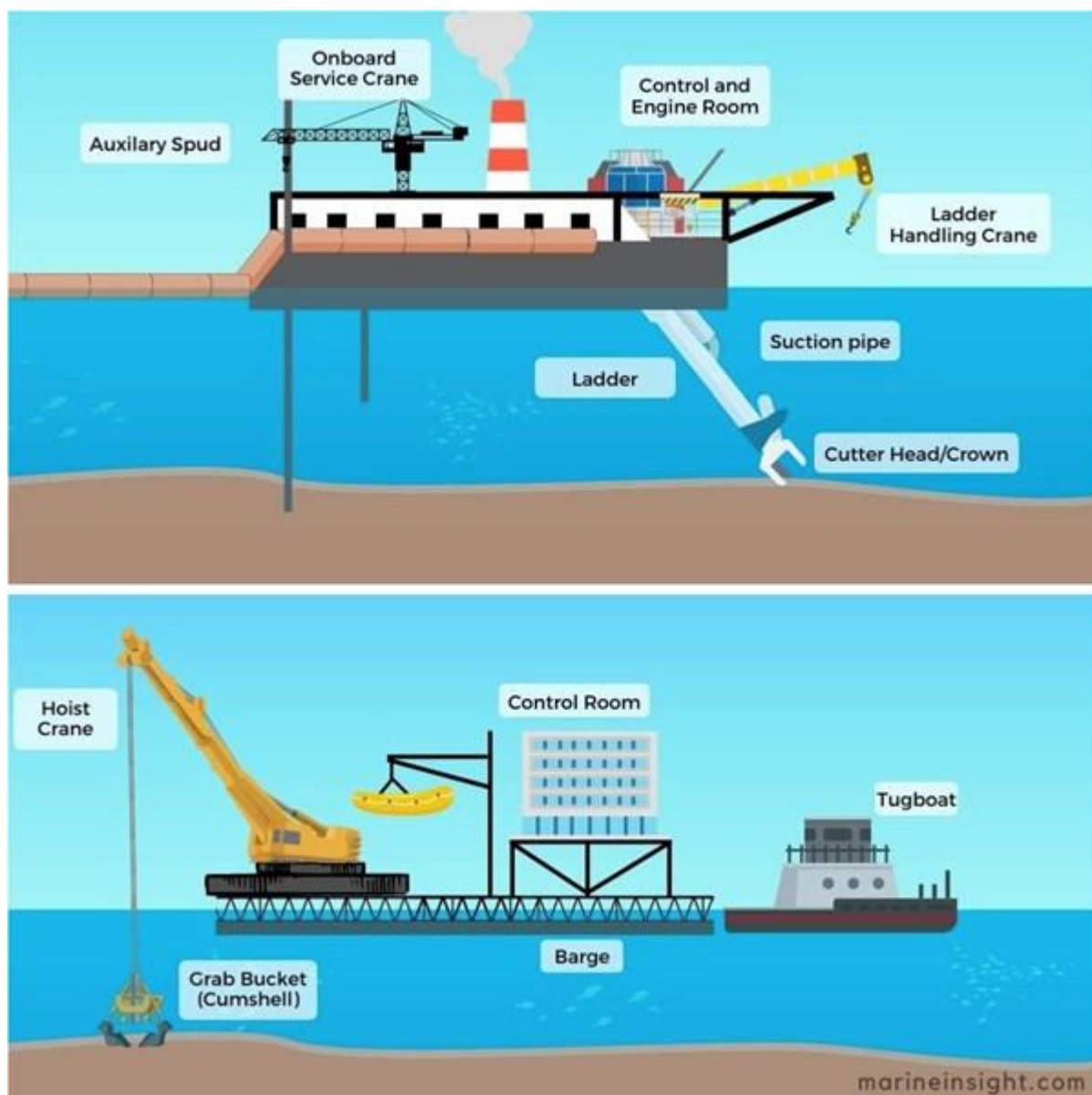
Answer Justification :

Sagar Samriddhi is an Online Dredging Monitoring System to bring transparency & efficiency.

The aim is to carry out dredging to accelerate 'Waste to Wealth' campaign of Ministry of Ports, Shipping and Waterways (MoPSW).

Dredging - Dredging is the removal of sediments and debris from the bottom of lakes, rivers, harbors, and other water bodies.

It is developed by National Technology Centre for Ports, Waterways and Coasts (NTCPWC) the technological arm of MoPSW.



Q Source: Current events

46. Consider the following statements.

1. Supercapacitors are a type of an electrochemical energy storage systems which contain no electrodes or electrolytes.
2. Supercapacitors are limited by the fact that they cannot be used in small devices like a mobile phone or laptop.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2 ✓

Your Answer :
 Correct Answer : D

Answer Justification :

Supercapacitors are a type of an electrochemical energy storage systems which have great power density and specific capacitance.

Supercapacitor differs from ultracapacitor as they are built from different materials and structured in slightly different ways, so they store different amounts of energy.

A supercapacitor device consists of an electrode, electrolyte and a current collector.

A capacitor stores energy by means of a static charge as opposed to an electrochemical reaction.

Applying a voltage differential on the positive and negative plates charges the capacitor.

They present lower energy densities (they store less energy per unit mass) than batteries.

Applications include portable and wearable devices such as smartphones, tablets, laptops and smartwatches.

Advantages of Supercapacitors

- Quick charging and discharging
- Exhibit long life since they are not subject to chemical degradation as in conventional batteries
- Greater power density (can release energy more quickly)
- Smaller in size
- Provides back-up power during power outages in space applications

Q Source:

<https://www.thehindu.com/sci-tech/science/indian-korean-researchers-develop-light-powered-supercapacitors/article66950924.ece>

47. Consider the following statements.

1. The WHO Framework Convention on Tobacco Control (FCTC) is the first global public health treaty on tobacco.
2. India is not a party to the WHO FCTC given its lack of safeguards for developing countries.
3. The Tobacco Board of India is a statutory body under the aegis of the Ministry of Commerce and Industry.

How many of the above statement(s) is/are correct?

- A. Only one
- B. Only two ✓
- C. All three

D. None

Your Answer :

Correct Answer : B

Answer Justification :

WHO FCTC is the first global public health treaty on tobacco.

It is an evidence-based treaty that reaffirms the right of all people to the highest standard of health.

India is a party to the convention.

The Tobacco Board of India is a statutory body established under the under the Tobacco Board Act, 1975, and under the aegis of the Ministry of Commerce and Industry.

Learning: Nicotiana tabacum and N. rustica are the two commonly cultivated for producing commercial tobacco.

The primary centre of origin of N. tabacum is South America and that of N. rustica is Peru.

In India, it is introduced by the Portuguese in the 17th century.

Area and production - N. tabacum is widely cultivated in most countries of the world while N. rustica is restricted to India, Russia and few other Asiatic countries.


Top production and productivity in India is in the state of Gujarat. Other producers include the states of Andhra Pradesh followed by Gujarat, Karnataka, UP, Bihar, etc.

Q Source: Current events

48. Consider the following missiles:

1. Prithvi
2. Agni
3. Trishul
4. Akash

Missiles developed under the Integrated Guided Missile Development Programme (IGMDP) include how many of the above?

- A. Only two
- B. Only three
- C. All four 
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

It is a Ministry of Defence programme to research and develop missiles.

The project was started in 1982-1983 under the leadership of Dr APJ Abdul Kalam.

It accomplished its design objectives by 2012.

The Defence Research and Development Organisation (DRDO) and erstwhile Ordnance Factories Board (OFB) managed the programme with other Indian government political organizations.

5 Missiles developed under the IGMDP include Prithvi, Agni, Trishul, Akash and Nag.

Q Source: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1930689>

49. How many of the following is/are (planned or launched) Lunar missions?

1. Artemis II
2. Danuri
3. Luna 25

Select the correct answer using the codes below.

- A. Only one
- B. Only two
- C. All three ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

Major moon missions till date:


- Chang'e 5, China: Soft-landed on the south pole of the moon and collected samples—launched in November 2020.
- Danuri mission, South Korea: Orbiter will study moon from January 2023 after entering lunar orbit—launched in Aug, 2022
- Artemis - I, USA: First uncrewed integrated flight mission to moon—launched in November 2022.
- ispace's Hakuto-R Mission, Japan: UAE rover and Japanese payload on a lander; crash-landed—launched in Dec, 2022
- Chandrayaan-3, India: Lunar exploration with a landing module and rover—to launch in June 2023.
- Luna 25, Russia: Sample gathering from southern pole—yet to launch, on July 2023
- Artemis II, U.S.A: Crewed mission to the moon—yet to launch, in 2024

Q Source: Current events

50. Consider the following statements.

1. Varunastra is a ship-launched, heavy weight, electrically-propelled anti-submarine torpedo.
2. Varunastra is capable of targeting quiet submarines, both in deep and shallow waters.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

Varunastra is a ship launched, heavy weight, electrically-propelled anti-submarine torpedo.

It is capable of targeting quiet submarines, both in deep and shallow waters in an intense countermeasure environment.

It was designed and developed by Vizag-based Naval Science and Technological Laboratory (NSTL) under the Defence Research and Development Organisation (DRDO).

It is manufactured by Bharat Dynamics Ltd (BDL).

It was inducted by the Indian Navy in 2016.

It can be fired from all Anti-submarine warfare (ASW) ships capable of firing heavy weight torpedoes.

