

UPSC 2013

1. Which of the following grants direct credit assistance to the households?

1. Regional Rural Banks
2. National Bank for Agriculture and Rural Development
3. Land Development Banks

Select the correct answer using codes given below.

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

Answer ||| C

Solution ||| Regional Rural Banks are setup to develop rural economy by showing credit facilities for the purpose of development of agriculture, trade, commerce, industry and productive activities in rural areas, so statement 1 is correct. National Bank for Agriculture and Rural Development refines financial institutions for rural sector which has no direct credit to rural household, so statement 2 is incorrect. Land Development Banks are special banks that gives Long Term Loans to rural household, so statement 3 is correct. We see that statements 1 and 3 are correct, so correct option is C.

2. The national income of a country in a given period is equal to the

- A. total value of goods services produced by nationals
- B. sum of total consumption investment expenditure
- C. sum of personal income of individuals
- D. money value of final goods services produced

Answer ||| A

Solution ||| National income is total value of country's output for goods and services produced in an year, which shows option A as correct. Option B is incorrect as National Income is not concerning with total consumption of investments. Option C is incorrect as National income is not related with persons total income. Option D is not correct as National income concerns with nationals of country goods value not money value of goods.

3. Who among the following constitute the National Development Council?

1. The Prime Minister
2. The Chairman, Finance Commission
3. Ministers of the Union Cabinet
4. Chief Ministers of the States

Select the correct answer using the codes given below.

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

Answer ||| B

Solution ||| National Development Council is chaired by Prime Minister of India which also includes Union Ministers, Chief Ministers of States/Union Territories along with Members of Planning Commission. It is noted that Chairman of Finance Commission is not a member of National Development Council, so 2 is incorrect, which eliminates A, C and D, so option B is correct.

4. Mycorrhizal biotechnology has been used in rehabilitating degraded sites because mycorrhiza enables the plants to

1. resist drought and increase absorptive area
2. tolerate extremes of pH
3. resist disease infestation

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| Mycorrhiza is an interaction among plants and fungi which helps in improving nutrient deficient soils that helps in plant growth. It can upgrade plant strength in poor soil and stores large amounts of

carbon. Statement 1 is correct as Mycorrhizal increase efficiency of nutrient and water uptake and improves resistance to pathogens against drought. Statement 2 is correct as Mycorrhizal plants can the capacity to hold soils with varying pH from 3 to 9.5. Statement 3 is correct as Mycorrhiza improves plant growth by removing against diseases, since all three statements are correct, so best option is D.

5.The efforts to detect the existence of Higgs boson particle have become frequent news in the recent past. What is/are the importance/importance's of discovering this particle?

1. It will enable us to understand as to why elementary particles have mass.
2. It will enable us in the near future to develop the technology of transferring matter from one point to another without traversing the physical space between them.
3. It will enable us to create better fuels for nuclear fission.

Select the correct answer using the codes given below.

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

Answer ||| A

Solution ||| Higgs Boson study shows us that how sub-atomic particles have mass which is critical part of a calculation which portends future of space and time, which makes statement 1 correct. Statement 2 is not correct as Higgs boson particle does not relate to transferring of matter, but discuss the importance of matter. Statement 3 is incorrect as Higgs boson particle is not concerning with fuels.

6.The known forces of natures can be divided into four classes, viz., gravity, electromagnetism, week nuclear force and strong nuclear force. With reference to them, which one of the following statements is not correct?

- A. Gravity is the strongest of the four.
- B. Electromagnetism acts only on particles with an electric charge.
- C. Weak nuclear force causes radioactivity
- D. Strong nuclear force holds protons and neutrons inside the nucleus of

an atom.

Answer ||| A

Solution ||| As per the table shown we see that:

Force Strength

Gravitational force 10^{-39}

Weak nuclear force 10^{-13}

Electromagnetic force 10^{-2}

Strong nuclear force 1

Gravity has weakest strength, so option A is incorrect. Statement 2 is correct, as Electromagnetism is a science of charge with forces and fields linked with charges. Statement 3 is correct weak force underlies forms of radioactivity that governs the decay of unstable subatomic particles following nuclear fusion reaction. Statement 4 is correct as Strong Nuclear Force hold subatomic particles of nucleus like protons and neutrons. Option A is only incorrect while all three options are correct, so correct is A.

7. Which of the following leaf modifications occurs/occur in desert areas to inhibit water loss?

1. Hard and waxy leaves
2. Tiny leaves or no leaves
3. Thorns instead of leaves

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| In desert areas the climate is hot which shows high evaporation with tree having long roots, thick barks with waxy, thorns and little leaves having hair or fur on leaves, so all three options mentioned in the question is correct, which makes option D as correct.

8. Which of the following statements is/are correct?

1. Viruses lack enzymes necessary for the generation of energy.
2. Viruses can be cultured in any synthetic medium.
3. Viruses are transmitted from one organism to another by biological vectors only.

Select the correct answer using the codes given below.

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

Answer ||| A

Solution ||| Statement 1 is correct as Viruses has genetic code in nucleic acid having no mechanisms for multiplication. Virus have no energy generating systems and lack in certain chemicals like enzymes for reproduction. Statement 2 is incorrect as Viruses lack organelles and depends on host cells metabolism for replication so they cannot grow in synthetic media. Statement 3 is incorrect as virus exists as biological and mechanical vectors which states statements 2 and 3 as incorrect that eliminates B and C, so correct option is A.

9. Economic growth in country X will necessarily have to occur if

- A. there is technical progress in the world economy
- B. there is population growth in X
- C. there is capital formation in X
- D. the volume of trade grows in the world economy

Answer ||| C

Solution ||| Economic development of a country concerns with increase in incomes along with increase in consumption, savings and investment which could be in any shape of capital formation, so this clearly satisfies option C.

10. Many transplanted seedlings do not grow because

- A. the new soil does not contain favourable minerals
- B. most of the root hairs grip the new soil too hard
- C. most of the root hairs are lost during transplantation

D. leaves get damaged during transplantation

Answer ||| C

Solution ||| Root hairs of young trees are thin and delicate which gets damaged while transplanting which may or may not grow that clearly satisfies option C.

11. Rainbow is produced when sunlight falls on drops of rain. Which of the following physical phenomena are responsible for this?

1. Dispersion
2. Refraction
3. Internal reflection

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| A rainbow is meteorological phenomenon which occurs due to reflection, refraction and dispersion of light on water droplets which shows spectrum of light in the sky. This description satisfies all the three phenomena listed in the questions, so option D is correct.

12. Consider the following phenomena

1. Size of the sun at dusk
2. Colure of the sun at dawn
3. Moon being visible at dawn
4. Twinkle of stars in the sky
5. Polestar being visible in the sky

Which of the above are optical illusions?

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

D. 2, 3 and 5

Answer ||| C

Solution ||| Optical illusion is characterized by visually apparent images which differ from objective reality. 1 "Size of the sun at dusk" is correct Sun appears big in size at sunset while sunrise is a mental illusion. 2 " Coloure of the sun at dawn" Is correct as sun appears red as atmosphere scatters blue light more efficiently which is optical illusion. 3 "Moon being visible at dawn" is incorrect as sun or moon at horizon where vertical diameter is less than horizontal diameter. 4 "Twinkle of stars in the sky " is correct as twinkling of stars is nothing but optical illusion as light travels in straight line and when passes through hot and cold air layers bends and deflects. From above description, 1, 2 and 4 are only cases of optical illusions, so option C is correct.

13. Ball bearings are used in bicycles, cars, etc., because

- A. the actual area of contact between the wheel and axle is increased
- B. the effective area of contact between the wheel and axle is increased
- C. the effective area of contact between the wheel and axle is reduced
- D. None of the above statements is correct

Answer ||| C

Solution ||| Ball bearing reduces rotational friction by reducing area of contact between the wheel and axle. In ball bearings the ball are spherical which are in contacts with the wheel and axle at a very small point making it to spin smoothly, which describes option C as correct.

14. Consider the following fauna of India :

- 1. Gharial
- 2. Leatherback turtle
- 3. Swamp deer

Which of the above is / are endangered?

