



Self Study IAS

Sample Test - Solutions

Number of questions: 100

Maximum Marks: 200

Time: 2 hours

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1. Which of the following conditions is/are conducive for formation of tropical cyclones?

1. large and continuous supply of warm and moist air.
2. large value of coriolis force.
3. inflow of air at upper level of atmosphere.

Select the correct answer using the codes given below.

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

a) 1 and 2 only

Large and continuous supply of warm and moist air is the most important condition for tropical cyclone. Where coriolis force is zero (like equator), tropical cyclones do not develop. An upper level outflow of air (and not inflow) helps in formation of tropical cyclone.

2. Consider the following statements about towns of Indus Valley Civilization:

1. The dockyard at Lothal is connected through a channel to river Bhogva.
2. Lime mortar was never used at Mohenjodaro for construction.

Which of the statements given above is/are correct?

- a) 1 only

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

a) 1 only

The dockyard at Lothal is connected through a channel to river Bhogva. Lime was used at Mohenjodaro for construction, for example in the great bath.

3. A buffer solution is the one which

- a) changes pH with the addition of a strong base.
- b) changes pH with the addition of an acid.
- c) resists changes in pH.
- d) does not change pH at all.

c) resists changes in pH.

A buffer solution (more precisely, pH buffer or hydrogen ion buffer) is an aqueous solution consisting of a mixture of a weak acid and its conjugate base, or vice versa. Its pH changes very little when a small or moderate amount of strong acid or base is added to it and thus it is used to prevent changes in the pH of a solution. Buffer solutions are used as a means of keeping pH at a nearly constant value in a wide variety of chemical applications.

4. Article 16 provides that No citizen can be discriminated against or be ineligible for any employment or office under the State on grounds of only

- 1. descent
- 2. language
- 3. place of birth
- 4. race

Select the correct answer using the codes given below.

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

b) 1, 3 and 4 only

Article 16 provides for equality of opportunity for all citizens in matters of employment or appointment to any office under the State. No citizen can be discriminated against or be ineligible for any employment or office under the State on grounds of only religion, race, caste, sex, descent, place of birth or residence.

5. Which of the following best describes the term 'effective radiation'?

- a) the difference between total incoming solar radiation and outgoing terrestrial radiation.
- b) the radiant energy received by the earth and its atmosphere.
- c) the longwave radiation from the earth's surface.
- d) none

c) the longwave radiation from the earth's surface.

The terrestrial (longwave) radiation is also called 'effective radiation' because it helps in heating the lower portion of the atmosphere.

https://books.google.co.in/books?id=tkhWXETk_G4C&pg=PA174&dq=effective+radiation+longwave+heating+the+atmosphere&hl=en&sa=X&ved=0CCsQ6AEwAmoVChMIgdX2muCmxwIVDhmOCh0LXQWt#v=onepage&q=effective%20radiation%20longwave%20heating%20the%20atmosphere&f=false

6. If RBI lowers the Cash Reserve Ratio (CRR), then

- 1. supply of money in the economy may increase.
- 2. banks will increase the interest rates.
- 3. exports will become cheaper.

Select the correct answer using the codes given below.

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

a) 1 only

If CRR is lowered by RBI, it will free up cash which will then enter the market increasing the money supply. In such a scenario, banks will prefer to lower the interest rate. Exports have no direct relation with CRR.

7. Consider the following statements about ecological succession:

1. The initial stage of secondary succession is different from the initial stage of primary succession.
2. The total time required for the development of climax vegetation in the secondary succession is more than that for primary succession.

Which of the statements given above is/are correct?

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

a) 1 only

The process of regrowth that an ecosystem undergoes after a destructive event such as a fire, avalanche, agricultural clearing, deforestation, or disease is known as secondary succession. The initial stage of secondary succession is different from that of primary succession because there has already been a community of life in the area of the disturbance and there is typically still some life present. This is unlike primary succession where you begin with bare rock - no life - even though the ecosystem in question may have been drastically altered. The total time required for the development of climax vegetation in the secondary succession is less than that for primary succession.

8. Consider the following statements:

1. Mulsim League's performance in the 1937 elections in the Muslim majority provinces such as Sindh and North West Frontier was very good.
2. The election results pushed it towards embracing extreme communalism.

Which of the statements given above is/are correct?

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

b) 2 only

Mulsim League's performance in the 1937 elections in the Muslim majority provinces such as Sindh and North West Frontier was very poor. The poor election results

pushed it towards embracing extreme communalism.

9. People drinking water from a shallow hand pump are likely to suffer from which of the following diseases?

1. cholera
2. typhoid
3. jaundice
4. fluorosis

Select the correct answer using the codes given below.

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

d) 1, 2, 3 and 4

Cholera, Typhoid, Jaundice are water borne diseases. Fluorosis happens due to excess intake of fluoride through drinking water obtained by hand pumps.

<http://www.thehindu.com/news/cities/Hyderabad/handpumps-lead-to-spurt-in-fluorosis-cases/article1462521.ece>

<http://unicef.in/Story/805/Mitigating-Fluorosis-Scourge-in-Madhya-Pradesh>

10. If both speaker and deputy speaker of Lok Sabha is absent from a joint sitting, then who presides over such a sitting?

- a) Chairman of Rajya Sabha.
- b) Deputy Chairman of Rajya Sabha.
- c) a person as may be determined by the members present.
- d) none of the above.

b) Deputy Chairman of Rajya Sabha.

The Speaker of Lok Sabha presides over a joint sitting of the two Houses and the Deputy Speaker, in his absence. If the Deputy Speaker is also absent from a joint sitting, the Deputy Chairman of Rajya Sabha presides. If he is also absent, such other person as may be determined by the members present at the joint sitting, presides

over the meeting. It is clear that the Chairman of Rajya Sabha does not preside over a joint sitting as he is not a member of either House of Parliament

11. The essential conditions for the development of Karst topography is/are

1. The limestone should be porous.
2. The limestone should be widely distributed in both area and vertical dimensions.
3. The carbonate rocks should be very close to ground surface.

Select the correct answer using the codes given below.

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

c) 2 and 3 only

The limestone should not be porous. If the limestone is porous, the water may pass through the rock mass and thus whole rock mass will become weak and will collapse. Therefore permeability should be largely controlled by joint and not by mass of rocks.

12. An employment situation where the marginal productivity of agricultural labour is zero is known as

- a) Structural unemployment.
- b) Frictional unemployment.
- c) Seasonal unemployment
- d) None of the above.

d) None of the above

An employment situation where the marginal productivity of agricultural labour is zero is known as disguised unemployment. In such a case, even if those employed in a disguised way are removed, there is no effect on production.

13. With reference to ecosystem pyramid, consider the following statements:

1. The energy pyramid is always upright.

2. The numbers pyramid is always inverted.

Which of the statements given above is/are correct?

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

a) 1 only

The pyramid of numbers depicts the relationship in terms of the number of producers, herbivores and the carnivores at their successive trophic levels. There is a decrease in the number of individuals from the lower to the higher trophic levels. The number pyramid varies from ecosystem to ecosystem. There are three of pyramid of numbers:

- 1. Upright pyramid of number
- 2. Partly upright pyramid of number and
- 3. Inverted pyramid of number.

The pyramid of energy or the energy pyramid describes the overall nature of the ecosystem. During the flow of energy from organism to other, there is considerable loss of energy in the form of heat. The primary producers like the autotrophs there is more amount of energy available. The least energy is available in the tertiary consumers. The energy pyramid always upright and vertical.

<http://biology.tutorvista.com/ecology/ecological-pyramid.html>

14. Which of the following folk dances belong to Rajasthan?

- 1. Bhavai
- 2. Dollu Kunita
- 3. Ghoomar

Select the correct answer using the codes given below.