It can carry a warhead weighing 250 kg and has an operational range of 40 km.

India is in a group of 8 countries that have the capability to manufacture heavyweight torpedoes.

Q Source:


<https://www.thehindu.com/news/national/indigenous-heavy-weight-torpedo-hits-bulls-eye-in-live-test-by-indian-navy/article66939145.ece>

51. The World Health Organization's (WHO) "blueprint priority diseases" include the

1. Middle East respiratory syndrome-related coronavirus (MERS-CoV)
2. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
3. Nipah virus

4. Lassa fever virus

Select the correct answer using the codes below.

- A. 2 only
- B. 1, 2, 3 and 4 
- C. 1 and 4 only
- D. 2 and 3 only

Your Answer :

Correct Answer : B

Answer Justification :

The Coalition for Epidemic Preparedness Innovations (CEPI) is a foundation that takes donations from public, private, philanthropic, and civil society organisations, to finance research projects which are no longer independent to develop vaccines against emerging infectious diseases (EID).

CEPI is focused on the World Health Organization's (WHO) "blueprint priority diseases", which include: the Middle East respiratory syndrome-related coronavirus (MERS-CoV), the Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the Nipah virus, the Lassa fever virus, and the Rift Valley fever virus, as well as the Chikungunya virus and the hypothetical, unknown pathogen "Disease X". Disease X is a placeholder name that was adopted by the World Health Organization (WHO) in February 2018 on their shortlist of blueprint priority diseases to represent a hypothetical, unknown pathogen that could cause a future epidemic

CEPI investment also requires "equitable access" to the vaccines during outbreaks, although subsequent CEPI policy changes may have compromised this criterion.


Q Source:

<https://www.thehindu.com/sci-tech/health/international-cooperation-essential-for-vaccine-development-of-emerging-pathogens-health-minister/article66927369.ece>

52. Consider the following statements.

1. Biochar is a carbon-rich material that is made from biomass through a thermochemical conversion process known as pyrolysis.
2. The use of Biochar in soils not only increases their water retention but also reduces their acidity and nitrous oxide emissions.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

Biochar is black, highly porous, lightweight, fine-grained and has a large surface area.

Approximately 70% of its composition is carbon.

The remaining percentage consists of nitrogen, hydrogen and oxygen among other elements.

It is produced using a specific process to reduce contamination and safely store carbon.

According to the UN's Intergovernmental Panel on Climate Change (IPCC), biochar could potentially be used to capture 2.6 billion of the 40 billion tonnes of CO₂ currently produced by humanity each year.

Advantages

- Enhancing soil structure
- Improves soil quality
- Produces energy as a byproduct
- Increasing water retention and aggregation
- Decreasing acidity
- Reducing nitrous oxide emissions
- Improving porosity
- Regulating nitrogen leaching
- Improving electrical conductivity
- Improving microbial properties
- One tonne of biochar or bio coal can stock the equivalent of 2.5 to 3 tonnes of CO₂

Q Source:

<https://www.thehindu.com/sci-tech/energy-and-environment/how-chocolate-could-counter-climate-change/article66930341.ece>

53. The Great Atlantic Sargassum Belt refers to a

- A. thick blanket of seaweeds in the Atlantic Ocean ✓
- B. belt of potential oil reserves in the Atlantic
- C. coral safe haven for marine species
- D. none of the above

Your Answer :

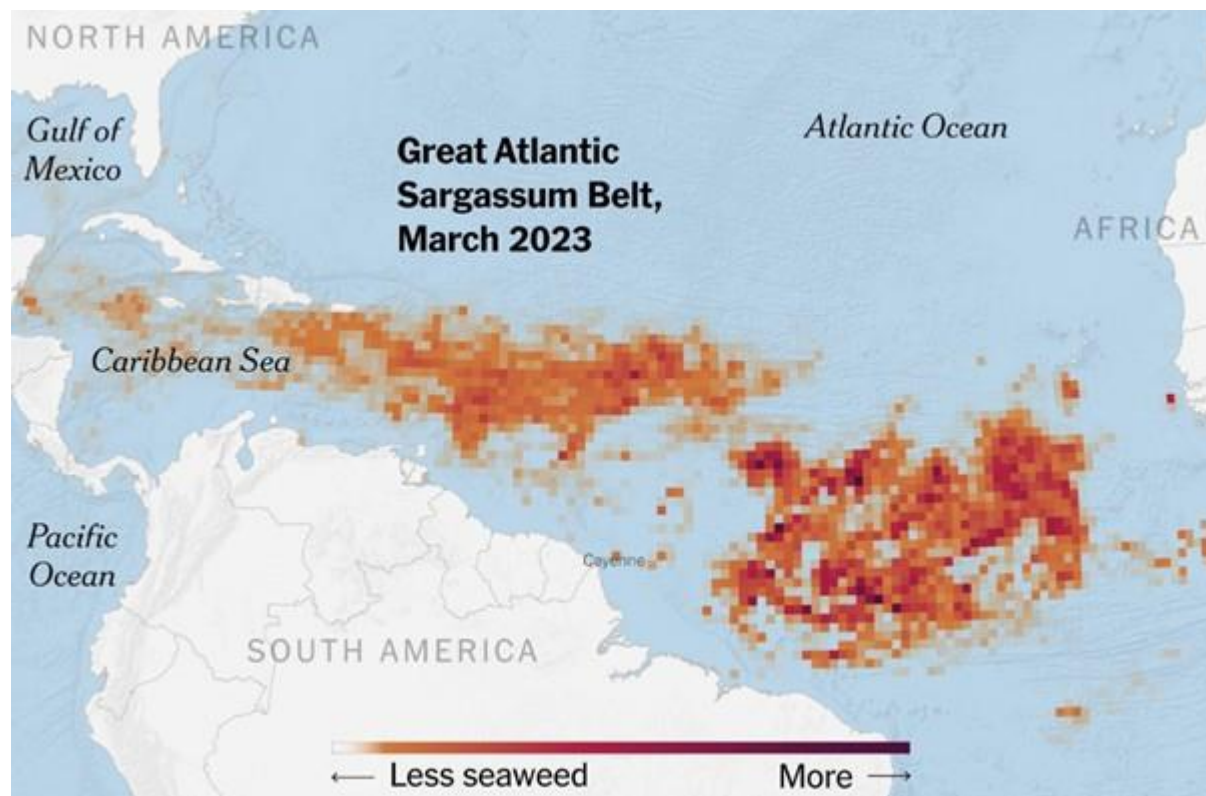
Correct Answer : A

Answer Justification :

It is a 5,000 mile-wide thicket of seaweed.

This floating habitat provides food and protection for fishes, mammals, marine birds, crabs, and more.

When the Sargassum piling up on beaches and decomposes it releases hydrogen sulfide, a toxic gas.



Q Source:

<https://www.hindustantimes.com/world-news/perfect-pathogen-storm-coming-flesh-eating-bacteria-in-seaweed-on-florida-beaches-101685809482648.html>

54. Under the Mission on Advanced and High-Impact Research (MAHIR) launched by the Ministry of Power and the Ministry of New and Renewable Energy, how many of these research areas need to be focussed upon?

1. Alternatives to Lithium-Ion storage batteries
2. Geo-thermal energy
3. Solid state refrigeration
4. Green hydrogen for mobility

Select the correct answer using the codes below.

- A. Only two
- B. Only three
- C. All four ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

The mission aims to facilitate indigenous research, development and demonstration of the latest and emerging technologies in the power sector.

Funds will be given by Ministry of Power, Ministry of New and Renewable Energy and the Central Public Sector Enterprises under 2 Ministries.

Planned for an initial period of 5 years from 2023-24 to 2027-28.

The Mission will follow the technology life cycle approach of Idea to Product.

Areas Identified for Research

- Alternatives to Lithium-Ion storage batteries
- Modifying electric cookers / pans to suit Indian cooking methods
- Green hydrogen for mobility (High Efficiency Fuel Cell)
- Carbon capture
- Geo-thermal energy
- Solid state refrigeration.
- Nano technology for EV battery
- Indigenous CRGO technology


Q Source: Current events

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1930368>

55. Koftgari is the term for a type of silver and gold damascene work produced in how many of these regions?

1. South India
2. Western India
3. North-eastern India

Select the correct answer using the codes below.

- A. Only one
- B. Only two 
- C. All three
- D. None

Your Answer :

Correct Answer : B

Answer Justification :


Koftgari is the term for a type of silver and gold damascene work produced in

Thiruvananthapuram, Kerala, Jaipur, Rajasthan, Hyderabad, Andhra Pradesh and Punjab. In ordinary damascene (tari-nishan), a technique used frequently to adorn the blades of swords, a chiselled groove is first made into which precious metal wire is hammered. The koftgari process is simpler and less time consuming, and allows for much freer decoration.

The entire surface of the object is first chiselled in at least two different directions so as to roughen it and then the wire (either silver or gold or both) is hammered onto it in intricate patterns. 'True' damasceners looked down on this method, but it is simply an alternative process. Once the manufacture of arms and armour had ceased, craftsmen began to apply this decorative technique to trays, boxes and other objects.

Q Source: Ch 4: Living Arts and Crafts Traditions of India 11th NCERT

56. Traditionally, “kundanaz” were associated with

- A. metal work 
- B. weaving
- C. embroidery
- D. paper craft

Your Answer :

Correct Answer : A


Answer Justification :

Teamwork is essential in the craft of metal-work. In Lucknow, Uttar Pradesh for example, the production of an enamelled hookah base would involve several different specialised skills, each practised by a different craftsman.