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

D. None

Answer ||| C

Solution ||| Critically endangered is top risk category allocated by IUCN Red List of wild species. Gharial is species of crocodilians found in Indian subcontinent who were listed as Critically Endangered in IUCN Red List of Endangered Species, so 1 is correct. Leatherback sea turtle is a circum global species which was abundant throughout world and were declared as Critically Endangered, so 2 is correct. Swamp deer is highly endangered species which is also included in red data list of rare animals of IUCN, so 3 is correct which shows that all three are correct making C as correct option.

15. Fruits stored in a cold chamber exhibit longer storage life because

- A. exposure to sunlight is prevented
- B. concentration of carbon dioxide in the environment is increased
- C. rate of respiration is decreased
- D. there is an increase in humidity

Answer ||| C

Solution ||| Cold chamber structure is relative humidity where temperature is lowered by 6°C to 10°C that hold up ripening process which increases shelf life of fruits. Due to reduction in temperature, the rate of respiration gets reduced, which satisfies option C.

16. Supply of money remaining the same when there is an increase in demand for money, there will be

- A. a fall in the level of prices
- B. an increase in the rate of interest
- C. a decrease in the rate interest
- D. an increase in the level of income and employment

Answer ||| B

Solution ||| If the supply of money is same and in case of increase in demand for money, then in such case people will deposit less money in

banks which makes the bank to increase the rate of interest in order to catch people so as to deposit money in bank, which describes in option B.

17. Which one of the following is likely to be the most inflationary in its effect?

- A. Repayment of public debt
- B. Borrowing from the public finance a budget deficit
- C. Borrowing from banks finance a budget deficit
- D. Creating new money to finance a budget deficit

Answer ||| D

Solution ||| Inflation results by increasing money supply that increased the total demand. The rate of inflation depends on money supply in an economy. So among the options given, the most inflationary will be arranging money for financing budget deficit which is option D.

18. Which one of the following groups of items is included in India's foreign – exchange reserves?

- A. Foreign–currency assets Special drawing Rights SDRs and loans from for countries
- B. Foreign–currency assets, gold holdings of the RBI and SDRs
- C. Foreign–Currency assets, loans from the World Bank and SDRs
- D. Foreign–currency assets, holdings of the RBI and loans from the World Bank

Answer ||| B

Solution ||| Foreign Exchange Reserves serves as deposits of foreign currency by Reserve Bank which includes gold, Special Drawing Rights and foreign currency assets, so option B is correct.

19. A rise in general level of prices may be caused by

- 1. an increase in the money supply
- 2. a decrease in the aggregate level of output
- 3. an increase in the effective demand

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

Answer ||| D

Solution ||| It is seen that factors which contribute to rise in price level result from rapid growth of population, increase in incomes, increasing non-development government expenses and increase in money supply, shows statement 1 and 3 are correct. Further it is noticed that a sudden change in price may caused an increase or decrease in supply of goods, which related that statement 2 is correct. As all three statements lead to either increase in demand of goods and services or decrease in the supply, so correct option is D.

20.The Ilbert Bill controversy was related to the

- A. imposition of certain restrictions to carry arms by the Indians
- B. imposition of restriction on newspapers and magazines published in Indian languages
- C. removal of disqualifications imposed on the Indian magistrates with regard to the trial of the Europeans
- D. removal of a duty on imported cotton cloth

Answer ||| C

Solution ||| Viceroy Ripon in 1883 introduced Ilbert Bill which proposed amendment for existing laws in the country by allowing Indian judges and magistrates to try Europeans in criminal cases in District level, so this shows option C as correct.

21.Annie Besant was-

- 1. Responsible for starting the Home Rule Movement
- 2. The founder of the Theosophical Society
- 3. Once the President of the Indian National Congress

Select the correct statement, statements using the codes given below.

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

Answer ||| C

Solution ||| Statement 1 "responsible for starting the Home Rule Movement" is correct since Annie Besant launched Home Rule league in 1916. Statement 2 "founder of the Theosophical Society" is incorrect as Theosophical Society was founded by Blavatsky and Olcott in 1875 and not by Annie Besant. Statement 3 "Once the President of the Indian National Congress" is correct as Annie Besant was elected as President of INC in 1917. Both statements 1 and 3 are correct so correct answer is C.

22. In the context of cultural history of India, a pose in dance and dramatics called Tribhanga' has been a favourite of Indian artists from ancient times till today.

Which only of the following statements best describes this pose?

- A. One leg is bent and the body is slightly but oppositely curved at waist and neck
- B. Facial expressions, hand gestures and make – up are combined to symbolize certain epic or historic characters
- C. Movements of body, face and hands are used to express oneself or to tell s story
- D. A little smile, slightly curved waist and certain hand gestures are emphasized to express the feelings of love or eroticism

Answer ||| A

Solution ||| Tribhanga dance featured exceptional gestures and postures where the dancer has three bent figure where head is inclined on one side, upper body bent on opposite direction while remaining part of body below waist is in reverse direction, so option A is correct.

23. To obtain full benefits of demographic dividend, what should India do?

- A. Promoting skill development
- B. Introducing more social security schemes
- C. Reducing infant mortality rate

D. Privatization of higher education

Answer ||| A

Solution ||| Demographic Dividend is rise in economic growth rate with increasing share of working age people among the population. To take the benefit of demographic dividend, government undertake certain measures to impart skills to Indian workforce, so option A is correct.

24. Which one among the following industries is the maximum consumer of water in India?

- A. Engineering
- B. Paper and pulp
- C. Textiles
- D. Thermal power

Answer ||| D

Solution ||| The table below shows consumption of water by above Industries, which shows that option D is correct as Thermal power plants consumes maximum annual water.

Industrial Sector	Annual consumption of water (million cubic meters)
Thermal power plants	35157.4
Engineering	2019.9
Pulp and paper	905.8
Textiles	829.8

25. Priority Sector Lending by Lending by banks in India constitutes the lending to

- A. agriculture
- B. micro and small enterprises
- C. weaker sections

D. All of the above

Answer ||| D

Solution ||| Priority Sector Lending concerns with activity of Reserve Bank of India that directs the banks to provide particular bank lending to agriculture, small scale industries, Micro Credit, Education and Housing loans for development of economy focusing on financial sector. The options in the questions are all correct, so correct is D.

26. In the context of Indian economy, 'Open Market Operations' refers to

- A. borrowing by scheduled banks from the RBI
- B. lending by commercial banks to industry and trade
- C. purchase and sale of government securities by the RBI
- D. None of the above

Answer ||| C

Solution ||| In terms of Indian Economy, open market operation refers to an activity of central bank to buy or sell government bonds/securities in open market which are applied to implement monetary policies, so option C is correct.

27. Consider the following liquid assets :

- 1. Demand deposits with the banks
- 2. Time deposits with the banks
- 3. Savings deposits with the banks
- 4. Currency

What is the correct sequence of these assets in the decreasing order of liquidity is?

- A. 1 - 4 - 3 - 2
- B. 4 - 3 - 2 - 1
- C. 2 - 3 - 1 - 4
- D. 4 - 1 - 3 - 2
- E. 3 - 2 - 4 - 1

Answer ||| D

Solution ||| Liquidity is a degree to which an asset can be converted to money. It is noted that the most liquid asset is cash or currency as it can always be used easily and fast, **so 1 has the highest liquidity.**

Demand deposit with Bank is an account having more liquidity with easy access in comparison with time deposits, so Demand deposit is less liquid than Currency.

Savings deposits with Bank have less liquidity as compared to cash or Demand deposit, so the correct order will be - 4 - 1 - 3 - 2

Currency- Demand deposits with the banks - Savings deposits with the banks - Time deposits with the banks.

28. Consider the following pairs :
Tribe State

1. Limboo Limbu : Sikkim
2. Karbi : Himachal
3. Dongria Kondh : Odisha
4. Bonda : Tamil Nadu

Which of the above pairs are correctly matched?

