6. Management of Natural Resources

Very Short Answer Type Questions-Pg-258

1. Question

Name two fossil fuels.

Answer

The two very common fossil fuels are coal and petroleum.

Coal is a flammable hard rock majorly made of carbon with some parts of oxygen, sulphur, nitrogen and hydrogen.

Petroleum is a thick yellow-black liquid majorly made of hydrocarbons, used for various types of fuels.

2. Question

Name the major programme started to replenish forests.

Answer

Silviculture began with an aim to control the growth, health and quality of forests so that forests could be regenerated and managed for desirable outcomes.

3. Question

Apart from the availability of forest products, name two other things which are affected by the destruction of forests.

Answer

The two major things that are affected by the destruction of forests are the quality of soil and the sources of water. Trees help retain the topsoil so as a result of destruction of forests the phenomenon of soil erosion takes place. Deforestation also pollutes water and disturbs the water table thereby affecting the sources of water.

4. Question

Name the rivers with which the following dams are associated:

(a) Tehri Dam

(b) Sardar Sarovar Dam

(c) Bhakra Dam

Answer

(a) Tehri Dam is associated with river Ganga and is the tallest dam in India near Tehri in Uttarakhand.

(b) Sardar Sarovar Dam is associated with river Narmada and is a gravity dam near Navagam in Gujarat.

(c) Bhakra Dam is associated with river Satluj and is a concrete gravity dam in Bilaspur, Himachal Pradesh.

5. Question

Name two factors which can be used to find whether river water has been contaminated.

Answer

The two factors which can be used to find whether the river water has been contaminated are:

i) The presence of coliform bacteria in rainwater.- Coliform is a harmless bacteria found in human intestine. However, if coliform is present in water it is a sign that the water may contain other harmful bacteria.

(ii) Measurement of pH of rainwater.- pH level below 7 indicates high levels of acid and hence confirms the contamination of water.

6. Question

Name the bacteria whose presence in water indicates the contamination with disease-causing micro-organims.

Answer

Presence of coliform bacteria in water confirms the contamination of water. It is found in human intestine. Although it is harmless, it indicates the presence of other harmful bacteria.

7. Question

With which process are the following ancient structures associated?

Kulhs, Eris, Surangams, Kattas, Pynes

Answer

All these structures are related with rain water harvesting. Kulhs were used in Himachal Pradesh, Eris in Tamil Nadu, Surangams in Kerala, Kattas in Karnataka and Pynes in Bihar.

8. Question

Which fossil fuel is conserved :

(a) when we save on electricity?

(b) when we use bicycle for covering short distances instead of a motorbike ?

Answer

(a) Coal as a fuel is used in thermal power plants to generate electricity so when we save on electricity, coal is conserved.

(b) Petroleum is conserved when we use bicycle for covering short distances because petroleum products are used as fuels to run vehicles.

9. Question

What is the main purpose of rainwater harvesting ?

Answer

Rain water harvesting is done so that rain water can penetrate into the ground and recharge the ground water levels which have fallen due to its excessive use.

10. Question

What is the name of the process in which rain water falling on the earth is stopped from flowing and made to percolate into the ground ?

Answer

Rain water harvesting is the process in which rain water is made to percolate into the ground and recharge the ground water table.

11. Question

Name the most common practice of recharging ground water.

Answer

The most common practice of recharging ground water in both rural and urban areas is rain water harvesting.

12. Question

The pH of a river water sample as measured by pH paper is found to be What does it tell us about water?

Answer

Water level below 7 indicates that the water is acidic. So ph 6 indicates that the water is acidic and thus polluted.

13. Question

Name the person who is most remembered for the protection of Khejri trees in Rajasthan.

Answer

Amrita Devi Bishnoi is most remembered for the protection of khejri trees in Rajasthan. She led a group of 363 people who gave their lives for the protection of these trees near Jodhpur.

14. Question

State whether the following statement is true or false :

Chipko Andolan was associated with the conservation of wild animals such as tigers and lions.

Answer

False

Chipko Andolan was associated with the conservation of forests and not wild animals.

15. Question

Write the full names of

(a) CFL, and (b) CFC.

Answer

a) CFL stands for Compact Fluorescent Lamps. These are fluorescent lamps designed for the purpose of saving energy.

b) CFC stands for chloro fluoro carbons. It is an organic compound made of chlorine, fluorine and carbon and is produced as a volatile derivative of methane and ethane.