A sunar makes the object; a chitrakar or nakashiwalla marks out the surface design; a chatera chisels away the depression in the design needed to hold the enamel; a minakar carries out the actual enamelling; a jilasaz polishes the object; a mulamasaz might gild it, while a kundanaz sets the stones required in the design. Successful teamwork of this sort clearly relies on a strong underlying design concept and a high degree of stylistic coherence, as well as a feeling of technical harmony amongst those responsible for each stage of the process

Q Source: Ch 4: Living Arts and Crafts Traditions of India 11th NCERT

57. The Black Sea Grain Initiative recently seen in news refers to the

- A. distribution of grains to war-affected regions near the Black Sea
- B. resumption of Ukrainian grain exports via the Black Sea 
- C. peace treaty between countries bordering the Black Sea
- D. transport network of grains across Eastern Europe

Your Answer :
 Correct Answer : B

Answer Justification :

The resumption of Ukrainian grain exports via the Black Sea amid the ongoing war (called the Black Sea Grains Initiative) was much-needed. It is a UN plan, which is linked to efforts to ensure Russian food and fertilizer reach global markets, that supports the stabilization of spiralling food prices worldwide and stave off famine, affecting millions.

The Initiative specifically allows for commercial food and fertilizer (including ammonia) exports from three key Ukrainian ports in the Black Sea - Odesa, Chornomorsk, Yuzhny/Pivdennyi.

Black Sea Grain Initiative led to the international vegetable oil prices falling.

Ukraine and Russia together accounted for nearly 58% of the world's production of oilseed in 2021-22.

As the war shut off their supplies through the Black Sea ports, prices skyrocketed.

However, the situation changed with the Black Sea Grain Initiative agreement between Russia and Ukraine signed on July 22.

The deal, brokered by the UN and Turkey, facilitated the safe navigation of vessels carrying grain and foodstuffs.

It led to international vegetable oil prices falling below even pre-war levels.

Q Source: Current events


<https://www.un.org/en/black-sea-grain-initiative>

58. Consider the following statements.

The river Kosi

1. is a trans-national river flowing through India that originates in Tibet
2. flows through Nepal and the plains of North Bihar

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. None of the above

Your Answer :
 Correct Answer : C

Answer Justification :

Union Government has approved Rs 4,900 crore Kosi-Mechi Interlinking project for interlinking of Kosi and Mechi rivers of Bihar. This is the second major river interlinking project in the country to be approved by Central Government after the Ken-Betwa project in Madhya Pradesh.

Need and significance:


- The river Kosi is an international river originating from Tibet and flowing through Nepal in Himalayan Mountains and the lower portion through plains of North Bihar.
- To overcome the acute problem of shifting of course of Kosi river, heavy sediment load, flooding etc. and to alleviate the severe suffering of the people of Bihar, the then His Majesty's Government of Nepal and The Government of India signed an agreement on 25th April 1954 for implementation of Kosi project. The present proposal is an extension of Eastern Kosi Main Canal (EKMC) system upto river Mechi, a tributary of river Mahananda.
- The aim of extension of EKMC upto Mechi river is mainly to provide irrigation benefits to the water scarce Mahananda basin command in the districts of Araria, Kishanganj, Purnea and Katihar during kharif season depending upon the pondage available in Hanuman Nagar barrage.
- This intrastate link scheme will thus transfer part of surplus water of Kosi basin to Mahananda basin. In view of irrigation benefit from the link canal, the project is fully justified.

Q Source: Revision Qs

59. Natural fibres for commercial use can be extracted from which of these plantations?

1. Screw Pine
2. Arecanut Palm
3. Sisal

Select the correct answer using the codes below.

- A. 1 only
- B. 2 and 3 only
- C. 3 only
- D. 1, 2 and 3 

Your Answer :

Correct Answer : D

Answer Justification :

Refer to the table below from NCERT - Natural fibres are extracted from the following parts of these plants:

Root	Stem	Branch	Leaf	Fruit/Seed
Khus	Bamboo	Willow	Palmyra	Cotton
	Kora grass		Palm date	Coir
	Jute		Palm coconut	Arecanut
	Hemp		Arecanut palm	
	Water hyacinth		Sisal	
	Banana		Banana	
	Kauna reed		Pineapple	
	Cane palm		Screw pine	
	Moonj grass			
	Sarkanda			
	Wagoo reed			
	Sikki grass			
	Cannabis/pulla			
	Wicker			
	Bhindi			
	Nettle			
	Flax			
	Arhar/Pigeon pea			

Q Source: Ch 6: Living Arts and Crafts Traditions of India 11th NCERT

60. Consider the following statements.

1. Alchi monastery in Ladakh and in Bagh in Madhya Pradesh have murals depicting the life of Buddha and other religious stories.
2. Jaina paintings can be found in Sittanavasal in the Pudukottai district of Tamil Nadu.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 ☒
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C


Answer Justification :

Buddhist viharas or monasteries and chaitya or prayer halls in Ajanta in Maharashtra, Alchi monastery in Ladakh, and in Bagh in Madhya Pradesh have murals depicting the life of Buddha and other religious stories.

Wall paintings can be found in the temples of Kailashnath Temple of Kanchipuram in Tamil Nadu. Recently wall paintings were found in the Brihadesvara Temple of Thanjavur, Tamil Nadu. Early examples of Jaina paintings were found in Sittanavasal in Pudukottai District of Tamil Nadu. At Virubhadra Temple in Lepakshi are examples of the Andhra style of mural painting.

Q Source: Ch 9: Living Arts and Crafts Traditions of India 11th NCERT

61. The cultural practice of Kar-iqalamdan from the region of Kashmir refers essentially to

- A. paper craft 
- B. painting skills
- C. puppetry
- D. folk theatre

Your Answer :

Correct Answer : A

Answer Justification :

Papier-mâché is used to create moulded forms of a variety of objects. It involves ornamentation of smoothened surfaces built up of paper pulp or layers of paper. The most sophisticated form of paper craft appears to be papier-mâché. The tradition of papier-mâché in Kashmir began in the fifteenth century. While in prison, in the magnificent Central Asian city of Samarkand, a young Kashmiri prince observed the craft of using paper pulp as the base for painted objects. This prince soon became King Zain-ulAbidin and invited accomplished artists and craftsmen from Central Asia to his court to make papier-mâché objects.


The craft was originally known in Kashmir as **Kar-iqalamdan**, being confined to ornamentation of cases then used for keeping pens as well as some other small personal articles. The craft was also known as Kar-i-munaqqash since it was used for ornamenting smooth surfaces made of paper pulp or layers of polished paper.

Q Source: Ch 7: Living Arts and Crafts Traditions of India 11th NCERT

62. How many of the following plants can metabolise nitrogen oxide present in traffic?

1. pinus
2. juniparus
3. quercus

Select the correct answer:

- A. Only one
- B. Only two
- C. All three 

D. None

Your Answer :

Correct Answer : C

Answer Justification :

Certain plants e.g., Pinus, Juniparus, Quercus, Pyrus and Vitis can metabolise nitrogen oxide and therefore, their plantation could help in this matter.

There are other techniques that are used to control or reduce the formation of pollution in urban atmospheres such as photochemical smog.

If we control the primary precursors of photochemical smog, such as NO₂ and hydrocarbons, the secondary precursors such as ozone and PAN, the photochemical smog will automatically be reduced.

Q Source: Page 404: Chemistry Unit 14: XIth NCERT

63. Most of the water reaching the leaves via the stem and roots is used in

- A. photosynthesis and plant growth ✓
- B. transpiration
- C. vernalisation
- D. root penetration into soil

Your Answer :

Correct Answer : A

Answer Justification :

Water is transient in plants. Less than 1 per cent of the water reaching the leaves is used in photosynthesis and plant growth. Most of it is lost through the stomata in the leaves. This water loss is known as transpiration.

When plants lose water, it will be shown as moisture on the inside of the bag (in which you have covered the plant).

Transpiration is important in many ways for a plant. It cools them and helps in water transportation to great heights in trees.

Q Source: Page 187: Biology: XIth NCERT

64. The intricate gold wire and sequin work of Kamdani and Mukesh is associated primarily with the region of

- A. Uttar Pradesh ✓
- B. Jammu & Kashmir
- C. Assam
- D. Rajasthan

Your Answer :

Correct Answer : A

Answer Justification :

In India, commercial embroidery made for the market was always done by men. Even chikan work was traditionally a male preserve, with women only doing the coarser filling details. The intricate gold wire and sequin work of Uttar Pradesh (zardozi, kamdani and mukesh) done on a stretched wooden frame, and Kashmiri ari, wool crewel work, tilla and sozni embroidery are still almost exclusively a male domain.

Sozni with its intricate detailing of flora and fauna derives its inspiration from the verdant, flowering beauty of the Kashmir valley. Tilla work is now a major business for wedding costumes, movie costumes and the fashion ramp, and it reflects the glory of the Mughal court that brought gold wire work from the Middle East and Byzantium

Q Source: Ch 8: Living Arts and Crafts Traditions of India 11th NCERT

65. In the Amarkantak range, how many of the following rivers emerge forming a radial pattern?

- 1. Narmada
- 2. Son
- 3. Johila

Select the correct answer using the codes below.