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

Answer ||| A

Solution ||| Limbu tribal population are located in Eastern and Western Sikkim, so it is correct. Karbis are major ethnic groups in North east India from Assam and not from Himachal Pradesh, so it is incorrect. Dongria Kondh tribal lives in Niyamgiri Hills in Orissa, so it is correct. Bonda tribe lives in the Malkangiri district of south western Odisha at the boarder of Odisha, Chhattisgarh, and Andhra Pradesh and not in Tamil Nadu, so it is incorrect, hence option A is right choice.

29. During a thunderstorm, the thunder in the skies is produced by the

1. meeting of cumulonimbus clouds in the sky
2. lightning that separates the nimbus clouds

3. violent upward movement of air and water particles

Select the correct answer using the codes given below.

- A. 1 only
- B. 2 and 3
- C. 1 and 3
- D. None of the above produces the thunder

Answer ||| D

Solution ||| Thunderstorm is a storm with lightning and thunder which is produced by cumulonimbus clouds. Thunder appears when lightning on crossing sky makes air around it so hot that it produces powerful explosion. Statement 1 is incorrect as thunder is not produced by meeting of giant cumulonimbus clouds but takes place in such clouds. Statement 2 is incorrect as thunder in sky is produced by lightning and not by separating nimbus clouds. Statement 3 is also incorrect as thunder in the sky is not produced by aggressive upward movement of air and water particles, but by expanding and contracting of air. As all given statements are incorrect, so correct option is D.

30. With reference to National Legal Services Authority, consider the following statements:

- 1. Its objective is to provide free and competent legal services to the weaker sections of the society on the basis of equal opportunity.
- 2. It issues guidelines for the State Legal Services Authorities to implement the legal programmes and schemes throughout the country.

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

Answer ||| C

Solution ||| Statement 1 "Its objective is to provide free and competent legal services to the weaker sections of the society on the basis of equal opportunity " is correct as National Legal Services Authority gives free legal services to weaker sections of society and organize Lok Adalats for agreeable settlement of disputes. Statement 2 "It issues guidelines for

the State Legal Services Authorities to implement the legal programmes and schemes throughout the country " is correct as National Legal Services Authority directs every State, State Legal Services Authority has been constituted which are monitored by the National Legal Services Authority

31.Consider the following statements:

1. The Chairman and the Deputy Chairman of the Rajya Sabha are not the members of that House.
2. While the nominated members of the two Houses of the Parliament have no voting right in the presidential election, they have the right to vote in the election of the Vice President

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

Answer ||| B

Solution ||| Statement 1 "Chairman and the Deputy Chairman of the Rajya Sabha are not the members of that House " is incorrect as Deputy chairman is elected by Rajya Sabha itself. Statement 2" While the nominated members of the two Houses of the Parliament have no voting right in the presidential election, they have the right to vote in the election of the Vice President" is correct as President is elected by members of Electoral College with nominated members of both the house. As statement 1 is incorrect, it eliminates option A, C and D, so option B is correct.

32.Consider the following statements :

1. National Development Council is an organ of the Planning Commission.
2. The Economic and Social Planning is kept in the Concurrent List in the Constitution List in the Constitution of India.
3. The Constitution of India prescribes that Panchayats should be assigned the task of preparation of place for economic development and social justice.

Which of the statements given above is / are correct?

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

Answer ||| B

Solution ||| Statement 1 "National Development Council is an organ of the Planning Commission " is incorrect as National Development Council is not an organ of planning commission, but serves as advisory body that approves Five year plans. Statement 2 "Economic and Social Planning is kept in the Concurrent List in the Constitution List in the Constitution of India" is correct as economic and social planning lies in concurrent list in Constitution. Statement 3 "Constitution of India prescribes that Panchayats should be assigned the task of preparation of place for economic development and social justice " is correct as under voluntary provisions, their appears devolution of powers and responsibilities where Gram Panchayat initiate participatory planning process and execute plans, so correct option is B.

33. Consider the following statements:

1. The council of Ministers in the Centre shall be collectively responsible to the Parliament.
2. The Union Ministers shall hold the office during the pleasure of the President of India.
3. The Prime Minister shall communicate to the President about the proposals for legislation.

Which of the statements given above is / are correct?

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

Answer ||| B

Solution ||| Statement 1 "The council of Ministers in the Centre shall be collectively responsible to the Parliament " is incorrect as under article 75, Council of Minister is collectively responsible to the Lok Sabha. Statement 2 "Union Ministers shall hold the office during the pleasure of the President of India" is correct as article 75 highlights that Union ministers hold office during the pleasure of President. Statement 3 "Prime Minister

shall communicate to the President about the proposals for legislation” is correct as It is duty of Prime Minister to communicate to President regarding every decisions of Councils of Minister related to affairs of union and proposal for legislation. We see that statement 2 and 3 are correct, so correct option is B.

34. Disguised unemployment generally means

- A. large number of people remain unemployed
- B. alternative employment is not available
- C. marginal productivity of labour is zero
- D. productivity of workers is low

Answer ||| C

Solution ||| Disguised unemployment takes place where portion of labour force is left without work or is working in laid off manner making worker productivity zero. Option A is incorrect as disguised unemployment makes some people employed. Option B is also incorrect as disguised unemployment has no alternate employment. Option C is correct as disguised unemployment has labour force where worker productivity is essentially zero.

35. Consider the following statements :

- 1. Inflation benefits the debtors.
- 2. Inflation benefits the bond.

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

Answer ||| A

Solution ||| Statement 1 “Inflation benefits the debtors” is correct as with redistribution of income and wealth their appears unexpected inflation which acts as redistribution among debtors and creditors where debtors gain from inflation due to repayment to creditors. Statement 2 “Inflation benefits the bond” is incorrect as bond holder will lose since the value of

interest decreases, as statement 2 is wrong while statement 1 is correct, so correct option is A.

36. Climate is extreme, rainfall is scanty and the people used to be nomadic herders. The above statement best describes which of the following regions?

- A. African Savanna
- B. Central Asian Steppe
- C. North American Prairie
- D. Siberian Tundra

Answer ||| D

Solution ||| Option A is incorrect as in African Savanna has tropical grassland with warm temperatures all round the year with highest rainfall. Option B is incorrect as in Central Asia Steppe, the climate is sub-humid and semiarid with annual precipitation is 18 inches to 10 inches with snow ranges from 4 inches to 20 inches deep. Option C is not correct as North American Prairie has less rainfall with moist and dry climates. Option D is correct as Siberian Tundra has limited rainfall with extreme climate where nomadic herding is main activity.

37. Consider the following crops :

- 1. Cotton
- 2. Groundnut
- 3. Rice
- 4. Wheat

Which of these are Kharif crops?

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

Answer ||| C

Solution ||| Kharif crops are monsoon crops which are planted for autumn harvest that gets cultivated at the time of monsoon such as Cotton,

groundnut and rice, so 1, 2 and 3 are correct. 4 Wheat is incorrect as it is a Rabi crop, hence option C is correct.

38. Consider the following statements :

1. Natural gas occurs in the Gondwana beds.
2. Mica occurs in abundance in Kodarma.
3. Dharwar is famous for petroleum.

Which of the statements given above is / are correct?

- A. 1 and 2
- B. 2 only
- C. 2 and 3
- D. None

Answer ||| A

Solution ||| Statement 1 is correct as shale a non-conventional natural gas which is found in Gondwana rock. Statement 2 is correct Koderma was considered as the mica capital of India. Statement 3 is incorrect as Dharwar is famous for Uranium deposits and not petroleum, as both statements 1 and 2 are correct so correct option is A.

39. Which of the following statements regarding Laterite soils of India are correct?

1. They are generally red in colour.
2. They are rich in nitrogen and potash.
3. They are well – developed in Rajasthan and UP.
4. Tapioca and cashew nuts grow well on these soils

Select the correct answer using the codes given below.

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

Answer ||| C

Solution ||| Laterite soil in India contains iron and aluminium that is rusty red in colour due to presence of iron oxide found in hot and wet tropical areas. Tea, coffee, cashew, rubber and coconut mostly grows in such soil. We see that the description clearly satisfies statement 1 and 4, so correct option is C.