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

b) 1 and 3 only

Bhavai is a genre of folk dance popular in Rajasthan state in western India. The male or female performers balance a number of earthen pots or brass pitchers as they dance nimbly, pirouetting and then swaying with the soles of their feet perched on the top of a glass, on the edge of the sword or on the rim of a brass thali (plate) during the performance.

Ghoomar is a traditional folk dance of Rajasthan, India and southern Asia. Ghoomar was developed by the Bhil tribe and was then adopted by other Rajasthani communities. It is performed by women in swirling robes, and accompanied by men and women singing together

Dollu Kunitha is a major popular drum dance of Karnataka and Andhra Pradesh.

15. Silver halides are used in photographic plates because they are

- a) readily reduced by light.
- b) easily oxidised by light.
- c) easily soluble in hypo solution.
- d) both (b) and (c).

a) readily reduced by light.

Silver halides are used in photographic plates because they are readily reduced by light. This is a standard textbook question.

16. With reference to Armed Forces Special powers Act (AFSPA), who among the following can declare an area as 'disturbed area'?

- 1. Governor
- 2. Chief Minister
- 3. Central Government

Select the correct answer using the codes given below.

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

b) 1 and 3 only.

The power to declare an area 'disturbed' lies with the Governor or the Central Government, who have to form an opinion that the use of armed forces in the aid of civil power is essential and then notify it as 'disturbed area'. The declaration of an area as a 'disturbed area' is for a limited duration and review of the declaration before the expiry of six months has to be undertaken by the executive. The 1972 amendments to AFSPA extended the power to declare an area disturbed to the Central Government whereas in the 1958 version of AFSPA, only the state Governor had the power.

17. With reference to oceans, consider the following statements:

1. The average depth of Atlantic ocean is less than that of Pacific Ocean.
2. Pacific Ocean is deeper as it has extensive continental shelves and marginal enclosed seas.

Which of the statements given above is/are correct?

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

a) 1 only

The average depth of Atlantic ocean is less than that of Pacific Ocean. Atlantic ocean is less deep as it has extensive continental shelves and marginal enclosed seas.

18. In order to control inflation, the Central Bank should

1. sell government securities.
2. lower the bank rate.
3. purchase government securities.
4. raise the bank rate.

Select the correct answer using the codes given below.

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

d) 1 and 4 only

To control inflation, if the central bank sells government securities, people/banks will

readily buy it and this will help in reducing the money supply in the market. Similarly raising the bank rate will make loans expensive. People may prefer depositing money in banks to get benefits of a higher interest rate. This will again reduce the money supply in the economy, thereby bringing inflation down.

19. Consider a body at temperature of 100 units kept in a room with room temperature 20 units.

Event A : The temperature of the body decreased from 100 to 60.

Event B : The temperature of the body decreased from 60 to 20.

- a) Time taken for A is more than that for B.
- b) Time taken for A is less than that for B.
- c) Both A and B will take equal time.
- d) Data is insufficient to compare time taken.

b) Time taken for A is less than that for B.

The question is based on Newton's law of cooling. Newton's Law of Cooling states that the rate of change of the temperature of an object is proportional to the difference between its own temperature and the ambient temperature (i.e. the temperature of its surroundings).

20. With reference to Kalinga Style of temple architecture, consider the following statements:

- 1. In this, the temple is built in two parts - tower and hall (jagmohan).
- 2. The main shrine is surrounded by 4 subsidiary shrines.

Which of the statements given above is/are correct?

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

a) 1 only

Statement 2 is about Panchayatana style of temple architecture. The Lingaraja temple at Bhubaneswar (11th century), the Jagannath Temple at Puri (12th century) and the great Sun Temple at Konark (13th century) mark the culmination of a distinct style of

architecture called the Kalinga style remarkable in its plan elevation and details of decoration. In the simplest form, a temple of this style consists of a structural due, the main temple or shrine and the frontal porch. Jagannath Temple While the main temple, called Vimana or Deula, is the sanctum enshrining the deity the porch or assembly hall called Jagamohana is the place for the congregation of devotees.

<http://www.orissaculture.gov.in/Architecture.asp>

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21. A fire caused by petrol cannot be extinguished effectively by water because

1. water and petrol react chemically.
2. water and petrol are immiscible with each other.
3. petrol forms the upper layer and continues to burn.
4. the flame is too hot for water to cool it.

Select the correct answer using the codes given below.

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

c) 2 and 3 only

In the case of fires caused by oil or petrol, sprinkling water is not effective since oil/petrol being lighter than water floats on the surface of water and continues to burn.

https://books.google.co.in/books?id=mKBaVw5V41IC&pg=PT23&lpg=PT23&dq=A+fire+caused+by+petrol+cannot+be+extinguished+effectively+by+water+because&source=bl&ots=SJvoLCjS5t&sig=hF_WDBxKzMzFiUJwFUeyU9z9Hfo&hl=en&sa=X&ved=0CEsQ6AEwB2oVChMIzPn8kNyoxwIVwhqOCh2rqgrK#v=onepage&q=A%20fire%20cause+d%20by%20petrol%20cannot%20be%20extinguished%20effectively%20by%20water%20because&f=false

22. Who among the following can be appointed as an acting Chief Justice of India by the President?

1. a judge of Supreme Court.
2. a judge of any High Court.
3. a senior advocate of a Supreme Court.

Select the correct answer using the codes given below.

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

a) 1 only

The President can appoint a judge of the Supreme Court as an acting Chief Justice of India when:

1. the office of Chief Justice of India is vacant; or
2. the Chief Justice of India is temporarily absent; or
3. the Chief Justice of India is unable to perform the duties of his office.

23. Horse latitudes are dynamically induced pressure belts. 'Dynamically induced' means that they are formed due to

- a) low temperature compared to nearby areas.
- b) high temperature compared to nearby areas.
- c) subsidence of air currents.
- d) none of the above

c) subsidence of air currents.

Horse latitudes are dynamically induced pressure belts. 'Dynamically induced' means that they are formed due to subsidence of air currents

24. Equity market instruments help in financing a firm. Which of these is/are equity market instruments ?

1. Bonds
2. Shares
3. Debentures

Select the correct answer using the codes given below.

- a) 1 and 2 only

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

b) 2 only.

Shares are equity instruments, while bonds and debentures are debt instruments. Debt instruments are assets that require a fixed payment to the holder, usually with interest. Examples of debt instruments include bonds (government or corporate), debentures and mortgages. Equity financing allows a company to acquire funds (often for investment) without incurring debt, eg shares.

25. With reference to biostimulation, consider the following statements:

1. Biostimulation involves the modification of environment to increase biodiversity.
2. Biostimulation allows one to control the nature of biomass.

Which of the statements given above is/are correct?

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

d) Neither 1 nor 2

Biostimulation involves the modification of the environment to stimulate existing bacteria capable of bioremediation.

Bioaugmentation involves the addition of specifically formulated microorganisms to a waste situation. It is done in conjunction with the development and monitoring of an ideal growth environment, in which these selected bacteria can live and work.

Bioaugmentation allows one to control the nature of the biomass. It ensures that the proper team of microbes is present in the waste situation in sufficient type, number, and compatibility to attack the waste constituents effectively and break them down into their most basic compounds.

http://www.adbio.com/biorem/why_add_microbes.htm

26. Which of the following caves have paintings dated to pre-historic times?

1. Barabar caves
2. Bhimbetka caves
3. Ellora caves

Select the correct answer using the codes given below.

- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) none

b) 2 only

The Rock Shelters of Bhimbetka are located about 45 km south east of Bhopal on the road to Hoshangabad. The site spread over 10 km in length and about 3 km in width has more than 700 rock shelters, of which over 400 have paintings. The earliest human activities are known from the numerous stone tools including handaxes, cleavers and also the pebble tools.

http://asi.nic.in/asi_monu_whs_rockart_bhimbetka.asp

27. With reference to efflorescence and deliquescence, consider the following statements:

1. In efflorescence, solid substances absorb water vapour from the atmosphere and are slowly transformed into liquids.
2. In the process of deliquescence, the resulting substances are fluffy and rough solids.

Which of the statements given above is/are correct?

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

d) Neither 1 nor 2

In deliquescence, solid substances absorb water vapour from the atmosphere and are slowly transformed into liquids which are solutions of such solids in water.

In chemistry, efflorescence is the migration of a salt to the surface of a porous material, where it forms a coating. The essential process comprises the dissolving of an internally-held salt in water, or occasionally in another solvent. The water, with the salt now held in solution, migrates to the surface, then evaporates, leaving a coating of the salt. The resulting substances are fluffy and rough solids.

28. The ordinance making power of Governor is co-extensive with the legislative power of the state legislature. This means

1. ordinance can only be promulgated when Legislative assembly is not in session.
2. ordinance can be promulgated only on those subjects on which state legislature can make laws.
3. Governor can promulgate ordinance only on the advice of Council of Ministers.
4. an ordinance cease to operate on the expiry of six weeks after the reassembly of state legislature.

Select the correct answer using the codes given below.

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

c) 2 only

Ordinance can only be promulgated when Legislative assembly is not in session - means it is not a parallel power of Governor. Governor can promulgate ordinance only on the advice of Council of Ministers - means it is not a discretionary power of Governor. Ordinance can be promulgated only on those subjects on which state legislature can make laws - means it is co-extensive with the legislative power of the state legislature.

29. Consider the following statements about Brahmaputra river:

1. Due to high gradient, the Brahmaputra is highly braided and has numerous riverine islands.
2. There are a number of isolated hillocks on both banks of the Brahmaputra river.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only

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

b) 2 only

Due to low gradient, the Brahmaputra is highly braided and has numerous riverine islands. There are a number of isolated hillocks on both banks of the Brahmaputra river.

30. It has been seen that farmers prefer to grow cereals over pulses. Which of the following could be a reason for low preference of pulses.

1. pulses require high amount of water and fertilizer.
2. cereals have high MSP compared to pulses.
3. pulses have low yield per hectare of land compared to cereals.

Select the correct answer using the codes given below.

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

c) 2 and 3 only

Pulses do not require high amount of water and fertilizer. In fact, they help in adding nitrogen to soils. High MSP and procurement support for cereals is one of the major causes of their higher preference. Also, pulses have low yield per hectare of land compared to cereals.

Pulses are among the least productive of all crops — the yields are on average 760 kg per hectare, compared to 2,400 kg per hectare for cereals, and 1,100 kg per hectare for oilseeds. Low yields on the one hand and relatively more lucrative MSP for other food grains makes pulses an unattractive crop for farmers. Another reason for the poor level of yields is that farmers are increasingly growing pulses on inferior land.

<http://www.thehindu.com/news/national/minimum-support-price-hike-can-boost-pulses-production-says-abhijit-sen/article7367769.ece>

31. Perfluorocarbons (PFCs), a Greenhouse gas (GHG) included under the Kyoto

Protocol is emitted from

1. aluminium production.
2. semiconductor industry.
3. refrigeration and fire extinguishing systems.

Select the correct answer using the codes given below.

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

d) 1, 2 and 3

Perfluorocarbons (PFCs) are man-made compounds containing just fluorine and carbon. The major release is from primary aluminium production. The semiconductor industry is a relatively minor source and there are other small emissions from the refrigeration sector (leakage during operation and at the end of life destruction of equipment) and fire extinguishing systems.

<http://utslappisiffror.naturvardsverket.se/en/substances/greenhouse-gases/perfluorocarbons/>

32. With reference to Constituent Assembly, consider the following statements:

1. The rulers of Indian states who acceded to the union as provided in the constitution accepted the premise that sovereignty resided in their people and not in themselves.

2. The members of the Constituent assembly were directly elected by the people.

Which of the statements given above is/are correct?

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

a) 1 only

The rulers of Indian states who acceded to the union as provided in the constitution accepted the premise that sovereignty resided in their people and not in themselves. The members of the Constituent assembly were not directly elected by the people.

33. Consider the following statements about entropy:

1. The total entropy of any isolated thermodynamic system tends to increase over time, approaching a maximum value.
2. The entropy of all system is zero at absolute zero temperature.

Which of the statements given above is/are correct?

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

c) Both 1 and 2

Statement 1 is 2nd law of thermodynamics, while statement 2 is third law of thermodynamics.

The third law of thermodynamics states that the entropy of a system approaches a constant value as the temperature approaches zero. The entropy of a system at absolute zero is typically zero, and in all cases is determined only by the number of different ground states it has. Specifically, the entropy of a pure crystalline substance at absolute zero temperature is zero.

34. Which of the following is/are a Fundamental Right under part 3 of the Indian Constitution?

1. Right to form trade unions.
2. Right to obtain recognition of the trade union.
3. Right to Strike

Select the correct answer using the codes given below.

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

a) 1 only

All citizens have the right to form associations or unions or co-operative societies. It includes the right to form political parties, companies, partnership firms, societies,

clubs, organisations, trade unions or anybody of persons. However, the right to obtain recognition of the association is not a fundamental right. Right to strike is also not a FR.

35. Which of the following is/are beneficial for the growth of cotton?

1. ample sunshine.
2. frost.
3. maritime air
4. moist weather during ball-opening

Select the correct answer using the codes given below.

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

b) 1 and 3 only

Frost is harmful to cotton. Moist weather during ball-opening leads to spread of pests and diseases. Maritime air promotes blossoming of the cotton plant.

36. In economics, 'forced savings' refers to

- a) taxes on individual income and wealth.
- b) compulsory deposits imposed on income tax payer.
- c) provident fund contribution of private sector.
- d) none of the above.

d) none of the above.

Forced savings - When people spend less than they earn because there are not enough goods available to buy or because goods are too expensive.

<http://lexicon.ft.com/Term?term=forced-savings>

37. The National Action Plan on Climate Change (NAPCC) focuses attention of which of the following areas?

1. wind energy.
2. sustainable habitat.
3. establishing a strategic knowledge platform for climate change.

Select the correct answer using the codes given below.

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

c) 2 and 3 only

The National Action Plan focuses attention of 8 priorities National Missions. These are:

1. Solar Energy
2. Enhanced Energy Efficiency
3. Sustainable Habitat
4. Conserving Water
5. Sustaining the Himalayan Ecosystem
6. A "Green India"
7. Sustainable agriculture
8. Strategic Knowledge Platform for Climate Change

<http://www.pib.nic.in/newsite/erelease.aspx?relid=39899>

38. During the Indian National Movement, Dewan Chamanlal, M. M. Joshi and V. V.

Giri were associated with

- a) Kisan Sabha Movement
- b) State People's Movement
- c) Communist Movement
- d) Trade Union Movement

d) Trade Union Movement

All the three were associated with the Trade Union Movement.

39. Which of the following is/are an example of polysaccharide carbohydrate?

1. sucrose.
2. starch.
3. glycogen.

Select the correct answer using the codes given below.

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

c) 2 and 3 only

Three important polysaccharides are starch, glycogen, and cellulose. They are composed of glucose. Starch and glycogen serve as short-term energy stores in plants and animals, respectively.

Sucrose is a Disaccharide.

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40. The seats are allotted to the states in the Rajya Sabha on the basis of

1. territorial area.
2. population.
3. density of population.

Select the correct answer using the codes given below.

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

c) 2 only

Population is the only basis for allotment of seats in Rajya Sabha.