- A. Only one
- B. Only two
- C. All three ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

When the rivers originate from a hill and flow in all directions, the drainage pattern is known as 'radial'. It is Amarkantak range where the Narmada River, the Son River and Johila River emerge forming the radial pattern.

Learning: The Mahadeo Hills separate the basin of the Narmada River to the north from that of the Wainganga and Wardha rivers, tributaries of the Godavari, to the south. The hills have a

gentle northern slope, but drop abruptly to the south onto the Deccan Plateau. They do not represent such a drainage pattern.

Also, the drainage pattern resembling the branches of a tree is known as “dendritic” the examples of which are the rivers of northern plain.

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

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

Q Source: Chapter 3: India Physical Geography

66. Agricultural lime is a soil additive that can help in

1. significantly reducing the pH of the soil
2. adding calcium and magnesium to the soil that can be used by plants
3. improved water filtration and percolation for acidic soils

Which of the above is/are correct?

- A. 2 and 3 only ✓
- B. 1 only
- C. 1 and 3 only
- D. 1, 2 and 3

Your Answer :

Correct Answer : A

Answer Justification :

Agricultural lime, also called aglime, agricultural limestone, garden lime or liming, is a soil additive made from pulverized limestone or chalk.

The primary active component is calcium carbonate. Additional chemicals vary depending on the mineral source and may include calcium oxide. Unlike the types of lime called quicklime (calcium oxide) and slaked lime (calcium hydroxide), powdered limestone does not require lime burning in a lime kiln; it only requires milling.

The effects of agricultural lime on soil are:

- it increases the pH of acidic soil (the lower the pH the more acidic the soil); in other words, soil acidity is reduced and alkalinity increased
- it provides a source of calcium and magnesium for plants
- it permits improved water penetration for acidic soils
- it improves the uptake of major plant nutrients (nitrogen, phosphorus, and potassium) of plants growing on acid soils

Q Source: AR: Page 403: Chemistry Unit 14: XIth NCERT

67. Consider the following forms of theatre:

Theatre form:	Region
1. Bhavai:	Maharashtra
2. Jatra:	West Bengal
3. Yakshagana:	Karnataka

How many pairs are matched correctly?

- A. Only one
- B. Only two ✓
- C. All three
- D. None

Your Answer :

Correct Answer : B

Answer Justification :

Theatre is a great form for story-telling in which one or more actors using the skills of dancing, acting, singing, talking, miming and theatre crafts like masks, make-up and costumes create a story world for us.

Every corner of India has its own unique form of folk theatre – the lively Nautanki of Uttar Pradesh which often draws on romantic Persian literature for its themes; raw vigour and bawdy humour characterise the Tamasha of Maharashtra or the Bhavai of Gujarat; the blood and thunder of the Jatra melodramas of Bengal which are in great demand during Puja (Dussehra) festivities; or the dance-drama form of Yakshagana from Karnataka, to name just a few.

Q Source: Ch 9: Living Arts and Crafts Traditions of India: 11th NCERT

68. With reference to Indian classical music, which of the following is/are Percussion Instruments?

- 1. Chikka
- 2. Ektara
- 3. Mashak
- 4. Gopijantra

Select the correct answer using the codes below.

- A. 1 and 2 only
- B. 1, 2, 3 and 4
- C. 1 and 3 only ✓
- D. 2, 3 and 4 only

Your Answer :
 Correct Answer : C

Answer Justification :

The following are percussion instruments:

Chikka: It is an instrument unique to Punjab. Similar to the cane snake available in many parts of the country, the chikka is made up of 14 wooden sticks joint together as a lattice. By opening and sharply shutting the chikkha, a sharp sound similar to clapping is produced.

Chimta: Very similar to an actual pair of tongs used in the kitchen, the chimta has small metal discs loosely attached to it which strike against each other when the arms of the chimta are struck.

Mashak: It is made of the leather bag used by villagers to transport water! It is like a basic bagpipe, the national musical instrument of Scotland! The mashak is usually played by the Dholis of Rajasthan as accompaniment to popular folk melodies.


Kirla: It is a stick with a carved squirrel or fish at the top. A cord fixed to the top jerks the galad up with a sharp click, while bells fixed to the bottom of the kirla jingle.

Khadtaal: We often see this instrument depicted in the hands of Meerabai and other Bhaktikaleen poets of the Medieval period. Held in one hand, the khadtaal is made of two similar pieces of wood with brass fittings. One piece of it has space for a thumb, the other for four fingers, these are struck together to produce a simple percussive beat. It is easy to see the close resemblance between a khadtaal and the Spanish castanets, used as accompaniment for the famous Flamenco music and dance

S2 and S4: String Instruments: Instruments in which sound is produced by striking the strings made of iron, steel, brass or other metals as well as goat's gut, cotton, silk threads etc. are known as string or chordophonic instruments. Some of the string instruments such as **ektara**, ravanhattha and **gopijantra** are used as accompanying instruments in traditional performances. Bhopas use the ektara while performing Bapuji ka phad, a traditional story-telling performance of Rajasthan

Q Source: Ch 10: Living Arts and Crafts Traditions of India: 11th NCERT

69. Tholu Bomalatta, a tradition of pottery making, belongs to the state of

- A. Andhra Pradesh 
- B. Tamil Nadu
- C. Odisha
- D. Maharashtra

Your Answer :
 Correct Answer : A

Answer Justification :

The best known leather puppets in our country are those used in the Tholu Bomalatta of Andhra Pradesh. The origins of these puppets can be traced back to about 2000 BCE, as they are mentioned in the Mahabharata. Leather puppets are made out of the hides of goat, deer and buffalo. The skin is treated with herbs and oils, and then beaten till it becomes translucent. The different parts of the puppet's body are separately cut out of this skin. Gods and heroes are made the largest in size, because of their importance.

Minute elaborate shapes are punched in the skin to delineate the gorgeous costumes and jewellery of each figure. They are then dyed, according to the different colours assigned to each of them. Carving out the eyes is done last for this symbolises bringing the figures to life.

Q Source: Ch 10: Living Arts and Crafts Traditions of India: 11th NCERT

70. Consider the following statements.

1. Non-Member States of the United Nations, which are members of one or more specialized agencies, can apply for the status of Permanent Observer at the UN.
2. Asian Development Bank is an official United Nations observer.
3. United Nations Charter contains a criterion for assigning observer status to inter-governmental bodies on fulfilment of certain criteria.

How many of the above statement(s) is/are correct?

- A. Only one
- B. Only two ✓
- C. All three
- D. None

Your Answer :

Correct Answer : B

Answer Justification :

Non-Member States of the United Nations, which are members of one or more specialized agencies, can apply for the status of Permanent Observer. **The status of a Permanent Observer is based purely on practice, and there are no provisions for it in the United Nations Charter.**

The practice dates from 1946, when the Secretary-General accepted the designation of the Swiss Government as a Permanent Observer to the United Nations. Observers were subsequently put forward by certain States that later became United Nations Members, including Austria, Finland, Italy, and Japan. Switzerland became a UN Member on 10 September 2002.

Permanent Observers have free access to most meetings and relevant documentation.


Many regional and international organizations are also observers in the work and annual sessions of the General Assembly, including ADB.

Q Source: Revision Qs

71. Observer states of the Shanghai Cooperation Organization (SCO) include

1. Pakistan
2. Mongolia
3. Belarus
4. Iran

Select the correct answer using the codes below.

- A. 1 and 2 only
- B. 2, 3 and 4 only 
- C. 4 only
- D. 1, 2 and 3 only

Your Answer :

Correct Answer : B

Answer Justification :

SCO comprises eight member states, namely the Republic of India, the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan.

SCO counts four observer states, namely the Islamic Republic of Afghanistan, the Republic of Belarus, the Islamic Republic of Iran and the Republic of Mongolia.

SCO has six dialogue partners, namely the Republic of Azerbaijan, the Republic of Armenia, the Kingdom of Cambodia, the Federal Democratic Republic of Nepal, the Republic of Turkey, and the Democratic Socialist Republic of Sri Lanka.

Q Source: Revision Qs

72. The major river systems originating in the Western Ghats include

1. Godavari
2. Kaveri
3. Krishna
4. Thamiraparani
5. Tungabhadra

Which of the above is/are correct?

- A. 1, 2 and 3 only

- B. 1, 2, 3, 4 and 5 ✓
 C. 3, 4 and 5 only
 D. 1 and 2 only

Your Answer :

Correct Answer : B

Answer Justification :

The Rivers that originate in Western Ghats flow eastwards or westwards.

- The major river systems originating in the Western Ghats include Godavari, Kaveri, Krishna, Thamiraparani and Tungabhadra. These rivers flow to the east due to the gradient of the land and drain out into the Bay of Bengal.
- Major tributaries include Bhadra, Bhavani, Bhima, Malaprabha, Ghataprabha, Hemavathi and Kabini. Periyar, Bharathappuzha, Netravati, Sharavathi, Mandovi and Zuari rivers flow westwards towards the Western Ghats, draining into the Arabian Sea and are fast-moving, owing to the steeper gradient.

Q Source: Revision Qs

73. Consider the following about the Office of the Vice President of India.

#235992

1. The Vice President takes over the office of the President when there is a vacancy.
2. State legislatures do not take part in the election of the Vice-President.
3. The Vice President must be removed from his office by a resolution of the Rajya Sabha and Lok Sabha both by a special majority.

How many of the above statement(s) is/are correct?