40. Which of the following are the characteristics of Indian coal?

1. High ash content
2. Low sulphur content
3. Low ash fusion temperature

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| There are many significant characteristic of Indian coal. 1 "High ash content" is correct as Indian coal contains high ash content that ranges from 35% to 45% as compared to coal found in other parts of world. 2 "Low sulphur content" is correct as Indian coal has low sulphur content of around 0.5%. 3 "Low ash fusion temperature " is correct as Indian coal has higher ash fusion temperature of around 1,500°C, which is not suitable for coal. Since all the above three are characteristics of Indian coal, so option D is correct, but in terms of advantage of Indian coal, option A is correct, as statement 3 is not favourable for Indian coal.

41. The annual range of temperature in the interior of the continents is high as compared to coastal areas. What is / are the reason / reasons?

1. Thermal difference between land and water
2. Variation in altitude between continents and oceans
3. Presence of strong winds in the interior
4. Heavy rains in the interior as compared to coasts

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, 3 and 4

Answer ||| A

Solution ||| Temperature at coastal is not so hot as compared to portion inside the continent as water having higher heat capacity as compared to soil and rock allows ocean to take longer time to heat and to cool the land. Since coastal areas have more moderate temperatures as compared to inland areas because of heat capacity, the areas near ocean remains cooler during day with moderate temperature range as to inland areas, which clearly supports option A as annual temperature range of continent and inside of continent differs due to thermal difference among land and water.

42. In the context of India, which of the following principles is / are implied institutionally in the parliamentary government?

1. Member of the Cabinet are Members of the Parliament
2. Ministers hold the office till they enjoy confidence in the Parliament.
3. Cabinet is headed by the Head of the State.

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

Answer ||| A

Solution ||| Statement 1 "Member of the Cabinet are Members of the Parliament" is correct as Cabinet consists of Prime Minister and Ministers who virtually are Members of House of Commons. Statement 2 "Ministers hold the office till they enjoy confidence in the Parliament" is correct as Ministers will hold the office. Statement 3 "Cabinet is headed by the Head of the State" is incorrect as President is the head of the state while Prime Minister is head of government. As statement 3 is incorrect, this eliminates B, C and D options, hence option A is correct.

43. With reference to the history of philosophical thought in India, consider the following statements regarding Sankhya school :

1. Sankhya does not accept the theory of rebirth or transmigration of soul.
2. Sankhya holds that it is the self – knowledge the leads to liberation and not any exterior influence or agent.

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

Answer ||| C

Solution ||| Statement 1 is correct as Sankhya doesn't believe in rebirth of soul. Sankhya believes human existence as seat of strong suffering where ignorance is root cause of suffering through discriminative knowledge, which thinks statement 2 is correct, so correct option is C.

44. Consider the following historical places:

1. Ajanta Caves
2. Lepakshi Temple
3. Sanchi Stupa

Which of the above places is / are also known for mural paintings?

- A. 1 only
- B. 1 and 2 only
- C. 1, 2 and 3
- D. None

Answer ||| B

Solution ||| Mural paintings are found in caves of Ajanta, Bagh, Sittanavasal, Armamalai Cave, Ravan Chhaya rock shelter and Ellora. 1 "Ajanta Caves" is correct as it is famous for murals. 2 "Lepakshi Temple" is correct as it is renowned for one of the best repository of mural paintings of Vijayanagar kings. 3 "Sanchi Stupa" is incorrect as no evidence was received till now for the presence of mural paintings. 1 and 2 are only correct, hence B is correct option.

45. Which of the following constitute Capital Account?

1. Foreign Loans
2. Foreign Direct Investment
3. Private Remittances
4. Portfolio Investment

Select the correct answer using the codes given below.

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

Answer ||| B

Solution ||| Capital account is the cumulative result of public and private international investments which is coming in and going out of the country which includes foreign direct investment, portfolio investments and other investments along with Foreign Loan account. This description shows that 1, 2 and 4 are correct, hence B is correct.

46. Which of the following is / are unique characteristic / characteristics of equatorial forests?

1. Presence of tall closely set trees with crowns forming a continuous canopy
2. Coexistence of a large number of species
3. Presence of numerous varieties of epiphytes

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| Statement 1 "Presence of tall closely set trees with crowns forming a continuous canopy " is correct as equatorial forests has different types of trees and other plants that are growing closely in small area where crowns of trees about 65 feet to 130 feet high which are tightly packed together that looks as canopy from above and not allow

sunlight to enter. Statement 2 "Coexistence of a large number of species" is correct as in such forest, there are 750 species of tree and 1,500 species of flowering plant in 4 square miles of forest. Statement 3 "Presence of numerous varieties of epiphytes" is correct as many epiphytes plant grow on trees, as all 3 statements are correct, so correct option is D.

47. The most important fishing grounds of the world are found in the regions where

- A. Warm and cold atmospheric currents meet
- B. Rivers drain out large amounts of freshwater into the sea
- C. Warm and cold oceanic currents meet
- D. Continental shelf is undulating

Answer ||| C

Solution ||| It is seen that the world's most productive fishing grounds are located where warm and cold currents meet as these region tend to have regular foggy conditions and because of this lot of weeds are found in that area which makes the fishes to attract for their feed, so option C is correct.

48. With reference to the food chains in ecosystems, which of the following kinds of organism is / are known as decomposer organism / organisms?

- 1. Virus
- 2. Fungi
- 3. Bacteria

Select the correct answer using the codes given below.

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

Answer ||| B

Solution ||| Decomposers are organisms which consume and break down dead and decaying organisms and wastes of other organisms. 1 Virus is incorrect as it is not a decomposer. 2 Fungi is a decomposer as they make

enzymes which decompose decaying matter while spreading on the nutrients of particular substance. 3 Bacteria is correct as it is an important decomposer which mainly breakdown organic materials and generates heat by composting. Both 2 and 3 are correct, so best option is B.

49. Consider the following Bhakti Saints :

1. Dadu Dayal
2. Guru Nanak
3. Tyagaraja

Who among the above was/were preaching when the Lodi dynasty fell and Babur took over?

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

Answer ||| B

Solution ||| The Lodi Dynasty ended in 1526 when Sultan Ibrahim was defeated at Battle of Panipat. 1 Dadu Dayal is incorrect as Dadu Dayal was born in 1544 after the Battle of Panipat. 3 Tyagaraja is incorrect as he was born on 4 May 1767 much after the fall of Lodi dynasty. 2 Guru Nanak was a bhakti saint born on 15 April 1469 and survived till 22 September 1539 which is the period of fall of dynasty, so it is correct. As statement 2 is only correct, hence correct option is B.

50. Consider the following statements:

The Parliamentary Committee on Public Accounts

1. Consists of not more than 25 Members of the Lok Sabha
2. Scrutinizes appropriation and finance accounts of the Government
3. Examines the report of the Comptroller and Auditor General of India

Which of the statements given above is / are correct?

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

D. 1, 2 and 3

Answer ||| D

Solution ||| Statement 1 "consists of not more than 25 Members of the Lok Sabha " is correct as Parliamentary Committee on Public Accounts has maximum of 22 members out of which 15 are from Lok Sabha and 7 from Rajya Sabha. Statement 2 "scrutinizes appropriation and finance accounts of the Government " is correct as committee scrutinizes appropriation accounts of various Ministries as Railways, Defence, P&T and other Civil Ministries. Statement 3 "examines the report of the Comptroller and Auditor General of India " is also correct as Public Accounts Committee examines report of Accounts of union government submitted by Comptroller and Auditor General of India to President. Statements 1, 2 and 3 are correct so this follows option D is correct.

51.Consider the following minerals:

1. Calcium
2. Iron
3. Sodium

Which of the minerals given above is/are required by human body for the concentration of muscles?

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

Answer ||| D

Solution ||| Our body is made up of various types of muscles which require certain minerals to contract. 1 Calcium is correct as it is required for activating enzymes that causes muscle contraction which can be available in sources such as milk, cheese, yogurt, cereals and juices. 2 Iron is correct as it helps in contracting of muscles where muscles use energy and oxygen. 3 Sodium is correct as it help nerve cells in sending electrical signals to muscles for contraction. Hence 1, 2 and 3 are correct so correct is D.

