

Class: 7
Subject: Science
Topic: OASK1507SA202
No. of Questions: 41

Q1. What do you understand y reproduction?

Sol. The production of new individual from the parents in known as reproduction.

Q2. What is pollination?

Sol. The transfer of pollen grains from anther to stigma of a flower is called pollination.

Q3. Which type of lens forms always a virtual image?

Sol. Convex lens always form a virtual image.

Q4. Fig. shows the distance-time graph for the motion of two vehicles A and B. which one of them is moving faster?

Distance-time graph for the motion of two cars

Sol. Vehicle A is moving faster.

Q5. Name the factors affecting the depletion of water table.

Sol. Increase in human population, increasing industries and increasing agricultural activities are cause of depletion of water table.

Q6. How time was measured when pendulum clocks were not available?

Sol. Many time measuring devices were used in different parts of the world before the pendulum clocks became popular, sundials, water clock and sand clocks are some examples of such devices.

Q7. Explain how ground water is recharged.

Sol. Groundwater is recharged by the rainwater and water from other sources such as rivers and ponds. The water seeps through the soil and fills the empty spaces and cracks deep below the ground. The process of seeping the water into the ground is called infiltration.

Q8. What is the difference between rate of percolation and the amount of water retained?

Sol. Rate of percolation is the amount of water percolated, per unit time through soil. Whereas the amount of water retained is the amount of water absorbed by soil. Thus, rate of percolation and water retention are opposite attributes.

Q9. Find out the letters of English alphabet or any other language known to you in which the image formed in a plane mirror appears exactly like the letter itself. Discuss your findings

Sol. Letters like A, H, I, M, O, T, U, V, W etc. appear same when seen through a plane mirror.

Q10. Classify the following as motion along a straight line, circular or oscillatory motion:

- (1) Motion of your hands while running.
- (2) Motion of a horse pulling a cart on a straight road.
- (3) Motion of a child in a merry go round.
- (4) Motion of a child on a sea saw.
- (5) Motion of the hammer of an electric bell
- (6) Motion of train on a straight bridge.

Sol.

- (1) Oscillatory motion
- (2) Straight line motion
- (3) Circular motion
- (4) Oscillatory motion
- (5) Oscillatory motion
- (6) Straight line motion

Q11. Explain how soil pollution and soil erosion could be prevented?

Sol. Soil pollution and soil erosion could be prevented by preventing cutting of trees and deforestation. Green areas should be increased. Crop rotation should be followed.

Q12. Without touching a mirror how can you know whether it is concave or convex?

Sol. We will see our image in the mirror. If the images erect than the mirror is convex. If the image is inverted than the mirror is concave

Q13. What is virtual image? Give one situation where a virtual images formed.

Sol. The image which cannot be taken on a screen is called virtual image. When some object is placed very close to the concave mirror we do not get any image of that object on the white screen placed behind the mirror. Such image is called a virtual image.

Q14. You have asked to maintain a garden. How will you minimize the use of water?

Sol. To minimize the use of water:
(1) I will use the technique of drip irrigation, which directly throws water at the base of plants.
(2) I will collect rain water to be used later by making small pits.
(3) I will use water after bath or washing utensils for watering in the garden.

Q15. Untreated human excreta are a health hazard. Explain.

Sol. Untreated human excreta is a health hazard. It causes air, water and soil pollution. Both the surface water and ground water get polluted; ground water is a source of water for wells, tubewells. Springs and many rivers. Thus it becomes the route for water-borne diseases. They include cholera typhoid, polio, meningitis, hepatitis and dysentery.

Q16. List four products we get from forests.

Sol. Products we get from forests:
(1) We get wood from forests which are used for much purpose like making furniture, perfect.
(2) We get medicines from forest.
(3) We get fodder for our animals from forest.
(4) We get gum, wax etc.
(5) We get spices from forests.
(6) We get honey from forests.

Q17. How does the process of fertilization take place in flowers?

Sol. The process of fertilization takes place when the pollen tube of the stigma. This tube continues to grow inside the style till it reaches the ovule. Male cells are released in the ovule for the fertilization with female cells and thus, the zygote is formed. After this process of fertilization the ovary develops into fruit and ovule into seeds.

Q18. What are the problems arising due to open drains and other unsanitary conditions?

Sol. Open drains and unsanitary conditions produce bad smells. It becomes an ideal place of breeding for mosquitoes, flies and other harmful insects. These insects spread many harmful diseases and other health hazards.

Q19. What are odometer and speedometer?

Sol. Odometer measures the distance moved by the vehicle, speedometer records speed directly in km/h.

Q20. What difference will it make if some trees are cut in a forest for a factory?

Sol. If some trees are cut in a forest for a factory then all other components of the forest would be affected. Many food chains are found in the forest. All food chains are linked. If any one food chain is disturbed, it affects other food chains. Every part of the forest is dependent on the other parts.

Q21. What are decomposers? Name any two of them. What do they do in the forest?

Sol. The micro-organisms which convert the dead plants and animals to humus are known as decomposers. Two decomposers are bacteria, beetles and fungi. They clean the forests of the decaying dead bodies and replenish the nutrient back to the forest soil.

Q22. What is a fuse? What are its uses?

Sol. Fuse is a device used to prevent any change being caused to circuit and electric appliance. Uses of fuse:-
Whenever there is shorting or appliances are used beyond the current estimation in domestic circuits then the fuse blows. This is because current flow is very large. This saves the appliances and the circuit from damage.