- A. Only one
 B. Only two ✓
 C. All three
 D. None

Your Answer :

Correct Answer : B

Answer Justification :

The Vice President is elected for five years. His election method is similar to that of the President, the only difference is that members of State legislatures are not part of the electoral college.

The Vice President acts as the President only until a new President is elected. B. D. Jatti acted as President on the death of Fakhruddin Ali Ahmed until a new President was elected.

The impeachment of Vice President is different from that of the President. In the latter case, both houses must pass the resolution by a special majority.

But the VP may be removed from his office by a resolution of the Rajya Sabha passed by a majority and agreed to by the Lok Sabha.

Q Source: Revision Qs

74. The Brahmaputra basin spans over the states of

1. Arunachal Pradesh
2. Assam
3. Tripura
4. Mghalaya
5. Nagaland

How many of the above states fit as the correct answer?

- A. Only two states
- B. Only three states ☒
- C. Only four states
- D. All five states

Your Answer :

Correct Answer : B

Answer Justification :

Brahmaputra basin spans over Arunachal Pradesh, Assam, Nagaland, Meghalaya, Sikkim and West Bengal.

With its origin in the Manasarovar Lake region, near the Mount Kailash, located on the northern side of the Himalayas in Burang County of Tibet as the Yarlung Tsangpo River, it flows along southern Tibet to break through the Himalayas in great gorges (including the Yarlung Tsangpo Grand Canyon) and into Arunachal Pradesh (India).

It flows southwest through the Assam Valley as Brahmaputra and south through Bangladesh as the Jamuna (not to be mistaken with Yamuna of India). In the vast Ganges Delta, it merges with the Padma, the popular name of the river Ganges in Bangladesh, and finally, after merging with Padma, it becomes the Meghna and from here, it flows as Meghna river before emptying into the Bay of Bengal.

The Brahmaputra Valley is said to be one of the most hazard-prone regions of the country – according to the National Flood Commission of India, about 32 lakh hectares or over 40 per cent of the Assam's land is flood-prone due to this.

Q Source: Page 26: 11th NCERT: India Physical Geography

75. Which of the following terms fit the Directive Principles listed in Part IV of the Constitution well?

- A. Goals and objectives for a society
- B. Rights of individuals and society
- C. Welfare policies to be adopted by the government
- D. Both (a) and (c) ✓

Your Answer :

Correct Answer : D

Answer Justification :

We get some idea of the vision of makers of our Constitution by looking at some of the Directive Principles

The governments from time to time tried to give effect to some Directive Principles of State Policy. They passed several zamindari abolition bills, nationalized banks, enacted numerous factory laws, fixed minimum wages, cottage and small industries were promoted and provisions for reservation for the uplift of the scheduled castes and scheduled tribes were made.

The DPSPs clearly reflect the social goals that we must follow like equity and justice.

Rights such as equal pay for equal work, child nutrition, old age security are some of the rights that DPSP mandates the government to implement.

Q Source: Revision Qs

76. Consider the following statements.

1. Parliamentary privileges are enshrined in the Constitution and enjoyed by individual MPs as well as by both Lok Sabha and Rajya Sabha.
2. The presiding officer of the legislature has the final power in deciding matters of breach of privilege within the House.

Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2 ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

Privileges may be classified into two groups:

- Privileges that are enjoyed by the members individually and
- Privileges that belong to each House (Lok Sabha or Rajya Sabha) of Parliament collectively.

Parliament has not yet codified its privileges. In fact, the privileges rest on conventions and they may be ascertained by the practice and law that is in force in England

The Privileges and immunities enjoyed by the members individually are:

- Freedom of speech - The basic idea of extending this freedom being the necessity that every member would put forward without fear or favour his/her arguments for or against any matter before the House.
- Freedom from arrest - From this freedom it is understood that no such member shall be arrested in a civil case 40 days before and after the adjournment of the House (Lok Sabha or Rajya Sabha) and also when the House is in session.
- Exemption from attendance as jurors and witnesses.

We will cover collective privileges in later tests.

Q Source: Revision Qs

77. Consider the following about the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

1. It is the only UN agency to have its international headquarters in India.
2. It is primarily responsible for coordinating the initiatives of major international NGOs operating in the Asia-Pacific region.
3. India has not acceded to the membership of ESCAP.

How many of the above statement(s) is/are correct?

- A. Only one ✓
- B. Only two
- C. All three
- D. None

Your Answer :

Correct Answer : A

Answer Justification :

Statement 1 and 2: It was established in 1947 with its headquarters in Bangkok, Thailand, to assist in post-war economic reconstruction.

ESCAP works to overcome some of the region's greatest challenges by providing results oriented projects, technical assistance and capacity building to member States in the following areas:

Macroeconomic Policy, Poverty Reduction and Financing for Development, Trade and

Investment, Transport etc.

In addition, ESCAP gives stronger participation to the smaller and often left out voices of the region, the least developed countries, the small island States and landlocked States.


Statement 3: India became its member on 28 March 1947, Pakistan on 30 September 1947.

Q Source: Revision Qs

78. Consider the following statements.

1. The Prime Minister is Constitutionally obliged to furnish all the information that the President may call for.
2. Constitutionally, the President has a right to be informed of all important matters and deliberations of the Council of Ministers.

Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

The President often writes to the Prime Minister and expresses his views on matters confronting the country. Here, the PM is bound to share the information that the President has called for.

In doing so, the President exercises his situational discretion.

Moreover, the President can send back the advice given by the Council of Ministers and ask the Council to reconsider the decision.

- In doing this, the President acts on her own discretion. When the President thinks that the advice has certain flaws or legal lacunae, or that it is not in the best interests of the country, the President can ask the Council to reconsider the decision.
- Although, the Council can still send back the same advice and the President would then be bound by that advice, such a request by the President to reconsider the decision, would naturally carry a lot of weight.

Q Source: Revision Qs

79. The constitution prescribes a maximum limit on the strength of how many of the following bodies?

1. Lok Sabha
2. Rajya Sabha
3. Legislative Council of States
4. Union Council of Ministers

Select the correct answer using the codes below.

- A. Only two
- B. Only three
- C. All four ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

S1 and S2: Maximum size of both is stated in the Constitution - 552 for LS and 245 RS.

S3: The size of the State Legislative Council cannot be more than one third of the membership of the State Legislative Assembly. However, its size cannot be less than 40 members.

S4: Before the 91st Amendment Act (2003), the convention of appointing a lot of ministers on the council due to political reasons led to widespread abuse of the system.

It led to very large size of the Council of Ministers. Besides, when no party had a clear majority, there was a temptation to win over the support of the members of the Parliament by giving them ministerial positions as there was no restriction on the number of the members of the Council of Ministers.

This was happening in many States also. Therefore, an amendment was made that the Council of Ministers shall not exceed 15 percent of total number of members of the House of People (or Assembly, in the case of the States).

Q Source: Page 91: Indian Constitution at Work: NCERT XIth

80. Anaerobic microbes include

1. Beijernickia
2. Azotobacter
3. Rhodospirillum

Select the correct answer using the codes below.

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 3 only ✓

Your Answer :

Correct Answer : D

Answer Justification :

The nitrogen-fixing microbes could be free-living or symbiotic. Examples of free-living nitrogen-fixing aerobic microbes are Azotobacter and Beijerinckia while Rhodospirillum is anaerobic and Bacillus free-living.


In addition, a number of cyanobacteria such as Anabaena and Nostoc are also free-living nitrogen-fixers.

Several types of symbiotic biological nitrogen fixing associations are known. The most prominent among them is the legume-bacteria relationship.

Both Rhizobium and Frankia are free-living in soil, but as symbionts, can fix atmospheric nitrogen.

Q Source: Page 202: Biology: XIth NCERT

81. Pitalkhora caves are known for their association with

- A. Saktism
- B. Buddhism 
- C. Lokayatas
- D. Virashaivas

Your Answer :

Correct Answer : B

Answer Justification :

The stupas in the fourth and fifth centuries CE have Buddha images attached.

Junnar has the largest cave excavations— more than two hundred caves around the hills of the town—whereas Kanheri in Mumbai has a hundred and eight excavated caves.

The most important sites are **Ajanta, Pitalkhora, Ellora, Nashik, Bhaja, Junnar, Karla, Kanheri. Ajanta, Ellora, and Kanheri continue to flourish.**

Earlier it was presumed that because of the absence of the Buddha image, the caves were considered belonging to the orthodox faith of Buddhism, i.e., the Theravadins, but with the discovery of the Konkan Maurya inscription mentioning the Saka era 322, i.e., 400 CE, it is now satisfactorily proved that the cave activity in western Deccan was an ongoing process.

Q Source: Revision: 11th NCERT: An Introduction to Indian Arts

82. Consider the following statements.

1. Satpura ranges form the northernmost boundary of the Deccan plateau.
2. Satpura ranges are the least denuded of all the Deccan plateau ranges and run continuously.

Select the correct answer using the codes below.