41. With reference to the scheme "Housing for All by 2022", consider the following statements:

1. It will be implemented in both urban and rural areas.
2. Under the scheme, subsidy for beneficiary-led individual house construction will be provided.

Which of the statements given above is/are correct?

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

b) 2 only

"Housing for All by 2022" aimed for urban areas with following components/options to States/Union Territories and cities:-

- a) Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource;
- b) Promotion of affordable housing for weaker section through credit linked subsidy;
- c) Affordable housing in partnership with Public & Private sectors and
- d) Subsidy for beneficiary-led individual house construction or enhancement.

<http://pib.nic.in/newsite/PrintRelease.aspx?relid=122576>

42. Which of the following Greenhouse gas (GHG) also destroys ozone in the stratosphere?

1. Chlorofluoro Carbon (CFC)
2. Nitrous Oxide (N₂O)
3. Methane

Select the correct answer using the codes given below.

- a) 1 only

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

d) 1, 2 and 3

All the three destroys ozone (Yes methane too). You may refer to these links -

<http://www.earthtimes.org/climate/burping-cows-depleting-ozone-layer-irish-study-finds/183/>

<http://www.theozonehole.com/ozonedestruction.htm>

43. Consider the following statements about Todar Mal's Bandobast:

1. The state was to advance loans to the cultivators which could be paid in easy annual installment.
2. Remissions of revenue were granted in bad season.

Which of the statements given above is/are correct?

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

c) Both 1 and 2

Under the Bandobast system, the state was to advance loans to the cultivators which could be paid in easy annual installment. Remissions of revenue were granted in bad season.

The chief characteristic of Todar Mai Bandobast were that the state was to advance loans to the cultivators which could be paid in easy annual installments, Remissions of revenue were granted in bad seasons. The revenue collectors were required to write officially annual reports about the work, character and integrity of their subordinates.

They were to see that cultivators were given a receipt for every payment made by them. A record of all the holding and liabilities of every cultivator was to be maintained. The collectors were to send reports of monthly returns to the royal treasury. Voluntary payments by cultivators were encouraged and the state force

was employed only as a last resort. All the Paraganas, whether cultivated or not, were required to be measured.

<http://www.preservearticles.com/2012031026031/get-complete-information-on-land-revenue-system-of-akbar.html>

44. Antibiotics are a type of antimicrobial used in the treatment and prevention of bacterial infection. Antibiotics can be obtained from

1. bacteria
2. fungi
3. molds

Select the correct answer using the codes given below.

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

d) 1, 2 and 3

Antibiotic drugs are made from living organisms such as fungi, molds, and certain soil bacteria that are harmful to disease-causing bacteria. Antibiotics can also be produced synthetically (artificially) or combined with natural substances to form semi synthetic antibiotics. These compounds work against strains of bacteria that are resistant to other antibiotics.

<http://www.scienceclarified.com/AI-As/Antibiotics.html#ixzz3inSEauMW>

45. The legislative council has equal power and status with respect to legislative assembly in which of the following matters?

1. ratification of constitutional amendment bill.
2. enlargement of jurisdiction of State Public Service Commission.
3. election of President.

Select the correct answer using the codes given below.

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

d) None

c) 2 only

Legislative Council has no role in ratification of constitutional amendment bill and election of President.

46. Which of the following have been pointed out as negative effect of FDI in India by those who are opposed to it?

1. inappropriate technology
2. skewed income distribution.
3. transfer pricing.

Select the correct answer using the codes given below.

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

d) 1, 2 and 3

The opponents of FDI argue that - the MNCs transfer only inappropriate technology to India which will be of hardly any use. The profits earned by MNCs in India will be transferred back to their parent company or other subsidiaries through the mechanism of transfer pricing. MNCs will mainly invest in areas which have great potential and will mainly benefit skilled workers, while ignoring the unskilled totally thereby leading to skewed income distribution.

Some references -

<https://books.google.co.in/books?id=ueUgAwAAQBAJ&pg=PA78&dq=negative+impact+of+fdi+skewed+income+distribution&hl=en&sa=X&ved=0CBwQ6AEwAGoVChMIImLWZs6b7xgIVUFuOCh3K3w5d#v=onepage&q=negative%20impact%20of%20fdi%20skewed%20income%20distribution&f=false>

<http://www.ukessays.com/essays/economics/negative-effects-of-fdi-in-host-countries-economics-essay.php>

47. Which of the following is/are an example of man-made wetland?

1. Chandertal in Himachal Pradesh.
2. Harike in Punjab.
3. Pong Dam in Himachal Pradesh.

Select the correct answer using the codes given below.

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

c) 2 and 3 only

Harike in Punjab and Pong Dam in Himachal Pradesh are an example of man-made wetland. Refer to this link from the book Introduction to Environmental Sciences

[https://books.google.co.in/books?id=dxQACQAAQBAJ&pg=PA129&lpg=PA129&dq=Man-made+Wetlands+\(e.g.,+Harike+in+Punjab&source=bl&ots=NxgKqZiCCb&sig=TmL8KobVCRxzKh2fekR2IPQeTFY&hl=en&sa=X&ved=0CC0Q6AEwAmoVChMI07XSx-SmxwIVSG2OCh2Vwgot#v=onepage&q=Man-made%20Wetlands%20\(e.g.%2C%20Harike%20in%20Punjab&f=false](https://books.google.co.in/books?id=dxQACQAAQBAJ&pg=PA129&lpg=PA129&dq=Man-made+Wetlands+(e.g.,+Harike+in+Punjab&source=bl&ots=NxgKqZiCCb&sig=TmL8KobVCRxzKh2fekR2IPQeTFY&hl=en&sa=X&ved=0CC0Q6AEwAmoVChMI07XSx-SmxwIVSG2OCh2Vwgot#v=onepage&q=Man-made%20Wetlands%20(e.g.%2C%20Harike%20in%20Punjab&f=false)

48. There was a great rebellion in Doab against Muhammad Bin Tughlaq. What was the reason for it?

- a) enslavement of rural population.
- b) issue of token currency.
- c) transfer of capital from Delhi.
- d) increase in rural taxation.

d) increase in rural taxation.

Increase in rural taxation made the people rebel against Mohammad Tughlaq, and he cancelled it later.

<https://books.google.co.in/books?id=EXPouL4BYTMC&pg=PA122&lpg=PA122&dq=eat+rebellion+in+Doab+against+Muhammad+Bin+Tughlaq&source=bl&ots=GZmmfelIhr&sig=TC3dPfi4WzvW8Bm2mkwaEhLrhtw&hl=en&sa=X&ved=0CEIQ6AEwCWoVChMlv6icmPmpxwIVxpGOCh2gTAOu#v=onepage&q=great%20rebellion%20in%20Doab%20against%20Muhammad%20Bin%20Tughlaq&f=false>

49. DDT, which was earlier used to control malaria has been banned in many countries because it

1. persists in the environment and bioaccumulates.
2. brings about a change in sex chromosomes.
3. prevents the coupling of oxygen with haemoglobin.

Select the correct answer using the codes given below.

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

a) 1 only

DDT persists in the environment and bioaccumulates.

<http://www.epa.gov/pbt/pubs/ddt.htm>

50. The Public Accounts Committee (PAC) performs which of the following function?

1. examination of appropriation and finance accounts of the Union Government.
2. suggesting alternative policies in order to bring about efficiency in administration.
3. examination of the accounts of state corporations.

Select the correct answer using the codes given below.

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

c) 1 and 3 only

Suggesting alternative policies in order to bring about efficiency in administration is the function of Estimate Committee.

51. The Indian constitution provides which of the following rights with respect to religion?

1. right to profess.
2. right to practice.
3. right to propagate.

