

BHARATIYA VIDYA BHAVAN'S V.M.PUBLIC SCHOOL, VADODARA
SESSION 2017-18
Sample paper-7

Class: X
Subject: Science

Max Marks: 70
Time Allotted: 3 hrs

SECTION - A

1. Mention the name of three colours of the wires used in house hold wiring. (1)
2. Why does the sky appear dark instead of blue to an astronaut? (1)
3. Mention four ways by which rusting can be prevented. (2)
4. Name two places where wind energy power plants are situated in India. Mention two limitations of harnessing wind energy on large scale. (2)
5. Name a growth stimulating and a growth inhibiting hormone in plants. (2)
6. Define resistance . State its SI unit. How does resistance vary with length and area of cross-section of the wire? (3)
7. Draw a magnetic lines of force for a current-carrying solenoid. Also explain the pole formation at its ends. (3)
8. An object 2.5cm long is placed on the axis of a concave mirror of 30cm radius of curvature at a distance of 10cm from it. Find the position, size and nature of the image formed. (3)
9. A sulphate salt of group 2 element of the periodic table is a white, soft substance, which can be moulded into different shapes by making its dough. When this compound is left in open for some time, it becomes a solid mass and it shows such behaviour? Give the reaction involved. (3)
10. What would be observed on adding a 5% solution of alkaline potassium permanganate? Solution drop by drop to some warm ethanol taken in a test tube? (3)
11. An organic compound X which is sometimes used as antifreeze has the molecular formula C_2H_6O . On oxidation X gives Y which gives effervescence with sodium bicarbonate solution. What can X and Y be? Write their structural formula. (3)
12. Reproduction is essentially a phenomenon that is not for survival of an individual but for the stability of a species. Justify. (3)
13. Differentiate between an endocrine and an exocrine gland. Which gland of our body acts like both? Name its secretions and their role in our body. (3)
14. We suddenly withdraw our hand when a pin pricks. Name the type of response. Explain the type of response. (3)

15. What is meant by pollination? Describe various types of pollination? (3)
16. (a) Define refraction. State the laws of refraction of light.
(b) With the help of ray diagrams, show the formation of the images of an object by a convex lens. When it is placed i) beyond the centre of curvature ii) between focus and optical centre. (5)
17. (a) The potential difference between two points in an electric circuit is 1V. What does it mean? Name a device that helps to measure the potential difference across a conductor.
(b) Why does the connecting cord of an electric heater not glow while the heating element does?
(c) Based on electrical resistivity of some elements, answer the following questions:
i) Among silver and copper, which one is better conductor and why?
ii) Which material would you advise to be used in electrical heating device and why? (5)
18. (a) Write any three chemical properties of acids.
(b) Why should water be never added drop wise to concentrated sulphuric acid? (5)
19. a) Why is Solvay process considered economical for the manufacturing of washing soda?
b) What happens when electric current is passed through brine solution? Write the chemical reaction involved? (5)
20. Explain human digestive system with all functions of enzyme. (5)
21. (a) Describe the Artificial selection with the example of Evolution of Wild cabbage.
(b) Differentiate between Analogous and homologous organs.
(c) Name one vestigial organ present in human beings. (5)

SECTION - B

22. We need to increase the brightness of a bulb which has a resistor connected in series to it. Without removing this resistor, what will you do? (2)
23. "If in a hydroelectric power plant, water falls from a greater height, more electrical power can be generated". Comment. (2)
24. A housewife wanted her house to be whitewashed. She bought 10 kg of quick lime from the market and dissolved it in 30 litres of water. On adding lime to water she noticed that the water started boiling even when it was not being heated. Give reason for her observation. Write the corresponding chemical equation and name the product formed. (2)
25. Why do ionic compounds have high melting points? (2)
26. A student is given a permanent slide showing binary fission in amoeba. What are the following steps in focussing the object under the microscope? (2)
27. What is micropyle? Give its function. (2)

