

SUMMER BREAK H.W.

CLASS X

SCIENCE

- A. Solve the given assignment in your science H.W. notebook.
- B. Make a newsletter having 20 science related news.
- C. Prepare a chart and presentation on: human digestive system (roll no. 1-10), human respiratory system (roll no 11-20), human heart (roll no 21-30), human excretory system (roll no 31 and above)

ASSIGNMENT

1. Which among the following changes are exothermic or endothermic in nature? (a) Decomposition of ferrous sulphate (b) Dilution of sulphuric acid (c) Dissolution of sodium hydroxide in water (d) Dissolution of ammonium chloride in water
2. Why do fire flies glow at night?
3. Why do we store silver chloride in dark coloured bottles?
4. Zinc liberates hydrogen gas when reacted with dilute hydrochloric acid, whereas copper does not. Explain why?
5. What happens when a piece of (a) zinc metal is added to copper sulphate solution? (b) aluminium metal is added to dilute hydrochloric acid? (c) silver metal is added to copper sulphate solution? Also, write the balanced chemical equation if the reaction occurs
6. What prevents backflow of blood inside the heart during contraction? (a) Valves in heart (b) Thick muscular walls of ventricles (c) Thin walls of atria (d) All of the above
7. "All plants give out oxygen during day and carbon dioxide during night". Do you agree with this statement? Give reason.
8. How do the guard cells regulate opening and closing of stomatal pores?
9. Two green plants are kept separately in oxygen free containers, one in the dark and the other in continuous light. Which one will live longer? Give reasons.
10. If a plant is releasing carbon dioxide and taking in oxygen during the day, does it mean that there is no photosynthesis occurring? Justify your answer.
11. Why do fishes die when taken out of water?
12. What would happen if green plants disappear from earth?
13. Leaves of a healthy potted plant were coated with vaseline. Will this plant remain healthy for long? Give reasons for your answer.
14. Differentiate between an artery and a vein.
15. What are the adaptations of leaf for photosynthesis?
16. Why is small intestine in herbivores longer than in carnivores?
17. What causes movement of food inside the alimentary canal?
18. Why does absorption of digested food occur mainly in the small intestine?
19. What is common for cuscuta, ticks and leeches?
20. Explain the role of mouth in digestion of food.
21. What are the functions of gastric glands present in the wall of the stomach?

22. Why does a light ray incident on a rectangular glass slab immersed in any medium emerges parallel to itself? Explain using a diagram.
23. A pencil when dipped in water in a glass tumbler appears to be bent at the interface of air and water. Will the pencil appear to be bent to the same extent, if instead of water we use liquids like, kerosene or turpentine. Support your answer with reason.
24. How is the refractive index of a medium related to the speed of light? Obtain an expression for refractive index of a medium with respect to another in terms of speed of light in these two media?
25. Refractive index of diamond with respect to glass is 1.6 and absolute refractive index of glass is 1.5. Find out the absolute refractive index of diamond.
26. A convex lens of focal length 20 cm can produce a magnified virtual as well as real image. Is this a correct statement? If yes, where shall the object be placed in each case for obtaining these images?
27. Sudha finds out that the sharp image of the window pane of her science laboratory is formed at a distance of 15 cm from the lens. She now tries to focus the building visible to her outside the window instead of the window pane without disturbing the lens. In which direction will she move the screen to obtain a sharp image of the building? What is the approximate focal length of this lens?
28. How are power and focal length of a lens related? You are provided with two lenses of focal length 20 cm and 40 cm respectively. Which lens will you use to obtain more convergent light?
29. Under what condition in an arrangement of two plane mirrors, incident ray and reflected ray will always be parallel to each other, whatever may be angle of incidence. Show the same with the help of diagram.
30. Draw a ray diagram showing the path of rays of light when it enters with oblique incidence (i) from air into water; (ii) from water into air.

CLASS – VIII

SUBJECT: SCIENCE

1. Make a project on any one of the endangered species like Sparrow, Pea-Cock, Lion, Tiger etc. And write about its habitat, food habits, cause of decreasing its population and some more information.
2. Make a collage using newspaper cuttings having scientific news.
3. Write 20 questions of very short answer type from chapter 1 and 2 each in A – 4 size sheets.
4. Do the following activities:-
 - (i) Collect different types of seeds and put them in small bags and label them.
 - (ii) Collect the labels from the bottles of jams and jellies. Write down the list of contents printed on the labels.