52.Photochemical smog is a resultant of the reaction among.

- A. NO₂, O₃ and peroxyacetyl nitrate in the presence of sunlight
- B. CO, O₂ and peroxyacetyl nitrate in the presence of sunlight
- C. CO, CO₂ and NO₂ at low temperature
- D. high concentration of NO₂, O₃ and CO in the evening

Answer ||| A

Solution ||| Photochemical smog is secondary pollutant which occurs when pollutants as nitrous oxides and VOCs interact with sunlight forming ozone and peroxyacetyl nitrate. It is a type of chemical reaction of sunlight, nitrogen oxides and volatile organic compounds in atmosphere, which makes option A correct.

53. Which one of the following terms describes not only the physical space occupied by an organism, but also its functional role in the community of organisms?

- A. Ecotone
- B. Ecological niche
- C. Habitat
- D. Home range

Answer ||| B

Solution ||| Option A is incorrect as Ecotone refers to transitional region among two biomes where two communities meet and integrate. Option B is correct as Ecological niche describes life of species and activities in terms of population to distribution of resources with its competitors. Option C is incorrect as Habitat is ecological area that is occupied by particular species of animal, plant or organism. Option D is incorrect as Home range is area where animal lives and move around.

54. Which of the following statements is/are applicable to Jain doctrine?

1. The surest way of annihilating Karma is to practice penance.
2. Every objects, even the smallest particle has a soul.
3. Karma is the bane of the soul and must be ended.

Select the correct answer using the codes given below.

- A. 1 only
- B. 2 and 3 only

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

Answer ||| D

Solution ||| Statement 1 "The surest way of annihilating Karma is to practice penance" is correct as annihilation of karma comes through penance. Statement 2 "Every object, even the smallest particle has a soul" is correct as Souls are not the property of animal and plant life, but serves as entities which are not looked as living by other sections. Statement 3 "Karma is the bane of the soul and must be ended" is correct as Jaina believes every living and non-living being has soul.

55. Which of the following diseases can be transmitted from one person to another through tattooing?

1. Chikungunya
2. Hepatitis B
3. HIV-AIDS

Select the correct answer using the codes given below.

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

Answer ||| B

Solution ||| Tattoo is a permanent mark on skin having pigments that are inserted by pricking skin's top layer causing a skin infections. 1 is incorrect as Chikungunya is not spread through tattooing but spread with mosquitoes, so this eliminates options A, C and D. 2 Hepatitis B is correct as Tattooing helps in spreading of hepatitis B virus infection. 3 HIV – AIDS is correct as equipment used to create tattoo which contains contaminated infected blood stains as Tattoo tool it is not properly cleaned by person which further lead to blood borne diseases.

56. Which of the following characterizes/characterize the people of Indus Valley Civilization?

1. They possessed great palaces and temples.
2. They worshipped both male and female deities.
3. They employed horse-drawn chariots in warfare.

Select the correct statement/statements using the codes given below.

- A. 1 and 2 only
- B. 2 only
- C. 1, 2 and 3
- D. None of the statements given above is correct

Answer ||| B

Solution ||| Statement 1 "They possessed great palaces and temples" is incorrect as during the period, no temples or religious place was seen from Harappan cities. Statement 2 "They worshipped both male and female deities" is correct as with presence of female deity with male figure posture that surrounds by animals shows similarities of Shiva. Statement 3 "They employed horse-drawn chariots in warfare" is incorrect as based on Indus seals there available many animals such as goats, buffaloes, oxen, elephants, dogs and camels, where Harappans were only familiar with horse. Option B is correct as both statements 1 and 3 are not in favour of Harappan civilisation.

57. In India, deficit financing is used for raising resources for

- A. economic development
- B. redemption of public debt
- C. adjusting the balance of payments
- D. reducing the foreign debt

Answer ||| A

Solution ||| Deficit financing involves financing budgetary shortage by way of public loans to generate new money. It is the best compost for economic development in short term as lot of money is required in infrastructure, industrial development, transportation and communication which can be easily carried out through financing deficit.

58. An increase in the Bank Rate generally indicates that the

- A. market rate of interest is likely to fall
- B. Central Bank is no longer making loans to commercial banks
- C. Central Bank is following an easy money policy

D. Central Bank is following a tight money policy

Answer ||| D

Solution ||| Bank rate is the rate of interest which Central bank charged on financing facilities such as loans and advances to commercial bank. Once the bank rate is higher, then the Central Bank will follow tight money policies in lending financial facilities to customer, so option D is correct. Option C is incorrect as on increasing higher bank rate, the Central bank will charge more rate of interest from commercial bank which further will charge higher interest from customers, so the money policy will not be eased. Option B is incorrect as immaterial of any bank rate, the Central Bank will make loan to commercial bank.

59.The Reserve Bank of India regulates the commercial banks in matters of

1. liquidity of assets
2. branch expansion
3. merger of banks
4. winding-up of banks

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| Reserve Bank of India is responsible to regulate commercial banks under provisions of Banking Regulation Act 1949 and Reserve Bank of India Act 1934 for development of banking policies. Reserve Bank of India will monitor banks in maintaining agreed cash, statutory liquidity reserves and many other operational matters. The options given in the questions are all correct as Reserve Bank of India regulates banks in maintaining liquidity of assets, played role in expansion of branch operations, helps in merging banks together and played an important role in winding-up of commercial banks, so correct option is D.

60.The balance of payments of a country is a systematic record of

- A. all import and export transactions of a country during a given period of time, normally a year
- B. goods exported from a country during a year
- C. economic transaction between the governments of one country to another
- D. capital movements from one country to another

Solution ||| Balance of payments of a country is the record of every economic transaction which is carried out in a year between residents of country with other countries. It can be current account, capital account and financial account, so option A is correct. Option B is incorrect as balance of payments of a country is not concern with export of goods from one country to another in a year. Option C is also correct as balance of payments of a country records every financial transactions between consumers, businesses and government of one country with others.

61. Quit India Movement was launched in response to

- A. Cabinet Mission plan
- B. Cripps Proposals
- C. Simon Commission Report
- D. Wavell Plan

Answer ||| B

Solution ||| Quit India Movement was launched when Cripps mission got failed which was initiated by Gandhi against British Rule in August 1942, so option B is correct.

62. The people of India agitated against the arrival of Simon Commission because

- A. Indians never wanted the review of the working of the Act of 1919
- B. Simon Commission recommended the abolition of Darchy (Diarchy) in the Provinces
- C. there was no Indian member in the Simon Commission
- D. the Simon Commission suggested the partition of the country

Answer ||| C

Solution ||| People in India agitated against arrival of Simon Commission as the commission doesn't have any Indian members, which is option C. Option A is incorrect as there was no question by Indians to review working of Act of 1919. Option D is incorrect as Simon Commission never suggested the partition of country.

63. According to the Constitution of India, which of the following are fundamental for the governance of the country?

- A. Fundamental Rights
- B. Fundamental Duties
- C. Directive Principles of State Policy
- D. Fundamental Rights and Fundamental Duties

Answer ||| C

Solution ||| In the question, the fundamental which has to be taken care while framing any law or governance of country are the Directive Principles of State Policy. These are the guidelines for union and state governments of India that are applied to frame laws by government, so option C is correct.

64. Which one of the following describes best the concept of Nirvana in Buddhism?

- A. The extinction of the flame of desire.
- B. The complete annihilation of self.
- C. A state of bliss and rest
- D. A mental stage beyond all comprehension

Solution ||| Option A "The extinction of the flame of desire" is correct as Nirvana in Buddhism is described as extinguishing of fires causing rebirths and connected suffering which is death of thirst. Option B is incorrect as "The complete annihilation of self" is extinction of thirst which is not self-annihilation as there is nothing self in Buddhism. Option C is correct "A state of bliss and rest" as Nirvana is a state of supreme happiness and bliss. Option D "A mental stage beyond all comprehension" is incorrect as Nirvana is absolute, supra-mundane experience which is insufficient to describe.