16. Question

Choose one term from the following which include all others :

coal, natural gas, fossil fuels, petroleum

Answer

Fossil fuels are natural fuels formed from the remains of living organisms. It is a broad concept and includes fuels like coal, natural gas and petroleum.

17. Question

Why is the process of 'reuse' better than that of 'recycling' ?

Answer

Reuse is better than recycling because reuse requires little or no expenditure of extra energy. However, recycling requires a lot of extra energy and produces more pollutants thus also causes harm to the environment.

18. Question

Name a clean gaseous fuel other than LPG and natural gas.

Answer

Other than LPG and natural gas, biogas is also a clean gaseous fuel which is produced by the fermentation of organic matter.

19. Question

Fill in the following blanks with suitable words :

(a) LPG is a ..... fuel but biogas is not a.....fuel.

(b) Glaciers are a source of .....

(c) One of the main aim of management of forests and wildlife is to conserve the ..... which we hav inherited.

(d) Khadin is a traditional ..... harvesting system in Rajasthan.

(e) When a fuel bums in an insufficient supply of air, then some poisonous gas called ..... is also produced.

Answer

a) LPG is a fossil fuel whereas biogas is a man made fuel. So the blank can be filled by ‘fossil’.

b) Water; Glaciers are dense ice and hence a source of water.

c) Biodiversity; Forests and wildlife constitute the biodiversity.

d) Water; Khadin is among the ancient water harvesting structures which was specifically used in Rajasthan.

e) Carbon dioxide; It is produced when a fuel is burned in insufficient supply of air.

Short Answer Type Questions-Pg-259

20. Question

What is meant by "sustainable development"?

Answer

Sustainable development refers to the use of resources in such a way that the demands of the present can be met without compromising on the needs of the future generations. It is basically for sustaining the finite resources which are necessary for future generations to sustain life on the planet.

21. Question

What is silviculture? What are its advantages?

Answer

Silviculture is a program which began with an aim to control the growth, health and quality of forests so that forests could be regenerated and managed for desirable outcomes.

The advantages of silviculture are:

(i) It produces abundant raw materials for the industry like timber and paper industry.

(ii) It increases forest cover which is necessary for the conservation of wildlife.

(iii) It maintains a perfect water cycle in nature.

(iv) It prevents soil erosion as the forest cover keeps the topsoil intact.

(v) It prevents floods since the forest cover is vast.

22. Question

Write a short note on 'Chipko Andolan' (Hug the Trees Movement).

Answer

The 'Chipko Andolan' also known as ‘Hug the Trees Movement’ started after an incident in a village called 'Reni' in Garhwal in the early 1970's. A logging contractor had been permitted to cut down trees in a forest close to that village, but the inhabitants didn’t want the trees to be cut down as they felt it would harm their environment. However, one day, when the male members of the village went out for work, the contractor's workers came in the forest to cut down the trees. In the absence of the male folks, the women of the village came to the forest quickly and hugged the tree trunks with their arms, thereby preventing the workers from cutting down the trees. This brave step of the women saved the forest trees. Soon, the Chipko Movement spread across all the communities and helped in the conservation of forests.

23. Question

Why' should we conserve forests and wildlife?

Answer

Forests, wildlife and human life are interdependent thus the forests and wildlife should be conserved so that an ecological equilibrium can be maintained and any undue damage to the environment prevented. They are a source of many resources and help sustain human life. Without a balance in these, even the food cycle would not work efficiently. Any imbalance in forests and wildlife will have serious implications on humans as well.

24. Question

Describe briefly the 'khadin' system of rainwater harvesting practised in Rajasthan.

Answer

The 'Khadin' system of rainwater harvesting was practiced in ancient times in Rajasthan. In this system, a very long (about 100 m - 300 m long) earthen embankment called 'Bund' is built across the lower hill slopes lying below gravelly uplands. The rainwater from the catchment area is made to flow down the slopes and stopped by the 'Bund' to form a reservoir. The rainwater collected in the reservoir formed by the 'Bund', and in the well, gradually penetrates into the land (or ground). This water - saturated land is subsequently used for growing crops. In this way, rain water harvesting was done using khadin system in Rajasthan.

25. Question

What measures would you take to conserve electricity in your house?