Q23. (1) What are the components of blood?
(2) Why is blood needed by all the parts of a body?

Sol.

- (1) There are four components of the blood:
 - (a) Plasma is the liquid part of the blood which is yellowish in color and contains 90 percent water. It contains food, enzymes, wastes and proteins etc.
 - (b) Red blood cells (RBCs) are disc shaped cells containing red-colored pigments called hemoglobin in it. Hemoglobin helps in transportation of oxygen.

- (c) White blood cells (WBC's) are the fighting cells, which protect us against bacteria and foreign material causing infections.
- (d) Platelets help in clotting of the blood.
- (2) Blood is needed by all parts of the body because it contains the digested food and oxygen in it. It supplies the digested food to various parts of the body and provide essential energy to the. This energy helps the body to perform various functions and activities. It also carries away the waste products.

Q24. Explain the factors responsible for the depletion of water table?

Sol. These are four main causes of depletion of water table.

- (1) Increasing population:- increasing population creates demand for construction of houses, shops, offices, roads and playgrounds. This in turn, decreases the seepage of rain water into the ground. Moreover a huge amount of water is required for construction work. Often groundwater is used for this purpose. So, on the hand we are consuming more groundwater, on the other we are allowing lesser water to seep into the ground this results in depletion of water table.
- (2) Increasing industries:- Water is used by all the industries. Almost everything that we use process. The number of industries is increasing continuously. Water used by most of the industries is drawn from the around.
- (3) Agricultural activities:- A majority of farmers in India depend upon rains for irrigating their crops. Irrigation system such canals are there only in a few places. Even these systems may suffer from lack of water due to erratic rainfall. Therefore farmers have to use groundwater for irrigation. Population pressure on agriculture forces increasing use of groundwater day by day. This results in depletion of water table.
- (4) Lack of water conservation techniques:- Main source of water on earth and for the underground water is the rain. The water of the rain, if conserved can increase the water level. But this is not done due to the lack of rain water harvesting techniques and other water conservation techniques.

Q25. Describe the steps in getting clarify water from waste water.

Sol. Water is treated physically, chemically and biologically in waste water treatment plant.

Following steps are involved in the purification of water:

- (1) At first stage all the physical impurities like stones, rags, napkins, plastic bags, cans, packets etc. are removed. It is done by passing the water through bar screens.
- (2) Then water is taken to frit and sand removal tank where impurities are removed by sedimentation.
- (3) Solid impurities and faces etc. are collected from the bottom of the water. These solid impurities collected are called sludge. Water is cleared of floatable solids like oil and grease.
- (4) Clarified water is cleared of other impurities by aerator. All disease causing bacteria released in various water bodies.

Q26. Hemoglobin contains.

- (a) Iron
- (b) Iodine
- (c) Calcium
- (d) None of these

Sol. (a)

Q27. The image formed by a plane mirror is:

- (a) Erect
- (b) Laterally inverted
- (c) Concave
- (d) Convex

Sol. (b)

Q28. Which parts of the flower forms fruit:

- (a) Seed
- (b) Petal
- (c) Stamen
- (d) Ovary

Sol. (d)

Q29. This method does not result in conservation of water:

- (a) Recycling water
- (b) Planting more trees
- (c) Cutting vegetation
- (d) Using drip irrigation

Sol. (c)

Q30. The batteries used in tractors, trunks and inverters are also made from:

- (a) Cells
- (b) Battery
- (c) Wire
- (d) None of these

Sol. (a)

- Q31. The unit of speed of trains is:
(a) Meter per unit
(b) Mile per second
(c) Meter per second
(d) Kilometer per hour

Sol. (d)

- Q32. This is level of groundwater.
(a) Water table
(b) Sea level
(c) Aquifer
(d) Both (a) and (b)

Sol. (a)

- Q32. A spherical mirror is a part of:
(a) Sphere
(b) Circle
(c) Square
(d) Rectangle

Sol. (a)

- Q34. The suspended impurities in sewage are called:
(a) Sedimentation
(b) Contaminants
(c) Both (a) and (b)
(d) None of these

Sol. (b)

- Q35. Organisms which cannot be seen with naked eyes are called:
(a) Micro organisms
(b) Decomposers
(c) Macro organisms
(d) Insects

Sol. (a)

Q36. One of these is not a source of surface water.

- (a) Rain
- (b) Lake
- (c) Spring
- (d) River

Sol. (b)

Q37. The positive terminal of one cell is connected to the:

- (a) Positive terminal
- (b) Negative terminal
- (c) Bulb
- (d) Wire

Sol. (a)

Q38. The cells helping in clotting of blood are:

- (a) Blood platelets
- (b) Red blood cells
- (c) White blood cells
- (d) None of these

Sol. (a)

Q39. Following should not be disposed off the drains:

- (a) Tissue papers
- (b) Waste water
- (c) Oils and fats
- (d) Excreta

Sol. (c)

Q40. Small trees and grass and shrubs from the

- (a) Canopy
- (b) Under storey
- (c) Lowest canopy
- (d) All of these

Sol. (b)

- Q41. Forest protect soil from:
- (a) Erosion
 - (b) Spoiling
 - (c) Flooding
 - (d) All the above

Sol. (d)

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