65. Some Buddhist rock-cut caves are called Chaityas, while the others are called Viharas. What is the difference between the two?

- A. Vihara is a place of worship, while Chaitya is the dwelling place of the monks
- B. Chaitya is a place of worship, while Vihara is the dwelling place of the monks
- C. Chaitya is the stupa at the far end of the cave, while Vihara is the hall axial to it.
- D. There is no material difference between the two

Answer ||| B

Solution ||| Viharas were place for living while Chaityas were place for discussions. Viharas is a resting places for wandering Buddhist monks while Chaitya is a place for offering prayer, hence option B is correct. Option C is incorrect as Chaitya is not a Stupa but there were Stupa at the end of the hall. Chaityas were commonly part of a monastic complex, while Vihara has central hall with compartments.

66. In which of the following States is lion-tailed macaque found in its natural habitat?

- 1. Tamil Nadu
- 2. Kerala
- 3. Karnataka
- 4. Andhra Pradesh

Select the correct answer using the codes given below.

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

Answer ||| A

Solution ||| Lion-tailed Macaque is a fruit, insects, eggs eating animal found in the pockets of evergreen tropical forest in Western Ghat of South India, so 1, 2 and 3 are correct, hence correct option is A.

67. Which of the following adds/add nitrogen to the soil?

1. Excretion of urea by animals
2. Burning of coal by man
3. Death of vegetation

Select the correct answer using the codes given below.

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

Answer ||| C

Solution ||| Nitrogen can be added to soil from animal by-products, plant and mineral sources. Statement 1 is correct as adding nitrogen to soil is done by excretion of urea by animals since urea serves an important role in metabolism of nitrogen containing compounds by animals. Statement 2 is incorrect as burning coal leads to cause smog, acid rain and toxic air pollution and not nitrogen to soil. Nitrogen in soil comes from leaves, plants and manure, so statement 3 is correct. As statement 1 and 3 are correct, so correct option is C.

68. Consider the following organisms:

1. Agaricus
2. Nostoc
3. Spirogyra

Which of the above is/are used as biofertilizer/biofertilizers?

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

Answer ||| C

Solution ||| Biofertilizer improves fertility of land through biological wastes. 1 is incorrect as Agaricus is a summer white button mushroom. 2 is correct as Nostoc is blue-green algae, that enrich paddy field soil by fixing atmospheric nitrogen and supply vitamin B to make plants to grow vigorously. 3 is correct as Spirogyra is a living nitrogen fixing algae.

69. Consider the following pairs:

National Park River flowing through the Park

1. Corbett National Park : Ganga
2. Kaziranga National Park : Manas
3. Silent Valley National Park : Kaveri

Which of the above pairs is/are correctly matched?

- A. 1 and 2
- B. 3 only
- C. 1 and 3
- D. None

Answer ||| D

Solution ||| Ramganga river flows through Jim Corbett National Park and not Ganga river, so it is incorrect. Kaziranga National Park is located on flood plains of Brahmaputra River and not on Manas river, so this also incorrect. Silent Valley National Park is an ecologically diverse area located on Kunti river and not on Kaveri river, hence it is also incorrect. From the options given in the question, none of them is correct, so correct option is D.

70. With reference to food chains, in ecosystems, consider the following statements:

1. A food chain illustrates the order in which a chain of organisms feed upon each other.
2. Food chains are found within the populations of a species.
3. A food chain illustrates the numbers of each organism which are eaten by others.

Which of the statements given above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1, 2 and 3
- D. None

Answer ||| A

Solution ||| A food chain in an ecosystem is a community of living and non-living things which depends on each other for food, so statement 1 is correct. Statement 2 is incorrect as in food chain energy is transferred from one organism to another for food, so it can exist within species itself, so only statement 1 is correct, so best option is A.

71. Acid rain is caused by the pollution of environment by

- A. carbon dioxide and nitrogen
- B. carbon monoxide and carbon dioxide
- C. ozone and carbon dioxide
- D. nitrous oxide and sulphur dioxide

Answer ||| D

Solution ||| Acid rain is a mixture of wet and dry materials coming from atmosphere which is caused by chemical reaction of sulfur dioxide and nitrogen oxides which rise high in atmosphere which mix and react with water, oxygen and chemicals to form acidic pollutants, so option D is correct.

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

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

Select the correct answer using codes given below.

- A. 1, 3, 4, 6 and 7 only
- B. 1, 2, 3, 5 and 6 only
- C. 2, 4, 5 and 7 only
- D. 1, 2, 3, 4, 5, 6 and 7

Answer ||| B

Solution ||| Computer contains highly toxic chemicals like lead, cadmium, mercury, beryllium, polyvinyl chloride and phosphor. Computers along with its peripherals like printer, scanner, keyboard, mice and monitors are form of e-waste. Computer Monitor contains Cathode ray tubes contain Mercury which serves as hazardous components. Computer Circuit boards contains Lead and Copper which serves as hazardous waste, so option B is correct.

73. 'Economic Justice' as one of the objectives of the Indian Constitution has been provided in

- A. the Preamble and the Fundamental Rights
- B. the Preamble and the Directive Principles of State Policy
- C. the Fundamental rights and the Directive Principles of State Policy
- D. None of the above

Answer ||| B

Solution ||| Economic Justice concerns with no inequity among man based on income, wealth and economic status which is in Preamble and Directive Principles of State Policy, hence option B is correct. Option A is incorrect as Economic Justice of Indian Constitution is in Preamble and not in Fundamental rights.

74. Improper handling and storage of cereal grains and oilseeds result in the production of toxins known as aflatoxins which are not generally destroyed by normal cooking process. Aflatoxins are produced by

- A. bacteria
- B. protozoa
- C. moulds
- D. viruses

Answer ||| C

Solution ||| Aflatoxin is a toxin which occurs from naturally occurring mold by fungus that are toxic and carcinogenic which are proven to cause cancer in humans, so option C is correct.

75. Under the Scheduled Tribes and Other Traditional Forest Dwellers [Recognition of Forest Rights] Act, 2006, who shall be the authority to initiate the process for determining the nature and extent of individual or community forest rights or both?

- A. State Forest Department
- B. District Collector/Deputy Commissioner
- C. Tahsildar/Block Development Officer /Mandal Revenue Officer
- D. Gram Sabha

Answer ||| D

Solution ||| In the Forest Rights Act 2006, the Gram Sabha is authorised to initiate the process for determining nature and extent of individual or community forest rights which may be given to forest dwelling Scheduled Tribes and various other traditional forest dwellers within the local jurisdiction, so option D is correct.

76. The Government enacted the Panchayat Extension to Scheduled Areas (PESA) Act in 1996. Which one of the following is not identified as its objective?

- A. To provide self-governance
- B. To recognize traditional rights
- C. To create autonomous regions in tribal areas
- D. To free tribal people from exploitation

Answer ||| C

Solution ||| Panchayat Extension to Scheduled Areas (PESA) Act in 1996 was principally introduced to give self rule authority to tribal people so that they can govern themselves with their resources. Option A is incorrect the objective of PESA Act was establishment self governance in Scheduled Areas. Option B is also incorrect as PESA was introduced to recognise traditional rights of tribal. Option C is correct as the PESA objective is not to create any autonomous regions in tribal areas. Option D is also incorrect as it is the objective of PESA to free tribal from exploitation.

77. Contour bunding is a method of conservation used in

- A. desert margins, liable to strong wind action
- B. low flat plains, close to stream courses, liable to flooding
- C. scrublands, liable to spread of weed growth
- D. None of the above

Answer ||| D

Solution |||

Contour bunding is a sustainable land management practice for sloping, and hilly land where the soil productivity is very low and risk of soil erosion is high.

78.Which one of the following is the correct sequence of ecosystems in the order of decreasing productivity?