Select the correct answer using the codes given below.

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

d) 1, 2 and 3

Article 25 says that all persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate religion. The implications of these are:

(a) *Freedom of conscience*: Inner freedom of an individual to mould his relation with God or Creatures in whatever way he desires.

(b) *Right to profess*: Declaration of one's religious beliefs and faith openly and freely.

(c) *Right to practice*: Performance of religious worship, rituals, ceremonies and exhibition of beliefs and ideas.

(d) *Right to propagate*: Transmission and dissemination of one's religious beliefs to others or exposition of the tenets of one's religion. But, it does not include a right to convert another person to one's own religion. Forcible conversions impinge on the 'freedom of conscience' guaranteed to all the persons alike.

52. Assertion (A) - Most satellite TV antenna in India face south, south east or south-west.

Reason (R) - TV transmission satellite mostly uses a geostationary orbit.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true but R is not a correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

a) Both A and R are true and R is the correct explanation of A

TV transmission satellite are in a geostationary orbit. Geostationary orbits can only be accomplished with equatorial orbits, and since India is in the northern hemisphere this means the satellite will always be in south direction.

Very few communication satellites use polar orbits, or any orbit inclined out of the equatorial plane for that matter, to prevent the need for constant reaming of the receiver dish.

Reference - <http://www.bestdth.com/dish-direction-for-indian-satellite-tv-channels.html>

53. Which of the following is/are an example of Hindu architecture showing Islamic influence?

1. Lotus Mahal, Vijaynagar
2. Pillared corridor, Rameshwaram
3. Thousand pillared Mandapa, Mafurai

Select the correct answer using the codes given below.

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

a) 1 only

Lotus Mahal at Vijaynagar has domes and arches showing Islamic influence.

54. The ripening of fruits can be accelerated by

1. spraying urea during maturation of fruits
2. decreasing oxygen concentration of the surroundings.
3. increasing ethylene concentration of the surroundings.

Select the correct answer using the codes given below.

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

c) 3 only

Use of ethylene for fruit ripening is well known.

Ethylene is thought of as the aging hormone in plants. In addition to causing fruit to ripen, it can cause plants to die. It can be produced when plants are injured, either mechanically or by disease. Ethylene will cause a wide range of effects in plants, depending on the age of the plant and how sensitive the plant is to ethylene.

Ethylene effects include fruit ripening, loss of chlorophyll, abortion of plant parts, stem shortening, abscission of plant parts, and epinasty (bending of stems).

<http://postharvest.tfrec.wsu.edu/pages/PC2000F>

55. Indian constitution is a combination of federal and non-federal features. Point out the non-federal features from these:

1. All India Services
2. Flexibility of the constitution
3. Supremacy of constitution
4. Bicameralism

Select the correct answer using the codes given below.

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

a) 1 and 2 only.

All India Services increases the power of Centre by allowing them some control over state administration, thus its non-federal. A flexible constitution which can be easily changed by the Centre without state's consultation skews power in respect of states and thus in non-federal. The rest two – Supremacy of constitution and Bicameralism are federal features.

56. What is "Surface Computing"?

- a) It is computing without storing any data in the computer so as to improve security.
- b) It is a computer network in which users can access a shared pool of resources.
- c) It is the use of specialised Graphical User Interface like touchscreen to interact.
- d) None of the above is a correct description of Surface Computing.

c) It is the use of specialised Graphical User Interface like touchscreen to interact.

Surface computing is the use of a specialized computer GUI in which traditional GUI elements are replaced by intuitive, everyday objects. Instead of a keyboard and mouse, the user interacts directly with a touch-sensitive screen. It has been said that this more closely replicates the familiar hands-on experience of everyday object manipulation.

57. The 'evil quartet' refers to the four major cause of biodiversity loss. Which of the following is/are part of the 'evil quartet'?

1. habitat loss.
2. climate change
3. pollution.
4. co-extinction.

Select the correct answer using the codes given below.

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

b) 1 and 4 only

Jared Diamond describes an "Evil Quartet" of habitat destruction, overkill, introduced species, and secondary extinctions.

https://books.google.co.in/books?id=GhwUOY_3kxAC&pg=PA42&lpg=PA42&dq=Evil+Quartet%22+of+habitat+destruction,+overkill,+introduced+species,+and+secondary+extinctions&source=bl&ots=cN4D_L8_nV&sig=Apg0I4F_p7Wh0V6wBff_VOymLa4&hl=en&sa=X&ved=0CCMQ6AEwAWoVChMI68e42-6mxwIVgm2OCh3Vfw7G#v=onepage&q=Evil%20Quartet%22%20of%20habitat%20destruction%2C%20overkill%2C%20introduced%20species%2C%20and%20secondary%20extinctions&f=false

58. Which of the following Muslim Leader/s joined the Home Rule League formed by Annie Besant?

1. Abul Kalam azad
2. M. A. Jinnah

3. Muhammad Iqbal

Select the correct answer using the codes given below.

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

c) 2 only

Jinnah joined the Home Rule League formed by Annie Besant.

<https://books.google.co.in/books?id=usgnwPQOFYMC&pg=PA124&lpg=PA124&dq=Jinnah+joined+the+Home+Rule+League+formed+by+Annie+Besant&source=bl&ots=Jl4TFawu7I&sig=4pAUMjBIS1JPvOE9AlvWRNcqGqE&hl=en&sa=X&ved=OCDgQ6AEwBGoVChMI3fje34OqxwIVQ2qOCh3AvwDu#v=onepage&q=Jinnah%20joined%20the%20Home%20Rule%20League%20formed%20by%20Annie%20Besant&f=false>

59. With reference to mycorrhiza, consider the following statements:

- 1. It is a symbiotic association between plant roots and algae.
- 2. In mycorrhiza, the plants benefit from the efficient uptake of mineral nutrients.

Which of the statements given above is/are correct?

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

b) 2 only

Mycorrhizas are symbiotic relationships between fungi and plant roots (the term means literally 'fungus root'). To a large degree, mycorrhizas seem to be symbiotic (mutualistic) relationships, in which the fungus obtains at least some of its sugars from the plant, while the plant benefits from the efficient uptake of mineral nutrients (or water) by the fungal hyphae. However, there can be circumstances in which the fungus is mildly detrimental, and others in which the plant feeds from the fungus.

<http://archive.bio.ed.ac.uk/jdeacon/microbes/mycorrh.htm>

60. The Zoological Survey of India (ZSI) has published a book containing a consolidated documentation of mammals found in India. Which of the following mammals is/are now extinct from India?

1. Banteng
2. Malabar Civet
3. Chinese Pangolin

Select the correct answer using the codes given below.

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

a) 1 only

Four mammal species — Cheetah, Banteng, Sumatran Rhinoceros and Javan Rhinoceros — are extinct in India.

Mammals that fall in the “Critically Endangered” category of the IUCN. These animals are: pygmy hog, Malabar civet, large rock rat and kondana rat.

As per the IUCN status 29 mammals (such as, Chinese Pangolin, fishing cat, Gangetic dolphin, golden langur, hispid hare etc.) in the country come under the “endangered” category.

This is a sample paper. To join the GS Prelims Mock Test Series 2018 (10 full length mock tests @Rs 800), visit selfstudyias.com

61. Alberuni's Kitab-ul-Hind is

1. mainly a political history of India.
2. a sympathetic study of Indian civilization.
3. critical of Mahmud Ghaznavi's plundering raids.

Select the correct answer using the codes given below.

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

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

c) 2 only

Alberuni's Kitab-ul-Hind is mainly a study of India's cultural, social and intellectual history. It is a sympathetic study because Alberuni gives credit to intellectual accomplishments of Indians.

62. With the attainment of climax vegetation

1. biomass increases to maximum.
2. net community production increases.
3. food chain becomes highly complex and it changes to food web.