Answer

Conservation of electricity is the need of the hour and we must begin by changing our habits at household level. The most basic measures which should be adopted for the conservation of electricity in our house are:

(i) One must switch off the lights, fans, television and other electrical appliances when not in use.

(ii) One must use energy efficient electrical appliances.

(iii) One must use CFLs instead of normal lights.

(iv) In a multistoried building, one must use stairs to climb up at least 3 floors instead of taking a lift.

26. Question

Although coal and petroleum are produced by the degradation of biomass, even then we need to conserve them. Why?

Answer

Coal and petroleum are fossil fuels. Although fossil fuels are formed by the degradation of biomass, they are formed from the remains buried in the soil millions of years ago. It is the continuous pressure, heat and time which convert the organic matter into coal and petroleum. Due to the slow and long process of formation of these fuels, it is advisable to conserve them since they are on the verge of exhaustion.

27. Question

Is water conservation necessary? Give reasons.

Answer

Water is one of the basic amenities required to sustain life. It is a necessity not just for humans but plants and animals too. No form of life can exist on this planet without water. It will not take many days for life forms to cease to exist without water. None of the basic activities are possible without water, the most basic use being drinking. Due to the major role water plays for the existence of life forms, it is essential to conserve it.

28. Question

Name the products of combustion of fossil fuels like coal and petroleum products. How do they affect us and our environment?

Answer

When coal and petroleum products are burned carbon dioxide, water, sulphur dioxide and nitrogen oxides are produced as the products of combustion. Carbon monoxide is produced if combustion takes place in an insufficient supply of air.

These products affect our health and also pollute the environment in the following ways-

(i) Sulphur dioxide produces acid rain which destroys the crops and monuments. It also attacks the lungs and causes bronchitis and other diseases.

(ii) Nitrogen oxides harms us just as sulphur dioxide does. It also attacks the breathing system and causes acid rain.

(iii) Carbon dioxide is leading pollutant and cause of global warming. It traps the sun's heat energy falling on the earth consequently increasing the temperature.

(iv) Carbon monoxide gas is lethal and if it gets into our blood stream, it ceases the red blood cells from performing their function of carrying oxygen from lungs to the rest of the body causing suffocation and ultimately death.

29. Question

Why should fossil fuels like coal and petroleum be used judiciously?

Answer

There is a need to use fossil fuels like coal and petroleum judiciously because they are formed from the remains of biomass buried in the soil millions of years ago. It is the continuous pressure, heat and time which convert the organic matter into coal and petroleum. Due to the slow and long process of formation of these fuels and the pollution caused by the products of combustion of these fossil fuels it is advisable to use them judiciously.

30. Question

What are the three R's to save the environment? Explain with one example of each.

Answer

The three R's to save the environment are reduce, reuse and recycle.

(i) Reduce - Reduce means we should use resources only when required and do not adopt practices that lead to their wastage. For example – We should switch off the lights and fans when not in use. In this way, we can reduce the wastage of electricity.

(ii) Recycle - Recycling means we should collect discarded items of paper, plastic, glass and metals, and send them to the respective industries so that can make fresh paper, plastic, glass or metal objects from them. We can even recycle paper at our homes.

(iii) Reuse - Reuse means that we should try and use the same things over and over again rather than discarding them after single use. For example: plastic and glass jars of jams, pickles, etc can be used later for storing items like salt, sugar, etc.

31. Question

What are the main uses of coal and petroleum products?

Answer

The main uses are:

(i)Coal is majorly used as a fuel in homes and industries. It is also used in thermal power plants to generate electricity.

(ii)Petroleum products such as petrol and diesel are majorly used as fuels for transportation purposes. It is used to run scooters, cars, buses etc.

32. Question

State any five steps to reduce the consumption of coal and petroleum products.

Answer

The steps which can be adopted to decrease the consumption of coal and petroleum products are:

(i) Lights, fans, television and other electrical appliances should be switched off when not in use to save electricity.

(ii) Energy efficient electrical appliances should be used to save electricity. For example: CFL and fluorescent tube lights

(iii) In multistoried building, we should try to climb at least up to three floors of the building and avoid taking a lift to save electricity.

(iv) We should use pressure cookers instead of open utensils for cooking food to save fuels like Kerosene and LPG.

(v) We should use solar cookers to cook food, whenever possible.