- A. Oceans, lakes, grasslands, mangroves
- B. Mangroves, oceans, grasslands, lakes
- C. Mangroves, grasslands, lakes, oceans
- D. Oceans, mangroves, lakes, grasslands

Answer ||| C

Solution ||| Ecotone regions like mangroves, wetlands, grasslands etc. have greater productivity as compared to forest, ocean, pond, river and desert ecosystems as there are variety of species present in ecotone. In the question we see that mangroves are intermediary ecosystems which have maximum productivity while all others are normal ecosystems. The grasslands are not transitional every time, so it is less productive as compared to mangroves. There is less productivity in the Ocean since it is very deep with poor nutrients, so it is least productivity. Hence the correct option according to decreasing productivity will be option C.

79.In the grasslands, trees do not replace the grasses as a part of an ecological succession because of

- A. insects and fungi
- B. limited sunlight and paucity of nutrients
- C. water limits and fire
- D. None of the above

Answer ||| C

Solution ||| Grassland ecosystems are weak due to water scarcity and frequently on fire which serves as main targets for human development, hence option C is correct.

80.The Parliament can make any law for whole or any part of India for implementing international treaties

- A. With the consent of all the states
- B. With the consent of the majority of States
- C. With the consent of the States concerned
- D. Without the consent of any State

Answer ||| D

Solution ||| In Indian Constitution, the parliament is authorized to make any laws on matter concerning in state list which lead to Rajya sabha passes resolution, national emergency, states making request, implementing international agreements, at time of president's rule. So basically Parliament while framing any law for implementing international treaties need no approvals from any states, hence option D is correct.

81.The demand for the Tebhaga Peasant Movement in Bengal was for

- A. the reduction of the share of the landlords from one-half of the crop to one-third
- B. the grant of ownership of land to peasants as they were the actual cultivators of the land
- C. the uprooting of zamindari system and the end of serfdom
- D. writing off all peasant debts

Answer ||| A

Solution ||| Tebhaga movement in Bengal was militant campaign initiated by Kisan Sabha in 1946. During that period, share-cropping peasants had to give half of their share of harvest to Jotedars who were the owners of land. They demanded reduction in distribution of harvest share given to landlords to only one-third the price, which seems to be option A.

82. Which of the following bodies does not/do not find mention in the Constitution?

1. National Development Council
2. Planning Commission
3. Zonal Councils

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| 1 is correct as National Development Council is extra-constitutional and non-statutory body involved in decision making on development matters. 2 is also correct as Planning Commission is an institution does not derive its creation from either the Constitution or statute and simply involves in planning strategies. 3 is correct as Zonal councils are statutory bodies set up under States Reorganisation Act 1956, hence the correct option is D since all the three mentioned in the question are not mentioned in constitution.

83. Consider the following:

1. Electromagnetic radiation
2. Geothermal energy
3. Gravitational force
4. Plate movements
5. Rotation of the earth
6. Revolution of the earth

Which of the above are responsible for bringing dynamic changes in the surface of the earth?

- A. 1, 2, 3 and 4 only
- B. 1, 3, 5 and 6 only
- C. 2, 4, 5 and 6 only
- D. 1, 2, 3, 4, 5 and 6

Answer ||| A

Solution ||| 1 is correct as Electromagnetic radiation brings changes in Earth's surface through rainfall, wind, and certain climatic factors. 2 is

correct as Geothermal energy is thermal energy generated and stored in Earth which helps in mitigation of climate change. 3 is correct as Gravitational Force is responsible for landslides, river flow and related diastrophic changes in earth's surface. 4 is correct as Plate Movements create rift valleys, mountains and several large scale physical features which brings dynamic changes on earth's surface. 5 is incorrect as Rotation of earth is responsible for climate and does not relate to large changes on earth's surface. 6 is not correct as Revolution of Earth results in seasonal changes only without concerning any changes on earth's surface, so the correct option is A.

84. Consider the following pairs:

1. Nokrek Bio-Sphere Reserve : Garo Hills
2. Logtak (Loktak) Lake : Barail Range
3. Namdapha National Park: Daphla Hills

Which of the above pairs is/are correctly matched?

- A. 1 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. None

Answer ||| A

Solution ||| Statement 1 is correct as the Nokrek Biosphere Reserve which is a national park is located in West Garo Hills. Statement 2 is incorrect as Logtak (Loktak) Lake is located in Manipur and not within Barail Range as these are mountain ranges which separates Barak and Brahmaputra Valleys of Assam. Statement 3 is incorrect as Namdapha National Park borders to south and east by Patkai hills and not by Daphla Hills, so only option a is correct.

85. On the planet earth, most of the freshwater exists as ice caps and glaciers. Out of the remaining freshwater, the largest proportion

- A. is found in atmosphere as moisture and clouds
- B. is found in freshwater lakes and rivers
- C. exists as groundwater
- D. exists as soil moisture

Answer ||| C

Solution ||| On Earth, apart from ice caps and glaciers, the fresh water in maximum proportion exists as groundwater which approximates 25 to 30% as described from the global distribution table, so option C is correct.

Global Water Distribution	Percent of Fresh Water
Oceans, Seas, and Bays	-
Ice Caps, Glaciers, and Permanent Snow	68.7
Groundwater	-
Fresh	30.1
Saline	-
Soil Moisture	0.05
Ground Ice and Permafrost	0.86
Lakes	-
Fresh	.26
Saline	-
Atmosphere	0.04
Swamp Water	0.03
Rivers	0.006
Biological Water	0.003
Total	100.0

86. The Narmada river flows to the west, while most other large peninsular rivers flow to the east. Why?

1. It occupies a linear rift valley.
2. It flows between the Vindhyas and the Satpuras.
3. The land slopes to the west from central India.

Select the correct answer using the codes given below.

- A. 1 only
- B. 2 and 3
- C. 1 and 3
- D. None

Answer ||| A

Solution ||| Narmada River is among the major rivers in peninsular India which flows from east to west towards rift valley, so statement 1 is correct.

Narmada enters structural channel between Vindhya and Satpura ranges and flows across Madhya Pradesh and Gujarat in Gulf of Khambhat, so statement 2 is also correct but that is not the reason for flow towards west.

Statement 3 is incorrect.

87. Variations in the length of daytime and night time from season to season are due to

- A. the earth's rotation on its axis
- B. the earth's revolution round the sun in an elliptical manner
- C. latitudinal position of the place
- D. revolution of the earth on a tilted axis

Answer ||| D

Solution ||| The three reasons that contribute to variations in day and night time are:

1. Tilting of Axis
2. Revolution of Earth around the Sun
3. North Pole pointing in similar direction



88. With reference to the usefulness of the by-products of sugar industry, which of the following statements is/are correct?

1. Bagasse can be used as biomass fuel for the generation of energy.
2. Molasses can be used as one of the feed stocks for the production of synthetic chemical fertilizers.
3. Molasses can be used for the production of ethanol.

Select the correct answer using the codes given below.

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

Answer ||| C

Solution ||| Bagasse is fibrous residue which is left after crushing and extraction of juice having fibres, water and soluble solids used for generation of steam and power for operating sugar factory, hence statement 1 is correct. Statement 2 is incorrect as Molasses on recycling are used by distillers, bakers and pharmaceutical companies. Statement 3 is correct as ethanol is prepared by fermentation of molasses. From the above we see that two statements are correct, hence correct option is C.

89. Consider the following statements:

Attorney General of India can

- 1. take part in the proceedings of the Lok Sabha
- 2. be a member of a committee of the Lok Sabha
- 3. speak in the Lok Sabha
- 4. vote in the Lok Sabha

Which of the statements given above is/are correct?

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

Answer ||| C

Solution ||| In India, Attorney General is the chief legal advisor appointed by the President who has the right of audience in all Courts in India and can take part in proceedings of both the Houses of Parliament without voting power. Thus we see that statements 1, 2 and 3 are correct while 4 is wrong, hence the correct option is C.

90. Consider the following statements:

- 1. An amendment to the Constitution of India can be initiated by an introduction of a bill in the Lok Sabha only.
- 2. If such an amendment seeks to make changes in the federal character of the Constitution, the amendment also requires to be ratified by the Legislature of all the States of India.

