

HOLIDAY HOME WORK

CLASS X

SCIENCE

PHYSICS

1. On what factors does the resistance of a conductor depend?
2. Why are coils of electric toaster and electric iron made of an alloy rather than a pure metal?
3. How many $176\ \Omega$ resistors (in parallel) are required to carry 5A on a 220 V line?
4. Which uses more energy a 250 W TV set in 1 hour or a 1200 W toaster in 10 minutes?
5. Why is the series arrangement not used for domestic circuits?
6. Why is the tungsten used almost exclusively for filament of electric lamp?
7. A piece of wire of resistance R is cut into 5 equal parts. These parts are connected in parallel. If the equivalent resistance of this combination are R' . Find the ratio R / R'
8. A Geyser is rated 1500 W, 250 V. It is connected to 250 V mains. Calculate (i) the current drawn (ii) the energy consume in 50 hours (iii) the cost of energy consumes at Rs. 2.20 / kWh
9. A electric bulb is rated 220 V and 100 W. Calculate the power consumed when it is operated on 110 V.
10. State Fleming's left hand rule.
11. What is the function of the earth wire?
12. What is electromagnet?
13. What is the electromagnetic induction?
14. What is the fuse?
15. What short circuiting and over loading?

16. State Faraday's Laws of electromagnetic induction?
17. What is solenoid? Can you determine north and south pole of a current – carrying solenoid with a help of a bar magnet. Explain.
18. What are the qualities of an ideal source of energy?
19. What the advantages and disadvantages of solar cooker?
20. What is Biogas? Describe the working of a Biogas Plant with a help of a labeled diagram.

CHEMISTRY

1. Identify the substances of oxidise and the substances reduce in the following reaction.
 - i) $4\text{Na} + \text{O}_2 \rightarrow 2\text{Na}_2\text{O}$
 - ii) $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$
2. The solution of substance 'X' is used for white washing.
 - i) Name the substance 'X' and right its formula
 - ii) Right the reaction substance 'X' with water
3. Explain the following terms:
 - a) Corrosion
 - b) Rancidity
4. What do the mean by precipitation reactions? Explain giving examples.
5. A shiny brown element 'X' on heating in air becomes black in colour. Name the element 'X' and the black coloured compound formed.
6. Why is hydrogen peroxide kept in coloured bottles?
7. Why is photosynthesis considered an endothermic reaction?
8. Why do fire flies glow at night?
9. What happens when silver chloride is exposed in sunlight? Write a chemical equation for this reaction.

10. What is observed when a solution of potassium iodide is added to a solution of lead nitrate taken in a test tube? What type of reaction is this? Write a balanced chemical equation to represent above reaction.

11. What happens when silver nitrate solution is added to silver chloride solution? Write the equation for the reaction which takes place. Name the type of reaction involved.

12. Compound 'A' when dissolved in water gives compound 'B' which is used in white washing. Compound 'B' reacts with CO_2 to form a white precipitate of compound 'C'. Identify 'A', 'B', 'C'. Also write the equation involved.

BIOLOGY

1. What would happen if green plants disappear from earth ?
2. What happens to the rate of photosynthesis in each of the following cases:
 - a) Cloudy days
 - b) No rainfall in the areas
 - c) Good manuring in the area
 - d) Stomata get blocked due to dust
3. Name the pores in a leaf through which gaseous exchange takes place.
4. What are the major events that take place during photosynthesis?
5. All plants give out O_2 during day and CO_2 during night. Do you agree?
6. What is the equation of Photosynthesis?
7. What are the conditions necessary for photosynthesis?
8. What happens when excess amount of glucose is formed?
9. What is the site of photosynthesis?
10. Name the by product released during photosynthesis.
11. Draw the labeled diagram showing nutrition in Amoeba

12. What is the process of obtaining food in Amoeba called?
13. How does Amoeba ingest food?
14. How the digestion takes place in Amoeba in the food vacuole?
15. What is the food vacuole considered as?
16. How the food is absorbed in Amoeba?
17. After absorption of food what happens to the food vacuole?
18. How the egestion takes place in Amoeba?
19. Draw the labeled diagram showing nutrition in Paramecium.
20. How the food is taken in Paramecium ?
21. Draw the labeled diagram of Alimentary Canal.
22. Name the largest Gland present in Human
23. Name the site where digestion of Carbohydrate starts.
24. Name the enzyme present in Mouth and its function .
25. What is the role of Liver?
26. Name the Juice secreted by Liver and where it is stored.
27. What is the function of Bile Juice?
28. What is the function of Hydrochloric acid?
29. Name the Juice secreted by Pancreas and its function.
30. Name the site where complete digestion of Carbohydrate, Proteins and Fats takes place.
31. Name the juice secreted in the stomach.
32. What is peristaltic movement ?
33. Name two fluids used by Circulatory System.
34. Name the two systems.
35. Name the components of Blood Vascular System.

36. What is the colour of Oxgenated and deoxygenated Blood ?
37. What are the components of Blood?
38. What are the contents of Plasma?
39. Name three different types of Corpuscles.
40. Name the respiratory pigment, its colour and function.
41. Why donation of blood is not harmful?
42. What is the function of WBC?
43. What is the function of Platelets?
44. Name the vein carries oxygenated blood.
45. Name the artery carries deoxygenated blood.
46. State the difference between arteries, veins and capillaries.
47. What is double circulation? Explain systemic circulation and pulmonary circulation.
48. Why it is keep separate oxygenated and deoxygenated blood?
49. Name the vein carry oxygenated blood? Name the artery carry deoxygenated blood.
50. What is systolic blood pressure and diastolic blood pressure.