33. Question

Explain why, despite good rains, we are not able to meet the demand for water of all the people in our country.

Answer

We are not able to meet the demand for water of all the people in our country, despite good rains because:

(i) There is a rapid increase in our population.

(ii) Since there is lack of sufficient vegetation on ground, not much rain water seeps into the ground and gets stored as ground water.

(iii) High amount of water is required for the irrigation of the high yielding varieties of crops.

(iv) Untreated sewage and industrial waste is discharged into water bodies.

34. Question

Give one example to show how the participation of local people can lead to the efficient management of forests.

Answer

People's participation is a must for the management of forests. It can help in enhancing forest produce as well as in their conservation. For example, Participation of localites in the management of forest lead to the revival of degraded sal forest. In 1972, the West Bengal Forest Department devised a scheme to animate the degraded sal forest by the involvement of the local people. The, then, forest officer A. K. Banerjee involved the villagers residing around the forest in the protection of 1272 hectares of degraded Sal forest. For the help the villagers offered in protecting the forest, they were given:

a) employment in both silviculture and harvesting operations of the forest

b) 25 percent of the final harvest produce

c) Provision to collect firewood and fodder from the forest area on a nominal payment.

With the active and voluntary participation of local people, the degraded sal forest of Arabari became thick and green within ten years.

35. Question

Explain briefly, how rainwater harvesting is done from open spaces around the buildings in city areas.

Answer

In the open spaces around the buildings in a city percolation pits, covered with concrete slabs having holes in them, are constructed and connected to a recharge well through a pipe. The rainwater which falls in the open spaces goes into the percolation pit through the holes in its cover. This rainwater, after filtration in percolation pit, enters the recharge well through the outlet pipe and gradually penetrates into the soil.

Long Answer Type Questions-Pg-259

36 A. Question

What is a natural resource? Name three important natural resources.

Answer

(a) Anything which can be procured by human beings from the environment and used with little or no modification is called a natural resource. The important natural resources are:

i. forest and wild life

ii. water

iii. coal

36 B. Question

Why do we need to manage our natural resources?

Answer

There is a need to manage our natural resources because:

(i) The population is increasing at a rapid pace and the resources of the earth are limited.

(ii) The resources should be wisely used with a long term perspective and not exploited for short term profits.

(iii) The resources are limited and hence must be equally distributed so that all the people can benefit from the development of these resources.

(iv) A check is required to take into consideration the damage which is caused to the environment during the extraction or use of these resources.

(v) It will help us to find ways and means to minimize the damage caused to the resources.

37 A. Question

State the advantages of constructing darns across the rivers.

Answer

The advantages of constructing dams across the rivers are many. The water from these dams is used for multiple purposes like:

(i) Irrigation in fields through canals.

(ii) After suitable treatment it is supplied through pipelines to the people in towns and cities.

(iv) Electricity is generated from the water falling from the dams.

37 B. Question

Describe some of the problems associated with the construction of darns.'

Answer

The construction of dams is associated with many problems.

(i) Social Problems – A large number of human settlements get drenched in the water of large reservoirs formed by the dam. This leaves people homeless thereby causing social problems.

(ii) Environmental Problems – Deforestation and loss of flora and fauna is a direct consequence of construction of dams on the rivers as a large variety of flora and fauna get drenched in the water. This causes disturbances in the ecological balance.

(iii) Economic Problems – Construction of dams requires massive expenditure. Despite spending huge amounts on their construction, the benefits reaped are not proportionate enough.

38 A. Question

Name any five sources of water (other than rivers)

Answer

The sources of water except rivers are:

i. Lakes

ii. Rains

iii. Ponds

iv. Wells

v. Glaciers

38 B. Question

Describe how, the water of river Ganga has been highly polluted.

Answer

The holy water of river Ganga has been highly polluted. It is due to the discharge of untreated sewage and industrial wastes. Effluents are discharged by industries in the river water. Besides this, man's activities are making it more polluted day by day. Bathing, washing of clothes, immersion of ashes of the dead and dumping of unburnt corpses into the river water are some major causes of pollution of river Ganga.

39 A. Question

Name the major industries which are based on forest produce.

Answer

There are many industries which are based on forest produce. The major ones are:

(i) Timber industry

(ii) Paper manufacturing industry

(iii) Lac industry

(iv) Sports equipment industry.