- A. 1 only ✓
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

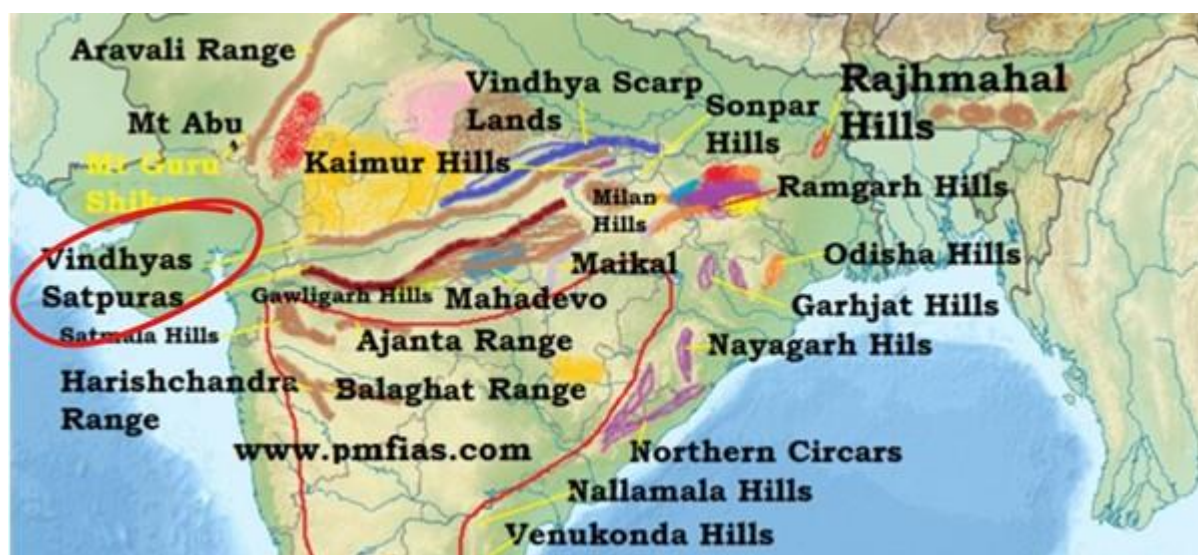
Your Answer :

Correct Answer : A

Answer Justification :

The Central Highlands are bounded to the west by the Aravali range. The Satpura range is formed by a series of scarped plateaus on the south, generally at an elevation varying between 600-900 m above the mean sea level.

This forms the northernmost boundary of the Deccan plateau. It is a classic example of the relict mountains which are highly denuded and form discontinuous ranges. The extension of the Peninsular plateau can be seen as far as Jaisalmer in the West, where it has been covered by the longitudinal sand ridges and crescent-shaped sand dunes called barchans. This region has undergone metamorphic processes in its geological history, which can be corroborated by the presence of metamorphic rocks such as marble, slate, gneiss, etc




Q Source: Revision Qs

83. The Himalayan tributaries of the Indus includes how many of the following?

1. Zaskar

2. Gilgit
3. Himadri
4. Dras
5. Nubra

Select the correct answer using the codes below.

- A. Only two
- B. Only three
- C. Only four 
- D. All five

Your Answer :

Correct Answer : C


Answer Justification :

The Indus receives a number of Himalayan tributaries such as the Shyok, the Gilgit, the Zaskar, the Hunza, the Nubra, the Shigar, the Gasting and the Dras. It finally emerges out of the hills near Attock where it receives the Kabul river on its right bank. The other important tributaries joining the right bank of the Indus are the Khurram, the Tochi, the Gomal, the Viboa and the Sangar. They all originate in the Sulaiman ranges.

The river flows southward and receives 'Panjnad' a little above Mithankot. The Panjnad is the name given to the five rivers of Punjab, namely the Satluj, the Beas, the Ravi, the Chenab and the Jhelum

Q Source: Revision Qs

84. A study of the following best defines nutriepigenomics:

- A. contribution of potential genetic and environmental risk factors to human birth
- B. human skin diseases caused due to lack of nutrition
- C. food nutrients and their effects on human health through epigenetic modifications 
- D. top layer of soil and the genetic changes it can bring to a standing crop

Your Answer :

Correct Answer : C

Answer Justification :

There is now considerable evidence that nutritional imbalances during gestation and lactation are linked to non-communicable diseases, such as obesity, cardiovascular disease, diabetes, hypertension, and cancer.

- If metabolic disturbances occur during critical time windows of development, the resulting epigenetic alterations can lead to permanent changes in tissue and organ structure or

function and predispose individuals to disease.

- Epigenetics relates to heritable changes in gene function that occur independently of alterations in primary DNA sequence.
- The period of development in which the nutritional imbalance occurs is very important in determining which disease-related genes will be affected.
- Different organs have critical developmental stages, and the time point at which they are compromised will predispose individuals to specific diseases.
- Epigenetic modifications that occur during development may not be expressed until later in life depending on the function of the gene.
- While the majority of studies implicate prenatal and perinatal periods as critical time windows, some research has shown that nutritional intake during adulthood can also affect the epigenome.

Q Source: AR: 11th Biology NCERT + <http://www.dbtindia.nic.in/program-medical-biotechnology/>

85. The organisation—Survey of India—is under the aegis of

- A. Ministry of Environment, Forest and Climate Change
- B. Ministry of Environment, Forest and Climate Change ✓
- C. Ministry of Earth Sciences
- D. Ministry of Statistics and Programme Implementation

Your Answer :

Correct Answer : B

Answer Justification :

The history of the Survey of India dates back to the 18th Century. Forerunners of army of the East India Company and Surveyors had an onerous task of exploring the unknown.

Under the Department of Science & Technology, it was set up in 1767 and has evolved rich traditions over the years.


Bit by bit the tapestry of Indian terrain was completed by the painstaking efforts of a distinguished line of Surveyors such as Mr. Lambton and Sir George Everest.

It is a tribute to the foresight of such Surveyors that at the time of independence the country inherited a survey network built on scientific principles.

In its assigned role as the nation's Principal Mapping Agency, Survey of India bears a special responsibility to ensure that the country's domain is explored and mapped suitably, provide base maps for expeditious and integrated development and ensure that all resources contribute with their full measure to the progress, prosperity and security of our country now and for generations to come.

Q Source: Revision Qs

86. Which of these cloud types grow high up into the atmosphere, sometimes even reaching tropopause, instead of spreading across the sky?

- A. Altostratus
- B. Stratus
- C. Cirrus
- D. Cumulus and Cumulonimbus 

Your Answer :

Correct Answer : D

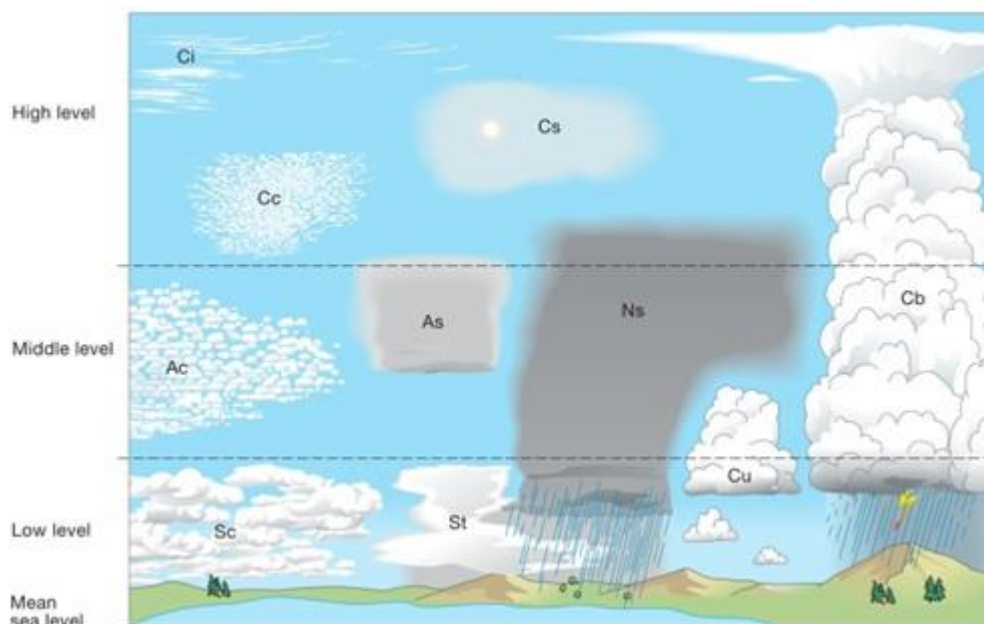
Answer Justification :

Clouds are generally encountered over a range of altitudes varying from sea level to the top of the troposphere (the tropopause). The troposphere can be vertically divided into three levels, formerly known as “étages”: high, middle and low. Each level is defined by the range of heights at which clouds of certain genera occur most frequently. The levels overlap and their limits vary with latitude (see table and figure below).

Table 6. Approximate heights of each level, and the genera occurring in each.

Level	Genera	Polar region	Temperate region	Tropical region
High	Cirrus Cirrocumulus Cirrostratus	3 – 8 km (10 000 – 25 000 ft)	5 – 13 km (16 500 – 45 000 ft)	6 – 18 km (20 000 – 60 000 ft)
Middle	Altostratus Altostratus Nimbostratus	2 – 4km (6 500 – 13 000 ft)	2 – 7 km (6 500 – 23 000 ft)	2 – 8 km (6 500 – 25 000 ft)
Low	Stratus Stratocumulus Cumulus Cumulonimbus	From the Earth's surface to 2 km (0 – 6 500ft)	From the Earth's surface to 2 km (0 – 6 500ft)	From the Earth's surface to 2 km (0 – 6 500ft)

Cumulus and Cumulonimbus usually have their bases in the low level, but their vertical extent is often so great that their tops may reach into the middle and high levels.