Select the correct answer using the codes given below.

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

b) 1 and 3 only

With the attainment of climax vegetation

1. biomass increases to maximum.
2. net community production decreases while net community respiration increases
3. food chain becomes highly complex and it changes to food web.

63. Transfusion of which of the following component of blood is done during high risk dengue fever?

- a) RBCs
- b) WBCs
- c) Platelets
- d) Both (a) and (b)

c) Platelets

While medical fraternity globally recognizes the role of platelet transfusion in the management of hospitalized dengue patients the exact indications and situations in which these are to be transfused may vary. High-risk patients having platelet count <

20,000/cumm and risk of bleeding require urgent platelet transfusion. Patients with platelet count 21-40,000/cumm are in moderate risk and require platelet transfusion only if they have any haemorrhagic manifestations and other superadded conditions.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3168133/>

<http://timesofindia.indiatimes.com/city/pune/Platelet-count-should-be-monitored-even-after-fever-subsidies-say-doctors/articleshow/42840059.cms>

64. Consider the following statements about seed dispersal:

1. Smaller and lighter seeds are more efficiently transported to greater distances and have low rate of mortality.
2. Larger seeds are difficult to be dispersed and have high rate of mortality.

Which of the statements given above is/are correct?

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

d) Neither 1 nor 2

Smaller and lighter seeds are more efficiently transported to greater distances and have high rate of mortality. Larger seeds are difficult to be dispersed but have low rate of mortality.

65. In which of the following embroidery type, stitching of cut out fabric designs to a background fabric is done to create a decorative effect?

- a) Applique
- b) Zardoshi
- c) Kashida
- d) Phulkari

a) Applique

Applique is the stitching of cut out fabric designs to a background fabric to create a decorative effect. The method can be used for anything from a simple motif on a kurta/cushion cover to a fabric picture or a big quilt/saree.

<http://sameeksha.asia/index.php/welcome/indian>

66. The item/s which will be included in the calculation of national income among the following is/are

1. Rs 1 lakh won in a lottery.
2. Rented residence.
3. Rent-free house given to an employee by the employer.

Select the correct answer using the codes given below.

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

b) 2 and 3 only

Rent-free house given to an employee by an employer. - Yes, it is included in the national income by Income Method since it is a part of 'wages in kind' paid to employees.

Winning of a lottery prize - No, it will not be included in the national income as it does not add to the flow of goods and services in the economy.

Rented residence as is easily understood will be included.

67. Primary productivity in Tundra biome is exceedingly low because of

1. low sunlight and insolation.
2. permanently frozen grounds.
3. scarcity of moisture in soils.

Select the correct answer using the codes given below.

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

d) 1, 2 and 3

All three are the reason for low primary productivity in Tundra.

68. Consider the following statements about ecotone:

1. Ecotone is a zone of junction between two or more ecosystem.
2. A well developed ecotones contain some organisms which are entirely different from that of the adjoining communities.

Which of the statements given above is/are correct?

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

c) Both 1 and 2

Ecotone is a zone of junction between two or more diverse ecosystems e.g. the mangrove forests. They represent an ecotone between marine and terrestrial ecosystem. Some more examples of ecotone are – grassland, estuary and river bank

Characteristics of ecotone:

- (1) It may be very narrow or quite wide.
- (2) It has the conditions intermediate to the adjacent ecosystems. Hence ecotone is a zone of tension.
- (3) It is linear as shows progressive increase in species composition of one in coming community and a simultaneous decrease in species of the other out going adjoining community.
- (4) A well developed ecotones contain some organisms which are entirely different from that of the adjoining communities.
- (5) Sometimes the number of species and the population density of some of the species is much greater in this zone than either community. This is called edge effect. The organisms which occur primarily or most abundantly in this zone are known as edge species. In the terrestrial ecosystems edge effect is especially applicable to birds. For example the density of song birds is greater in the mixed habitat of the ecotone between the forest and the desert.

This question has been formed using the NOS document -

<http://download.nos.org/333courseE/6.pdf>

69. Which of the following is/are true about the rule of Indo-Greeks in north western India?

1. They carried long distance trade.
2. There was proliferation of artisanal and craft production.
3. There was extensive land grants.

Select the correct answer using the codes given below.

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

b) 1 and 2 only

Indo-Greeks did not undertake extensive land grants. The rest two statements are correct.

70. With reference to borrowing powers of government, consider the following statements:

1. The Central government can borrow either within India or outside upon the security of the Consolidated Fund of India.
2. A state government can borrow within India or outside upon the security of the Consolidated Fund of the State.

Which of the statements given above is/are correct?

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

a) 1 only

The Central government can borrow either within India or outside upon the security of the Consolidated Fund of India or can give guarantees, but both within the limits fixed by the Parliament. Similarly, a state government can borrow within India (and

not abroad) upon the security of the Consolidated Fund of the State or can give guarantees, but both within the limits fixed by the legislature of that state.

71. The availability of plant nutrients is greatly affected by soil pH. In this respect, soil acidification can cause a deficiency of

1. phosphorous.
2. manganese.
3. cadmium.

Select the correct answer using the codes given below.

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

a) 1 only

As soils become more acidic some nutrients may become less available while other elements in the soil may reach toxic levels. Acidic soils may have some or all of the following problems:

- reduction in the amount of nutrients being recycled by soil micro-organisms (e.g. nitrogen supply may be reduced)
- phosphorus in the soil may become less available to plants
- induced deficiencies of calcium, magnesium and molybdenum
- the ability of plants to use subsoil moisture may be limited
- aluminium, which is toxic to plants and microorganisms, may be released from the soil
- manganese may reach toxic levels
- uptake of cadmium (a heavy metal contaminant) by

crops and pastures may increase.

Please go through this document - <http://www.qld.gov.au/dsitia/assets/soil/soil-acidification.pdf>

72. With reference to post-Gupta period, consider the following statements:

1. The post-Gupta agrarian structure is marked by growing feudal set up.
2. It saw the emergence of landed intermediaries and subjected peasantry.

Which of the statements given above is/are correct?

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

c) Both 1 and 2

The post-Gupta agrarian structure is marked by growing feudal set up. It saw the emergence of landed intermediaries and subjected peasantry.

73. The LASER light is monochromatic. This means it

- a) contains one specific wavelength of light.
- b) all the photons have wave fronts that launch in unison.
- c) has a very tight beam.
- d) all of the above

a) contains one specific wavelength of light.

Laser light is very different from normal light. Laser light has the following properties:

The light released is monochromatic. It contains one specific wavelength of light (one specific color). The wavelength of light is determined by the amount of energy released when the electron drops to a lower orbit.

The light released is coherent. It is “organized” -- each photon moves in step with the others. This means that all of the photons have wave fronts that launch in unison.

The light is very directional. A laser light has a very tight beam and is very strong and concentrated. A flashlight, on the other hand, releases light in many directions, and the light is very weak and diffuse.

<http://science.howstuffworks.com/laser4.htm>

74. Consider the following statements about President's rule:

1. The presidential proclamation imposing President's rule is not subject to judicial review.

2. The courts cannot go into the correctness of the material on the basis of which president's rule was declared.

Which of the statements given above is/are correct?

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

b) 2 only

The presidential proclamation imposing President's Rule is subject to judicial review. Burden lies on the Centre to prove that relevant material exist to justify the imposition of the President's Rule. The court cannot go into the correctness of the material or its adequacy but it can see whether it is relevant to the action.

75. With reference to volcanic dusts and their role in climate change, consider the following statements:

- 1. They reduce the amount of solar radiation reaching the earth's surface.
- 2. They do not block the outgoing long wave radiation waves from the earth's surface.