39 B. Question

State the main aim of the management of forests and wildlife.

Answer

The main objective of forest and wild life management is to preserve the inherited biodiversity so that our future generations can inherit it from us.

39 C. Question

Name the four main stakeholders in the management of forest resources.

Answer

The main stakeholders in the management of forest resources are:

(i) Dwellers in and around the forest and those who depend on forest produce to lead their life.

(ii) Government's Forest Department which not only owns the forest land but also controls the forest's resources.

(iii) Factory owners who use various forest products for their production, such as wood for making paper and furniture, and 'tendu' leaves for making 'bidis', etc.

(iv) The forest and wildlife activists who wish to see the forests in their natural form.

40 A. Question

What is meant by rainwater harvesting? Name some of the ancient structures used for rainwater harvesting by the rural people.

Answer

Rainwater harvesting is the process of recharging the ground water by making the rain water falling on the ground percolate in the land. The structures of rain water harvesting which were used in the ancient times are: Khadins of Rajasthan, Kulhs of Himachal Pradesh and Eris of Tamil Nadu.

40 B. Question

What are the various advantages of water stored in ground ?

Answer

Water stored in the ground gives many advantages. Some of them are:

(i) The ground water doesn't evaporate.

(ii) The ground water recharges wells and gives moisture to the crops spread over a wide area.

(iii) The ground water does not promote breeding of mosquitoes.

(iv) The ground water doesn't get contaminated by human and animal wastes.

(v) The ground water gets utilized for local people's activities.

Multiple Choice Questions (MCQs)-Pg-259

41. Question

The Bishnoi community of Rajasthan is associated with the conservation of :

A. coal and petroleum

B. forests and wildlife

C. water resources

D. abiotic environment

Answer

The Bishnoi community of Rajasthan is associated with the conservation of forests and wildlife.

42. Question

The Chipko Andolan is associated with :

A. Tigers

B. Turtles

C. Trees

D. Tomatoes

Answer

Chipko Andolan is associated with the conservation of trees.

43. Question

Arnrita Devi Bishnoi was associated with :

A. preventing the custom of child marriage in Rajasthan

B. campaign to save the girl child

C. conservation of cultural heritage of Rajasthan

D. conservation of forests and wildlife

Answer

Amrita Devi Bishnoi was associated with the conservation of forests and wildlife.

44. Question

One of the following is not a direct stakeholder in the management (or conservation) of forests. This is :

A. the people who have paper mills.

B. the people who run the forest department

C. the people who campaign for the conservation of forests

D. the people who live in urban areas

Answer

People living in urban areas are not direct stakeholders in the management of forests.

45. Question

The river water is said to be polluted with acidic wastes if the pH of river water is :

A. zero

B. above 7

C. below 7

D. exactly 7

Answer

If the pH of river water is below 7, the river water is said to be polluted.

46. Question

The major programme started to replenish the damaged forests is called :

A. horticulture

B. tissue culture

C. agriculture

D. silviculture

Answer

Silviculture was started to replenish the damaged forests.

47. Question

With which tree Amrita Devi Bishnoi is associated?

A. khajoor

B. khejrali

C. khejri

D. keekar

Answer

Amrita Devi Bishnoi is associated with khejri tree.

48. Question

One of the following does not contribute in producing acid rain. This one is :

A. sulphur dioxide

B. carbon dioxide

C. nitrogen oxides

D. carbon monoxide

Answer

Carbon monoxide doesn't contribute in producing acid rain.

49. Question

The poisonous gas which reduces the oxygen-carrying capacity of blood to a large extent is :

A. S02

B. NO

C. CO

D. C02

Answer

CO is the gas which reduces the oxygen carrying capacity of blood to a large extent.

50. Question

Which of the following is not an ancient water harvesting structure ?

A. kattas

B. sargam

C. kulhs

D. surangams

Answer

Among the given options, sargam is not an ancient water harvesting structure.

51. Question

Snakes are killed in large numbers because :

A. they are very poisonous

B. they kill rats

C. their skin is expensive

D. they damage the crops

Answer

Snakes are killed because their skin is expensive and thus in huge demand in fancy items.

52. Question

Which of the following is not a fossil fuel ?

A. LPG B. natural gas

C. biogas D. CNG

Answer

Biogas is not a fossil fuel.

53. Question

Which of the following is not a natural resource ?