Q Source: 11th NCERT: Fundamentals of Physical Geography

87. Consider the following statements.

1. A government security (G-Sec) can be issued by both central government and state governments.
2. G-secs cannot be issued for less than one year maturity.
3. Foreign Portfolio Investors (FPIs) cannot participate in the G-Secs market.

How many of the above statement(s) is/are correct?

- A. Only one ☒
- B. Only two
- C. All three
- D. None

Your Answer :

Correct Answer : A

Answer Justification :

A government security (G-Sec) is a tradeable instrument issued by the central government or state governments.

Key features:

It acknowledges the government's debt obligations.

Such securities can be both short term (treasury bills – with original maturities of less than one year) or long term (government bonds or dated securities – with

original maturity of one year or more).

The central government issues both: treasury bills and bonds or dated securities.


- State governments issue only bonds or dated securities, which are called the state development loans.
- Since they are issued by the government, they carry no risk of default, and hence, are called risk-free gilt-edged instruments.
- **FPIs are allowed to participate in the G-Secs market within the quantitative limits prescribed from time to time.**

Learning: Why are G-secs volatile?

- G- Sec prices fluctuate sharply in the secondary markets. Factors affecting their prices:
- Demand and supply of the securities.
- Changes in interest rates in the economy and other macro-economic factors, such as, liquidity and inflation.
- Developments in other markets like money, foreign exchange, credit and capital markets.
- Developments in international bond markets, specifically the US Treasuries.
- Policy actions by RBI like change in repo rates, cash-reserve ratio and open-market operations.

Q Source: Revision Qs

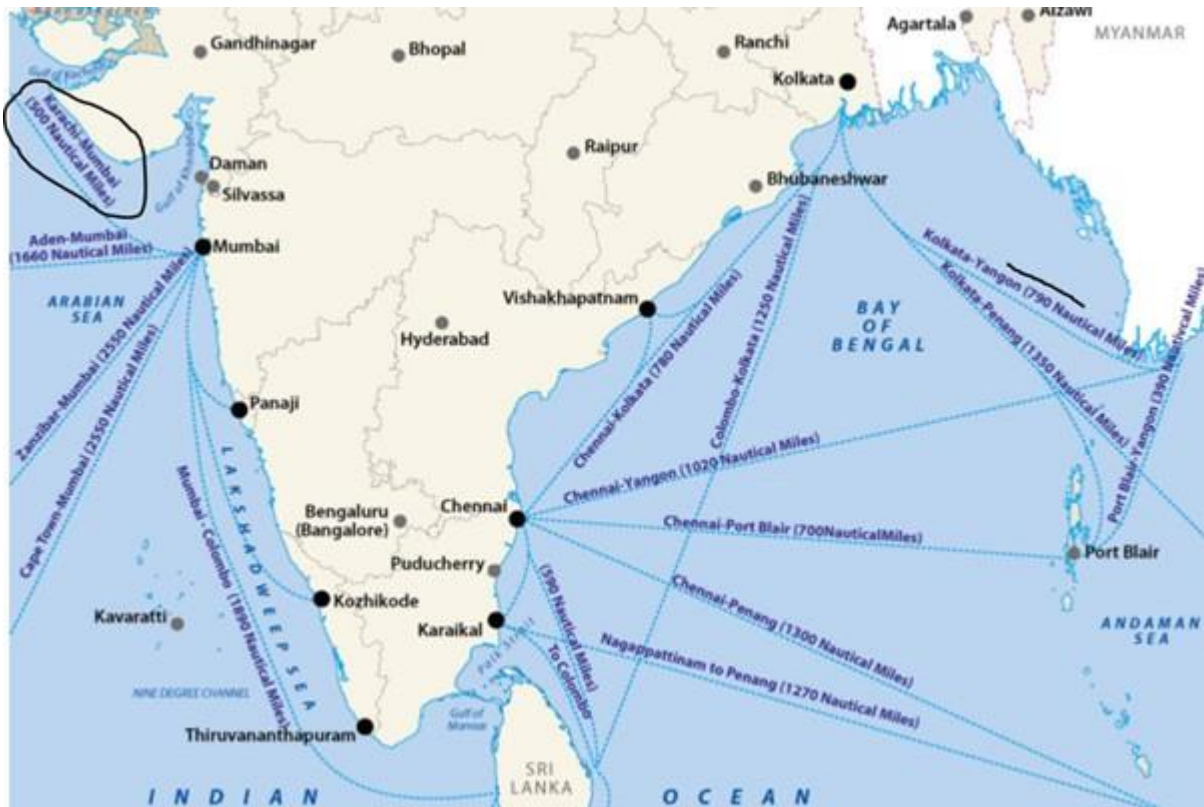
88. Among the following major Indian sea/trade routes, the shortest is

- A. Mumbai—Aden
- B. Mumbai—Karachi 
- C. Kolkata - Penang (Malaysia)
- D. Kolkata - Yangon

Your Answer :

Correct Answer : B

Answer Justification :



Q Source: Map based questions: India

89. Consider the following statements.

1. A non-citizen of India cannot become a member of parliament.
2. A person who does not have his/her name on the electoral rolls cannot contest for election to the Parliament.

Which of the above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2 ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

Statement 1 and 2: Qualifications for Membership of Lok Sabha are the following:

- She should be a citizen of India; So, 1 is correct.
- She should not be less than 25 years of age;
- She should not be a proclaimed criminal (i.e. he/she should not be a convict, a confirmed debtor or otherwise disqualified by law);

- She should have his/her name in the electoral rolls in any part of the country (he/she may not belong to the State from which he/she contests the election); so, 2 is correct as well.
- The candidate should not be a direct beneficiary of the Government and should not hold an office of profit under the Government.

Q Source: Revision: 9th NCERT: Polity

90. The Supreme Court of India

1. was first established under the Pitts Act of 1861
2. was first setup at Fort William, Calcutta

Which of the above is/are correct?

- A. 1 only
- B. 2 only ✓
- C. Both 1 and 2
- D. None

Your Answer :

Correct Answer : B

Answer Justification :

Under the Regulating Act of 1773, a new Supreme Court was established, while a court of appeal - the Sadar Nizamat Adalat - was also set up at Calcutta.

It was setup at Fort William, Calcutta.

This Supreme Court consisted of one Chief Justice and three other regular judges or Puisne Judges. Sir Elijah Impey was the first Chief Justice of this Supreme Court.

Even though it was a Supreme Court, it was not above the Company. The act of 1773 was obscure with regard to the relation of the Supreme Court with the Government of Bengal.

Q Source: Revision Qs

91. In Medieval India, the term Zabita was used to refer to

- A. revenue regulations ✓
- B. state donations
- C. cavalry
- D. size of agricultural produce

Your Answer :

Correct Answer : A

Answer Justification :

Khilji's first revenue regulation (zabita) related to the measurement of cultivable land as the principle for determining revenue; biswa (1/20th of a bigha) was declared to be the standard unit of measurement.

- The state demand was fixed as half of the produce per biswa and assessment was done on the basis of paimash (measurement).
- Bhaga (land-revenue), Bhoga (cesses) and Kar (taxes) became the basis for the assignment of land to the nobles.
- The Sultan deprived the village chiefs and Hindu revenue collectors, such as khuts, maqaddams, and chaudhurs of their privileges.
- They were forced to pay land revenue and other cesses at the same rate at which other peasants were taxed.
- Besides the land revenue, house tax (ghari) and pasture tax (chari) were also imposed on the agrarian population.

Q Source: Based on UPSC CAPF papers + 7th NCERT History revision

92. Consider the following statements.**Abscisic acid (ABA)**

1. inhibits seed germination in plants
2. stimulates the closure of stomata in plant leaves
3. increases the tolerance of plants to various kinds of stresses.

How many of the above statement(s) is/are correct?

- A. Only one
- B. Only two
- C. All three ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

Abscisic acid (ABA) was discovered for its role in regulating abscission and dormancy. But like other PGRs, it also has other wide ranging effects on plant growth and development.

It acts as a general plant growth inhibitor and an inhibitor of plant metabolism. ABA inhibits seed germination. ABA stimulates the closure of stomata in the epidermis and increases the tolerance of plants to various kinds of stresses. Therefore, it is also called the stress hormone.


ABA plays an important role in seed development, maturation and dormancy. By inducing dormancy, ABA helps seeds to withstand desiccation and other factors unfavourable for growth.

Q Source: Chapter 15: Biology: XIth NCERT

93. Consider the following statements about the immediate consequences of the Quit India movement (QIM) started by Gandhi in 1942.

1. The Indian National Congress (INC) was declared an unlawful association.
2. The senior INC leaders were imprisoned without trial within hours of Gandhi's speech that declared the start of the QIM.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. None of the above

Your Answer :

Correct Answer : C

Answer Justification :

The Quit India movement was **started by Mahatma Gandhi in 1942** but drew protests from the All-India Congress Committee demanding what Gandhi called was “**An Orderly British Withdrawal**” from India. This forced the British to act immediately and soon all the senior INC leaders were imprisoned without trial within hours of Gandhi's speech.

Other key facts:

1. Several national leaders like Mahatma Gandhi, Abdul Kalam Azad, Jawaharlal Nehru and Sardar Vallabhbhai Patel were arrested.
2. The Congress was declared an unlawful association, leaders were arrested and its offices all over the country were raided and their funds were frozen.
3. The first half of the movement was peaceful with demonstrations and processions. The peaceful protest was carried till Mahatma Gandhi's release.
4. The second half of the movement was violent with raids and setting fire at post offices, government buildings and railway stations. Lord Linlithgow adopted the policy of violence.
5. The Viceroy's Council of Muslims, Communist Party and Americans supported Britishers.