Which of the statements given above is/are correct?

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

c) Both 1 and 2

Volcanic dusts causes global cooling. They reduce the amount of solar radiation reaching the earth's surface but they do not block the outgoing long wave radiation waves from the earth's surface.

Volcanic eruptions can alter the climate of the Earth for both short and long periods of time. For example, average global temperatures dropped about a degree Fahrenheit for about two years after the eruption of Mount Pinatubo in 1991

Volcanic dust blasted into the atmosphere causes temporary cooling. The amount of cooling depends on the amount of dust put into the air, and the duration of the cooling depends on the size of the dust particles.

Reference - <http://www.cotf.edu/ete/modules/volcanoes/vclimate.html>

76. Consider the following statements about health benefits of Tulsi (holy basil):

1. Chewing of Tulsi leaves have been found to beneficial for teeth.
2. Drinks made from Tulsi leaves provide relief in sore throats.

Which of the statements given above is/are correct?

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

b) 2 only

Drinks made from tulsi leaves provides relief in sore throats. It is advised not to chew the fresh leaves of Tulsi too much, (probably due to its high organic mercury-like content which may affect the teeth)

77. Ocean seeding refers to

- a) growing plants inside ocean.
- b) quick germination of seeds inside ocean water.
- c) encouraging growth of phytoplankton to remove carbon.
- d) none of the above

c) encouraging growth of phytoplankton to remove carbon.

The idea of dumping iron in the oceans to lower temperatures has been around since the late 1980s and has been known variously as carbon sinking, ocean seeding or iron fertilization.

The premise is actually simple. Iron acts as a fertilizer for many plants, and some, like the phytoplankton that form the base of the marine food web, need it to grow. Adding iron to the water stimulates phytoplankton growth, which in turn gobble up carbon dioxide through photosynthesis.

<http://science.howstuffworks.com/environmental/green-science/iron-sulfate-slow-global-warming.htm>

78. Which of the following is/are an example of active remote sensing?

1. camera with its flash turned on.
2. spectrometer.
3. LIDAR

Select the correct answer using the codes given below.

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

b) 1 and 3 only

Cameras are active sensors when the photographer uses flash. It illuminates its target and measures the reflecting energy back to the camera.

Cameras are passive sensors when the photographer does not use the flash. The camera is not providing the source of energy. It uses naturally emitted light from the sun or lamp.

Lidar—A light detection and ranging sensor that uses a laser (light amplification by stimulated emission of radiation) radar to transmit a light pulse and a receiver with sensitive detectors to measure the backscattered or reflected light. Distance to the object is determined by recording the time between transmitted and backscattered pulses and by using the speed of light to calculate the distance traveled. It is an active remote sensing device.

Spectrometer—A device that is designed to detect, measure, and analyze the spectral content of incident electromagnetic radiation. Conventional imaging spectrometers use gratings or prisms to disperse the radiation for spectral discrimination. It is a passive remote sensing device.

<https://earthdata.nasa.gov/user-resources/remote-sensors>

<http://gisgeography.com/passive-active-sensors-remote-sensing/>

79. Who was the lady representative of India at the second Round Table Conference (RTC)?

- a) Vijayalakshi Pandit.
- b) Sucheta Kripalani.
- c) Aruna Asaf Ali.
- d) Sarojini Naidu

d) Sarojini Naidu

Sarojini Naidu was the lady representative of India at the second Round Table Conference (RTC)

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80. With reference to carbon sequestration, consider the following statements:

- 1. Coastal vegetation sequesters carbon more effectively than terrestrial forests.
- 2. In coastal vegetation, organic carbon is broken down and released by microbes.

Which of the statements given above is/are correct?

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

a) 1 only

The blue carbon solution: One of the most promising new ideas to reduce atmospheric CO₂ and limit global climate change is to do so by conserving mangroves, seagrasses and salt marsh grasses. Such coastal vegetation, dubbed “blue carbon”, sequesters carbon far more effectively (up to 100 times faster) and more permanently than terrestrial forests. Carbon is stored in peat below coastal vegetation habitats as they accrete vertically.

Because the sediment beneath these habitats is typically anoxic, organic carbon is not broken down and released by microbes. Coastal vegetation also continues to sequester carbon for thousands of years in contrast to forest, where soils can

become carbon-saturated relatively quickly. Therefore, carbon offsets based on the protection and restoration of coastal vegetation could be far more cost effective than current approaches focused on trees. Furthermore, there would be enormous ad-on benefits to fisheries, tourism and in limiting coastal erosion from the conservation of blue carbon.

<http://www.thebluecarbonproject.com/the-problem-2/>

81. QR codes are being increasingly used everywhere. Which of the following is/are true about QR codes?

1. QR code is a three dimensional matrix code.
2. They are free from security issues.
3. They contain more information than conventional barcodes.

Select the correct answer using the codes given below.

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

b) 3 only

A QR code is a two dimensional bar code / matrix code.

Security issues. The transfer of data between two devices can always lead to security issues. Also, before scanning a code, the scanner can never really know where the code is going to lead them.

Many people are making their QR code that link to social media, such as Facebook. This might not be the best idea, especially if one of your friends decides to get drunk one night and write something obscene on your wall. Say you put that QR code on your business card; then everyone you've given your business card to can see that as well. Also, since free generators are available to everyone with an internet connection, there is a potential risk that someone could create a QR code that represents you or your business, but you did not actually make the code.

<http://www.qrcodestickers.org/about-qr-codes/positive-negative-aspects-of-qr-codes.html>

82. If there is an expectation of a rise in the price level, investment will be encouraged because

1. there will be an increase in the production of capital goods.
2. there will be a rise in the prospective return from capital.
3. people will save more and the interest rate will fall.

Select the correct answer using the codes given below.

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

c) 2 only

Only statement 2 has a certainty. Statement 1 and 2 have no direct relation to increase in price level or its expectation. If someone invest 100 units and there is increase in price level, then the return on the investment will also increase.

83. Subsurface environment is largely affected by human activities. Man changes subsurface conditions by

1. construction of big dams.
2. supply of water through irrigation in the agricultural farms.
3. underground mining.

Select the correct answer using the codes given below.

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

d) 1, 2 and 3

Any activity which increases the surface load will impact the subsurface environment. Construction of big dams is a good example. Irrigation leads to compaction of soils which increases the weight over the subsurface. Underground mining is easily understood.

84. 'Ghatikas' during the early medieval India refers to

- a) association of traders.
- b) colleges and centres providing Brahmanical learning in South India.
- c) Jaina cave monasteries and centre of learning in Kalinga areas.
- d) none

b) colleges and centres providing Brahmanical learning in South India.

'Ghatikas' during the early medieval India refers to colleges and centres providing Brahmanical learning in South India.

The kings and emperors of the South India in the ancient and medieval ages, in addition to their numerous duties, paid much attention to the propagation of education in their land. The ghatikas were the most important educational institutions of this time and the most important ghatika of the Pallavas was located in Kanchipuram. Inscriptions reveal that many of these kings looked after this institution with great care.

http://www.indianetzone.com/21/educational_institutions_ancient_south_india.htm

85. Which of the following is/are an example of live vaccine?

- 1. BCG
- 2. Oral Polio Vaccine (OPV)
- 3. Varicella Vaccine

Select the correct answer using the codes given below.

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

d) 1, 2 and 3

Live virus vaccines use the weakened (or attenuated) form of the virus. The measles, mumps, and rubella (MMR) vaccine and the varicella (chickenpox) vaccine are examples. The live attenuated strain of Mycobacterium bovis known as bacillus

Calmette-Guérin (BCG) uses shared antigens to stimulate the development of cross-immunity to Mycobacterium tuberculosis and Mycobacterium leprae.