A. soil B. water

C. electricity

D. natural gas

Answer

Electricity is not a natural resource. Natural resources are used to make electricity.

54. Question

The most rapidly dwindling natural resource in the world is :

A. water B. soil

C. sunlight D. forests

Answer

Forests are the most rapidly dwindling natural resource in the world.

55. Question

Which of the following is not a natural resource ?

A. snake

B. wind

C. wooden house

D. mango tree

Answer

Wood is a natural resource but not a wooden house. A wooden house is a man made resource.

56. Question

The three. R's which can help us to conserve natural resources for long term use are:

A. recycle, regenerate, reuse

B. reduce, regenerate, reuse

C. reduce, reuse, redistribute

D. reduce, recycle, reuse

Answer

The three R's of conservation are reduce, recycle and reuse.

57. Question

The main reason for the abundant coliform bacteria in the water of river Ganga is :

A. immersion of ashes of the dead into the river

B. washing of clothes on the banks of river

C. discharge of industrial wastes into river water

D. disposal of unburnt corpses into river water

Answer

Disposal of unburnt corpses into river water is the main reason behind abundant coliform bacteria in river Ganga.

58. Question

The pH of a sample of water collected from a river is found to be in the range of 3.5 to 4.5. The most likely reason for this is the waste being discharged into the river from a :

A. soap and detergent manufacturing factory

B. car battery manufacturing factory

C. alcohol manufacturing factory

D. plastic cups moulding factory

Answer

Car battery manufacturing factory

59. Question

Which of the following statement is incorrect ?

A. economic development is linked to environmental conservation

B. sustainable development meets the current basic human needs and also preserves resources for future generations

C. sustainable development does not take into consideration the viewpoints of all stakeholders

D. sustainable development is a long planned and persistent development

Answer

It is incorrect because sustainable development does take into consideration the viewpoints of all stakeholders.

60. Question

Arabari forest of Bengal is dominated by :

A. Teak

B. Sal

C. Bambooo

D. Mangroove

Answer

Arabari forest of Bengal is dominated by sal trees.

61. Question

Groundwater will not be depleted due to :

A. process of afforestation

B. establishing thermal power plants

C. process of deforestation

D. cultivation of high yielding varieties of crops

Answer

the process of afforestation

62. Question

Ahars, Kattas, Bhundhis and Khadins are the modes of :

A. grain storage

B. soil conservation

C. water harvesting

D. cold storage

Answer

They are the modes of water harvesting.

63. Question

Which of the following combination of terms has no fossil fuel ?

A. wind, ocean, coke

B. kerosene, tide, wind

C. wood, wind, sun

D. petrol, wood, sun

Answer

wood, wind and sun

64. Question

The use of one of the following is eco-friendly. This one is :

A. cars for transportation

B. polybags for shopping

C. wind mills for generating power

D. dyes for colouring clothes

Answer

wind mills for generating power

65. Question

Khadins are used in Rajasthan to :

A. hold water for irrigation

C. promote soil erosion

B. recharge groundwater

D. trap wild animals

Answer

Khadins are used in Rajasthan to recharge ground water.

Questions Based on High Order Thinking Skills (HOTS)-Pg-261

66. Question

In a village, farmers started cultivating crops all around a lake which was always filled with water. They added lot of materials W to the soil in their fields to increase the yield of crops. Soon they found that the whole surface of water in the lake was covered with a green layer made up of tiny organisms X. After some time, the fish present in the lake started dying in large numbers because they could not get sufficient Y due to a process Z which had occurred in lake water and drained out all the Y present in the water of lake.

(a) What do you think materials W are ?

(b) Name (i) X, and (ii) Y.

(c) What is the process Z known as?

(d) What happens during the process Z which uses up all the Y present in lake water?

(e) What does this example tell us about the use of materials like W?

Answer

(a) W should be fertilizers. They are substances which help increase the yield of the crop.

(b) (i) The green layer of tiny organisms indicates the presence of algae. So X is algae.

(ii) The substance absence of which made the fish in lake to die is oxygen.

(c) The process Z is known as Eutrophication.

(d) In eutrophication, excessive richness of nutrients in a lake causes a dense growth of algae. When these algae die, bacteria use up all the oxygen dissolved in the water to decompose the dead algae.

(e) This process indicates that excessive use of fertilisers should not be done in fields as ot harms the environment.