Q Source: Revision Qs

94. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) concerns species that are

1. in danger of extinction
2. not threatened with extinction but that might suffer a serious decline in number if trade is not restricted
3. protected in at least one country that is a CITES member states and that has petitioned others

for help in controlling international trade in that species

How many of the above statement(s) is/are correct?

- A. Only one
- B. Only two
- C. All three ✓
- D. None

Your Answer :

Correct Answer : C

Answer Justification :

CITES classifies plants and animals according to three categories, or appendices, based on how threatened. They are.

1. Appendix I: It lists species that are in danger of extinction. It prohibits commercial trade of these plants and animals except in extraordinary situations for scientific or educational reasons.
2. Appendix II species: They are those that are not threatened with extinction but that might suffer a serious decline in number if trade is not restricted. Their trade is regulated by permit.
3. Appendix III species: They are protected in at least one country that is a CITES member states and that has petitioned others for help in controlling international trade in that species.

Learning: Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):

- It is an International agreement to regulate worldwide commercial trade in wild animal and plant species.
- It restricts trade in items made from such plants and animals, such as food, clothing, medicine, and souvenirs.
- It was signed on March 3, 1973 (Hence world wildlife day is celebrated on march 3).
- It is administered by the United Nations Environment Programme (UNEP).
- Secretariat – Geneva (Switzerland).
- CITES is legally binding on state parties to the convention, which are obliged to adopt their own domestic legislation to implement its goals.

Q Source: Revision Qs

95. Jajmani in ancient India was essentially a system of

- A. sacrificial rites
- B. war tributes
- C. tax collection
- D. division of labour ✓

Your Answer :

Correct Answer : D

Answer Justification :

Jajmani system or Yajman system was an economic system most notably found in villages of India in which lower castes performed various functions for upper castes and received grain or other goods in return. It was an occupational division of labour involving a system of role-relationships that enabled villages to be mostly self-sufficient.


The potter, carpenter, stone sculptor, mason and goldsmith lived and worked often in their own homes in designated parts of the village. Everyone in the village knew their local craftsmen and therefore he had no need to autograph his works. The jajmani system ensured that hereditary artisans were bound to the dominant agricultural groups through traditional ties. This was a hierarchical and symbiotic relationship, in which the artists worked under the protection and hospitality of the landowning class. When there was a festival, the landowner or the jajman would request the potter to make ceremonial pots and diyas and in return pay him in kind with food for the rest of the year. When his household needed a grinding stone, the stone cutter would make one to the specified requirement and size.

Q Source: Ch 3: Living Arts and Crafts Traditions of India 11th NCERT

96. The International Covenant on Civil and Political Rights (ICCPR) Act identifies which of the following individual rights?

1. Freedom of religion
2. Freedom of speech
3. Freedom of assembly
4. Electoral rights
5. Rights to due process and a fair trial

Select the correct answer using the codes below.

- A. 3, 4 and 5 only
- B. 1, 2 and 3 only
- C. 1, 4 and 5 only
- D. 1, 2, 3, 4 and 5 

Your Answer :

Correct Answer : D

Answer Justification :

The ICCPR is a multilateral treaty that deals with human rights.

Adoption - The Act was adopted by the United Nations (UN) General Assembly on 1966 and came into force in 1976.

The Covenant respects civil and political rights of individuals, including right to life, freedom of religion, freedom of speech, freedom of assembly, electoral rights, and rights to due process and a fair trial.

The ICCPR is part of the International Bill of Human Rights, along with the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Universal Declaration of Human Rights (UDHR).

Monitoring Authority - The UN Human Rights Committee reviews regular reports by state parties on how human rights are being implemented.

Today, the covenant has 173 parties and 6 more signatories without ratification.

India ratified this treaty in 1979.

Q Source:

<https://indianexpress.com/article/explained/explained-global/sri-lanka-using-human-rights-law-to-stifle-free-speech-8651121/>

97. Match the following stonewares/stones with the region they are found in:

Stoneware/stone:	Region
1. Jali work:	Rajasthan
2. Gorahari stone:	Uttar Pradesh
3. Soapstone:	Odisha

How many of the above pairs is/are correctly matched?

- A. Only one pair
- B. Only two pairs
- C. All three pairs ✓
- D. None of the above

Your Answer :

Correct Answer : C

Answer Justification :

Rajasthan is famous for delicate jali work, for domestic architecture in yellow and pink limestone and white marble. Jaipur also produces stone figurines.

In Madhya Pradesh the soft marble rocks of Bhedaghat on the banks of the Narmada provide craftsmen with excellent raw material to make carved panels, figurines and boxes.

Uttar Pradesh is one of the leading producers and exporters of stoneware in India. Soft marble and soft streaked Gorahari stone of many shades are inlaid with semi precious stones. Inlaid table tops, plates and decorative items are produced in Agra.

In Orissa the stone cutters of Puri work mainly in soapstone. Harder stone is used for temple


building. Traditional stone carvers in Mangalpur make stone utensils from semi-hard grey stone and add to it a beautiful polish. Grey stone from Khichling are made into items for the urban market, like boxes and containers, bowls and vases.

Q Source: Ch 3: Living Arts and Crafts Traditions of India 11th NCERT

98. Consider the following statements.

1. Uruli is a wide-mouthed cooking vessel made in Kerala using the lost-wax process.
2. Bidri is a technique practiced in Andhra Pradesh where blackened alloy of zinc and copper are inlaid with thin sheets of pure silver.

Select the correct answer using the codes below.

- A. 1 only
- B. 2 only
- C. Both 1 and 2 
- D. Neither 1 nor 2

Your Answer :

Correct Answer : C

Answer Justification :

Bidri, a technique named after its place of origin, Bidar, Andhra Pradesh, is the application of inlay (mainly silver) to objects cast in a relatively soft alloy of zinc, copper and lead. After the inlay work is completed, the ground is stained black using chemicals, thus creating a splendid contrast to the silver decoration.


In Kerala to make the uruli (wide-mouthed cooking vessel, with flat or curved rims) the lost wax process is used. A giant cauldron called varpu, which is magnificent in form, is used in temples for making prasada to feed thousands of devotees. Kerala also has a great tradition in making metal tumblers for drinking, which range in size and are very elegantly shaped.

Q Source: Ch 4: Living Arts and Crafts Traditions of India 11th NCERT

99. With reference to the architectural finds concerning the Kushan Period (100 BCE - 300 CE) in India, consider the following statements.

1. In the north-western region of India, the Greco-Buddhist stupas were decorated with stucco designs and motifs.
2. There is no evidence of any paint work done by the Kushanas in Gandharan sculptures.

Select the correct answer using the codes below.

- A. 1 only 
- B. 2 only
- C. Both 1 and 2

D. Neither 1 nor 2

Your Answer :

Correct Answer : A

Answer Justification :

In the north-western region of India the Greco-Buddhist stupas were often decorated with stucco designs and motifs. There are several Gandharan heads with evidence of paint. Strong red mineral colours were used for the lips and black charcoal hues for matted locks and curly hair.


Learning: Votive terracotta figures are made in Madhya Pradesh and Chhattisgarh. In Bastar, on amavasya (the no moon night) of Bhadrapad (August to September), tribals offer terracotta bulls, tigers, elephants and horses, sometimes with one or two riders, to the goddess whom they worship for wealth, health and protection from evil spirits. These clay animal gifts or votive offerings have replaced the practice of animal sacrifices of earlier times.

Q Source: Ch 3: Living Arts and Craft Traditions of India: 11th NCERT

100. Consider the following statements about aerobic rice cultivation.

1. Throughout the growing season, aerobic rice field is kept under unsaturated condition.
2. No fertilisers are used with any form of aerobic rice cultivation.

Which of the above is/are correct?

- A. 1 only 
- B. 2 only
- C. Both 1 and 2
- D. None of the above

Your Answer :

Correct Answer : A

Answer Justification :

Aerobic rice cultivation is growing rice plant as irrigated crop like cultivating maize and wheat in aerobic condition, where oxygen is plenty in soil.

- Throughout the growing season, aerobic rice field is kept under unsaturated condition and field is irrigated by surface or sprinkler system to keep soil wet. Therefore, water productivity is reported to be higher in aerobic rice.
- In aerobic rice cultivation, rice is cultivated as direct sown in non-puddle aerobic soil under supplementary irrigation and fertiliser with suitable high yielding rice varieties.

The suitable areas for aerobic rice cultivation includes irrigated lowlands, where rainfall is insufficient to sustain rice production, delta regions where there is delay in water release from

reservoir, irrigated system of rice cultivation, where pumping from deep bore well has become so expensive and favourable upland system has access to supplementary irrigation.

- Accordingly, Tamil Nadu, Jharkhand, Chhattisgarh, parts of Bihar, Odisha, Karnataka, and eastern Uttar Pradesh are the projected area where there is uneven distribution and frequent occurrence of soil moisture limitation.
- Aerobic rice cultivation needs suitable rice varieties having the characteristics of both upland and high yielding lowland varieties to get good yield under the new unconventional system of cultivation.
- This system also involves mechanised way of sowing with no puddling, transplanting and no need of frequent irrigation, which reduce labour usage more than 50%, compared to irrigated rice.

Q Source: Revision Qs