Killed (inactivated) vaccines are made from a protein or other small pieces taken from a virus or bacteria. The flu vaccine is an example.

<http://patient.info/doctor/bcg-vaccination>

<http://www.nlm.nih.gov/medlineplus/ency/article/002024.htm>

86. With reference to oil spills, consider the following statements :

1. They make the water deficient in oxygen.
2. They can cause algal blooms.

Which of the statements given above is/are correct ?

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

a) 1 only.

Oil Spills make the water deficient in oxygen. This causes problem for the marine animals. Algal bloom is associated with eutrophication, and oil spills have no role here. On the contrary, oil spills kills algae. Spilled oil can harm the environment in several ways, including the physical damages that directly impact wildlife and their habitats (such as coating birds or mammals with a layer of oil), and the toxicity of the oil itself, which can poison exposed organisms.

87. Although the Constitution came into force on 26 January 1950, some provisions of the constitution came into force on November 26, 1949 itself. These included

1. Fundamental Rights
2. Citizenship
3. Elections

Select the correct answer using the codes given below.

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

c) 2 and 3 only

d) 1, 2 and 3

c) 2 and 3 only

Some provisions of the Constitution pertaining to citizenship, elections, provisional parliament, temporary and transitional provisions, and short title contained in Articles 5, 6, 7, 8, 9, 60, 324, 366, 367, 379, 380, 388, 391, 392 and 393 came into force on November 26, 1949 itself.

The remaining provisions (the major part) of the Constitution came into force on January 26, 1950. This day is referred to in the Constitution as the 'date of its commencement', and celebrated as the Republic Day.

88. Consider the following statements about scattering of solar radiation waves:

1. Scattering happens when the diameter of dust particles in the air is shorter than the wavelengths of the solar radiation waves.

2. A major portion of the scattered solar energy is sent back to the space.

Which of the statements given above is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

a) 1 only

Scattering happens when the diameter of dust particles in the air is shorter than the wavelengths of the solar radiation waves. A major portion of the scattered solar energy is absorbed by the atmosphere.

89. At which of the following places do Ashoka's rock edicts occur?

1. Dhauli

2. Girnar

3. Ahraura

Select the correct answer using the codes given below.

a) 1 only

b) 1 and 2 only

c) 1 and 3 only

d) 1, 2 and 3

d) 1, 2 and 3

At all these places Rock edit have been found.

<http://www.katinkahesselink.net/tibet/asoka-locations.htm>

90. Which of the following genetic disorders in human beings is/are sex-linked

1. Down syndrome.

2. Thalassemia

3. Haemophilia

Select the correct answer using the codes given below.

a) 1 and 2 only

b) 3 only

c) 2 and 3 only

d) 1, 2 and 3

b) 3 only

Hemophilia is a sex-linked recessive disorder. These kinds of defects occur more often in men than in women.

<http://www.hog.org/handbook/section/2/how-hemophilia-is-inherited>

91. With reference to Charter Act of 1833, consider the following statements:

1. It introduced a system of open competition for selection of civil servants.

2. It ended the activities of the East India Company as a commercial body.

Which of the statements given above is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

b) 2 only

The Charter Act of 1833 attempted to introduce a system of open competition for

selection of civil servants, and stated that the Indians should not be debarred from holding any place, office and employment under the Company. However, this provision was negated after opposition from the Court of Directors.

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

92. Water in a wetland can be:

1. Fresh
2. Brackish
3. Static

Select the correct answer using the codes given below.

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

d) 1, 2 and 3.

The Ramsar definition of wetlands is fairly wide, including "areas of marine water the depth of which at low tide does not exceed six meters" as well as fish ponds, rice paddies and salt pans. wetlands can be freshwater as well. Freshwater wetlands are not connected to the ocean. They can be found along the boundaries of streams, lakes, ponds or even in large shallow holes that fill up with rainwater. Freshwater wetlands may stay wet all year long, or the water may evaporate during the dry season.

93. The Fundamental Rights in the Indian Constitution is/are

1. positive rights
2. negative rights
3. available against private individuals.

Select the correct answer using the codes given below.

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

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

d) 1, 2 and 3

The FRs are positive because they require active role of state. For e.g right to education, right against trafficking, right against untouchability etc require state to take steps to implement them. These rights are also available against private individuals. FRs are negative when they restrict state's role in individual domain. So, FRs like right to religion and conscience restrict state's role and allows an individual to have freedom of conscience.

94. Both soil and vegetation influences each other. Vegetation influences soils through

1. uptake of nutrients by plants through their root.
2. interception of raindrops.
3. making changes in slope profile.
4. release of organic matter to the soil horizons.

Select the correct answer using the codes given below.

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

b) 1, 2 and 4 only

Vegetation intercept the raindrops and hence protect the soils from being eroded. Slope profile changes are not due to vegetation.

95. Which of the following statement regarding the Stupa is/are correct?

1. It has a circumambulatory path.
2. They are often surrounded by a fence.
3. There is an umbrella at the top.

Select the correct answer using the codes given below.

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

c) 2 and 3 only

d) 1, 2 and 3

d) 1, 2 and 3

https://books.google.co.in/books?id=IFM0hetegAcC&pg=PT88&lpg=PT88&dq=stupa+circumambulation+fence+umbrella&source=bl&ots=adGdjicyT7&sig=sSudw5pWhdRqHy6xxJL9khN4Gog&hl=en&sa=X&ved=0CCIQ6AEwAWoVChMIIZSo0vipxwIVkAaOC_h3DmAd6#v=onepage&q=stupa%20circumambulation%20fence%20umbrella&f=false

96. The RBI has been intervening in the foreign exchange market of India and buying dollars to

1. prevent weakening of rupee further thereby acting as disincentive to export growth.
2. check enhanced liquidity in the monetary system.
3. build-up foreign exchange reserves for debt servicing.

Select the correct answer using the codes given below.

a) 1 only

b) 1 and 2 only

c) 1 and 3 only

d) none

d) none

The RBI has been intervening in the foreign exchange market of India and buying dollars to prevent strengthening of rupee further thereby acting as disincentive to export growth. If foreign inflow increases rupee starts appreciating. An appreciation in Rupee makes exports expensive and hence less competitive.

97. When cold front passes over an area then

1. temperature decreases.
2. relative humidity increases.
3. sky becomes clear.

Select the correct answer using the codes given below.

a) 1 only

b) 1 and 2 only

c) 1 and 3 only

d) 1, 2 and 3

c) 1 and 3 only

Relative humidity (RH) decreases when cold front passes over an area. Cold fronts are associated with clear sky and weather while warm fronts have clouds and rainfall.

98. Overcooking of food is undesirable. While cooking of food, the compounds lost to the maximum extent are

a) carbohydrate

b) proteins

c) fats

d) vitamins

d) vitamins

While cooking of food, the compounds lost to the maximum extent are vitamins.

<http://www.livestrong.com/article/443774-are-vitamins-destroyed-during-cooking/>

99. According to the provisions of the Indian Independence Act, 1947 the princely states had the freedom to

1. join India.

2. join Pakistan.

3. remain independent.

Select the correct answer using the codes given below.

a) 1 and 2 only

b) 1 and 3 only

c) 2 and 3 only

d) 1, 2 and 3

d) 1, 2 and 3

The Indian Independence Act, 1947 granted freedom to the Indian princely states either to join the Dominion of India or Dominion of Pakistan or to remain independent.

100. Which of the following can be used as water softeners?

1. gypsum
2. zeolites
3. quartz

Select the correct answer using the codes given below.

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

b) 2 only

Zeolites are minerals that are microporous cage-like molecules. These cages are interconnected forming a framework with many cavities and channels. The zeolite is the main ingredient in a water softener and is also called resin.

http://homecents.com/h2o/h2o_soft/

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