67. Question

There were lot of organisms A in the crop fields in an area. These organisms used to feed on organisms B also present in the crop fields but which damaged the standing crops. One day some people arrived in the fields and killed all the organisms A so that they could remove their C for making fancy items which were in great demand. Due to large scale killing of A, the population of B increased too much damaging all the crops in the area and causing a famine-like situation. Apart from A, there is another organism D which can also kill and eat B. Name A, B, C and D.

Answer

The organisms which are in great demand for making fancy items are snakes. Their skin is in great demand. Organisms which cause damage to the crops are mainly rats. Since earlier snakes ate rats the crops were not damaged. But after humans killed snakes for their skin, rats thrived and destroyed the crops. However, apart from snakes rats can also be killed and eaten by cats. So,

A:snakes, B:Rats, C:Skin and D:Cat

68. Question

There are two important fuels A and B both of which are extracted from deep inside the earth. Fuel A is a thick, dark, foul smelling liquid whereas fuel B is a black solid. Combustion of both the fuels produces products, C, D, E and F. The product C makes the rainwater only slightly acidic but it is mainly responsible for causing global warming. The product D is neither acidic nor basic. It is harmless and does not affect the environment in any way. Both E and F attack breathing system of humans and are mainly responsible for causing acid rain. In addition to combustion of fuels A and B, the product F is also formed when lightning occurs in the sky.

(a) What are (i) fuel A, and (ii) fuel B ? (b) Name (i) C (ii) D (iii) E, and (iv) F

(c) What is the process of formation of F during lightning known as ?

(d) Which fuel is supposed to be exhausted sooner : A or B ?

(e) Which fuel is mostly used for generating electricity at thermal power plants ?

Answer

(a) The two important fossil fuels are coal and petroleum. Coal is a black solid while petroleum is a thick, dark, foul smelling liquid. So, (i) Petroleum (ii) Coal

(b) The products of combustion are water, carbon dioxise, sulphur dioxide and nitrogen oxides. Water is neither acidic nor basic and doesn't even harm the environment so water is D. Carbon dioxide makes the rain water only slightly acidic and is mainly responsible for causing global warming so carbon dioxide is C. E and F which are mainly responsible for causing acid rain should be sulphur dioxide and nitrogen oxides respectively. It is so because nitrogen oxide is also formed when lightning occurs in the sky.

(c) The process of formation of nitrogen oxides when lightning occurs in the sky is known as N\natural fixation of nitrogen.

(d) Between coal and petroleum, A (Petroleum) is expected to exhaust sooner.

(e) Between coal and petroleum, B (Coal) is used for generating electricity at thermal power plants.

69. Question

A man bought a device X which could cook pulses, vegetables and rice without using any fuel like wood, coal, kerosene or LPG, etc. This device did not work at night. It also took a lot of time for cooking.

(a) Name the device X.

(b) What is the source of energy which cooks food in this device?

(c) What is the name of the process which traps energy in this device?

(d) State one advantage (other than saving on fuel) of using such a device for cooking food.

Answer

(a) The device which cooks food without fuel is solar cooker. IT doesn't work at night because it requires sunlight to operate.

(b) The source of energy for solar cookers is sun.

(c) The process of trapping sun's energy in the solar cookers is called as greenhouse effect.

(d) Using devices like solar cooker is beneficial because they do not cause pollution.

70. Question

A person buys two electrical devices P and Q for lighting purposes in his house. The device P consumes only 5 units of electricity in a month but device Q consumes 15 units of electricity in a month when used for the same number of hours daily. The device Q wastes a lot of electricity by radiating energy C but P does not do so.

(a) What type of device is (i) P, and (ii) Q?

(b) Name one component which is present in Q but not in P.

(c) Name the energy C.

(d) Which device is more energy efficient: P or Q ?

(e) Which fossil fuel is most likely to be conserved if all of us switch over to devices like P?

Answer

(a) The device P is Compact Fluorescent Lamp or CFL and device Q is Filament type bulb. CFL consumes less number of electricity units.

(b) The component which is present in filament type bulb but not in CFL is filament.

(c) Filament type bulb wastes electricity by radiating a lot of heat energy.

(d) P i.e. CFL is more efficient than filament type bulb.

(e) If all of us switch to devices like CFL, coal is most likely to be conserved. Coal is used for generating electricity.