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

Answer ||| D

Solution ||| In case of amendment in Constitution of India, both the houses of the Parliament will initiate a bill, so statement 1 is incorrect. Statement 2 is also incorrect as amendment seeking changes in federal character of Constitution should ratify from at least half of the states. Both statements 1 and 2 are incorrect; hence the correct option is D.

91. Consider the following animals

- 1). Sea cow
- 2). Sea horse
- 3). Sea lion

Which of the above is/are mammal/mammals?

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

Answer ||| B

Solution ||| Sea cow is the highest member of Sirenia which is an extinct herbivorous marine mammal, so it is correct. Seahorse is not a mammal but it is a title for 54 species of marine fishes. Sea Lions are marine mammals having feature winged feet. It is noted that both 1 and 3 are correct, so option b is correct.

92. With reference to Indian History, the Members of the Constituent Assembly from the Provinces were

- A. Directly elected by the people of those provinces
- B. Nominated by the Indian National Congress and the Muslim League
- C. Elected by the Provincial Legislative Assemblies

D. Selected by the Government for their expertise in constitutional matters

Answer ||| C

Solution ||| In Indian history, seats in constitutional assembly were allocated to every British province that was decided among Muslims, Sikh and General category. Members of Constituent Assembly were elected by respective Provincial assemblies by way of single transferable vote. Option C is correct as members of Constituent Assembly were indirectly elected by Provincial Legislative Assemblies.

93. Which of the following can be found as pollutants in the drinking water in some parts of India?

- 1). Arsenic
- 2). Sorbitol
- 3). Fluoride
- 4). Formaldehyde
- 5). Uranium

Select the correct answer using the codes given below.

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

Answer ||| C

Solution ||| As per WHO, the risk associated with quality of drinking water involves pollutants such as arsenic, uranium and fluoride, hence 1, 3 and 5 are correct. Sorbitol is an artificial sweetener and laxative while Formaldehyde is used in coating, laminating etc which are not pollutants of water. So from this we see that option C is correct as arsenic, uranium and fluoride are major water pollutants.

94. Consider the following:

- 1). Star tortoise
- 2). Monitor lizard
- 3). Pygmy hog
- 4). Spider monkey

Which of the above are naturally found in India?

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

Answer ||| A

Solution ||| Star tortoise is a species found in dry areas and scrub forest in west of Sindh province in India, hence it is correct. Monitor Lizards are large reptiles found in Africa and in Asia, which is also correct. Pygmy Hog is smallest and rarest species of pig which spreads across India, Nepal and Bhutan and in Tropical forest of Mexico and Brazil, so it is also correct. Spider monkeys are found in tropical forests of Central and South America, which is incorrect, hence A is the valid option.

95.The Chinese traveler Yuan Chwang (Hiuen Tsang) who visited India recorded the general conditions and culture of India at that time. In this context, which of the following statements is/are correct?

- 1). The roads and river-routes were completely immune from robbery.
- 2). As regards punishment for offences, ordeals by fire, water and poison were the instruments for determining the innocence or guilt of a person.
- 3). The tradesmen had to pay duties at ferries and barrier stations.

Select the correct answer using the codes given below.

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

Answer ||| B

Solution ||| Yuan Chwang was a Chinese visitor who visited India during period of Harshavardhana to see sacred places connected with life of Buddha. Statement 1 "The roads and river-routes were completely immune from robbery is incorrect as Yuan Chwang himself robbed many Gold and silver images of Buddha. Statement 2 "As regards punishment for offences, ordeals by fire, water and poison were the instruments for determining the innocence or guilt of a person" is correct as according to Yuan Chwang, water, fire, weighing and poison were the four ordeals by

which innocence or guilt of accused person is found. Statement 3 “The tradesmen had to pay duties at ferries and barrier stations” is correct as Yuan Chwang noted that under taxation and revenue, tradesmen during exchange of their goods needs to pay small duties at ferries and barrier stations. We see that only statement 1 is incorrect that eliminates option A, C and D, hence option B is correct.

96.Recombinant DNA technology (Genetic Engineering) allows genes to be transferred

- 1). across different species of plants
- 2). from animals to plants
- 3). from microorganisms to higher organisms

Select the correct answer using the codes given below.

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

Answer ||| D

Solution ||| Recombinant DNA technology is that where individual genes get transferred from one organism to another across different species. We see that statement 1 is correct as on transferring carrot genes to rice, we get Golden rice. Recombinant DNA technology applied for producing transgenic organisms applies to plants, animals and bacteria. Statement 2 is correct because as per research, movement of genetic material DNA taken from plant or animal can be placed in any and vice versa. Statement 3 is also valid as transferring of genes from bacteria to man or man to bacteria or from bacteria to plant is possible, since all three statements are correct, so correct option is D

97.With reference to the history of Indian rock-cut architecture, consider the following statements:

- 1). The canvas at Badami are the oldest surviving rock-cut caves in India.
- 2). The Barabar rock-cut caves were originally made for Ajivikas by Emperor Chandragupta Maurya.
- 3). At Ellora, caves were made for different faiths.

Which of the statements given above is/are correct?

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

Answer ||| C

Solution ||| Statement 1 is incorrect as Badami caves are not the oldest surviving rock cut caves dating in 6th & 7th Centuries. Statement 2 is incorrect as Barabar Caves are oldest surviving rock-cut caves in India from Maurya Empire 322–185 BC. Statement 3 is correct as Ellora caves are famous for Hindu, Buddhist and Jain temples which constructed during the time of Kalachuri, Chalukya and Rashtrakutas. Since statements 1 and 2 are incorrect, so it eliminates option A, B and D.

98. Which one of the following pairs is correctly matched?

Geographical feature and region

- A. Abyssinian Plateau - Arabia
- B. Atlas mountains - Northwest Africa
- C. Guiana Highlands - Southwest Africa
- D. Okavango Basin - Patagonia

Answer ||| B

Solution ||| Option A is incorrect as Abyssinian Plateau is located in Ethiopia and not in Arabia. Option B is correct as Atlas Mountains is located in North western Africa which is about 2,500 km. Option C is incorrect as Guiana Highlands is a plateau which is a type of low mountain region in South America located north of Amazon and south of Orinoco River. Option D is incorrect as Okavango Basin is located in South western Africa and not in Patagonia.

99. Which one of the following statements is correct?

- A. In India, the same person cannot be appointed as Governor for two or more States at the same time
- B. The Judges of the High Court of the States in India are appointed by

the Governor of the State just as the Judges of the Supreme Court are appointed by the President

C. No procedure has been laid down in the Constitution of India for the removal of a Governor from his/her post

D. In the case of a Union Territory having a legislative setup, the Chief Minister is appointed by the Lt. Governor on the basis of majority support.

Answer ||| C

Solution ||| Option A is not correct as Indian constitution, a person can be appointed as Governor of more than two States at the same time where his salary gets shared among the respective states. Option B is incorrect as Judges of High Court are appointed by will of President, Governor and Chief Justice of High Court. Option C is correct as Constitution does not place any reason for which, Governor gets removed by president. Option D is wrong as in case of Union Territory with legislative setup, Chief Minister gets appointed by the President not by Lt. Governor.

100. What will follow if the money bill is substantially amended by the Rajya Sabha?

A. The Lok Sabha may send the bill to the Rajya Sabha for reconsideration

B. The Lok Sabha may still proceed with the bill, accepting or not accepting the recommendations of the Rajya Sabha

C. The president may call a joint sitting for passing the Bill

D. The Lok Sabha cannot consider the bill further

Answer ||| B

Solution ||| Money Bill is introduced in Lok Sabha on recommendation of President which cannot be initiated by Rajya Sabha. Rajya Sabha can reject or amend the Money Bill only with the consent of Lok Sabha. If Lok Sabha does not accept any amendments recommended by Rajya Sabha, then in such case, Money Bill is deemed to be passed by both Houses of Parliament, which suggests that option A is correct. Option B is invalid as Lok Sabha has to wait for 14 days for any amendment made in the bill by Rajya Sabha. Option C is not relevant as there is no need for the President to call joint sitting for passing of Money bill.