

Time: 2 Hour

Total Marks: 50

Class : X

Subject : Science and Technology - I

MCQ SINGLE CORRECT

1. $\begin{array}{c} \text{O} \\ || \\ -\text{C}-\text{OH} \end{array}$ is called _____
(a) Carboxylic acid group (b) aldehyde group (c) ketonic group (d) alcohol group
2. _____ is a metal which is in liquid form at ordinary temperature and pressure.
(a) Magnesium (b) Sodium (c) Scandium (d) Mercury
3. Molecular formula of the chloride of an element X is XCl. This compound is a solid having high melting point. Which of the following elements be present in the same group as X.
(a) Na (b) Mg (c) Al (d) Si
4. Acetic acid _____
(a) turns red litmus blue (b) has pungent odour (c) is red in colour (d) is odourless
5. The latent heat of fusion of ice is _____
(a) 540 cal/g (b) 80 cal/g (c) 800 cal/g (d) 4 cal/g

TRUE/FALSE

6. Aquaregia is a mixture of conc. HCl and conc. HNO_3 in the ratio of 1 : 3.
(a) True (b) False
7. Electromagnetism was discovered by Oersted.
(a) True (b) False

FILL IN THE BLANKS

8. Electric Power = $\frac{V^2}{\text{-----}}$

VERY SHORT DESC

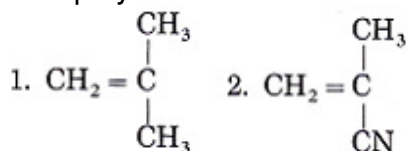
9. In India, what is the time interval in which AC changes direction?
10. Give two examples of alkynes.

SHORT DESC - 25 WORDS

All The Best!!!

(Attempt any 5)

11. General formula of the homologous series of alkanes is C_nH_{2n+2} . Write down the molecular formula of the 8th and 12th member using this.
12. Define :
Esterification
13. Give scientific reason: Metals are good conductors, while non-metals are poor conductors of electricity.
14. The gravitational force due to the earth also acts on the moon because of which it revolves around the earth. Similar situation exists for the artificial satellites orbiting the earth. The moon and the artificial satellites orbit the earth. The earth attracts them towards itself but unlike the falling apple, they do not fall on the earth, why?
15. Give two examples of double displacement reaction.
16. Structural formulae of some monomers are given below. Write the structural formula of the homopolymer formed from them,



MED DESC - 50 WORDS

(Attempt any 5)

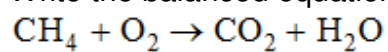
17. Compare the gravitational force on a body of mass 1 kg due to the earth with the force on the same body due to another body of mass 1kg at a distance of 1 m from the first body. (Mass of the earth = 6×10^{24} kg, radius of the earth = 6400 km)
18. What is meant by modern periodic table ?
19. Obtain the relation between the refractive index of the second medium with respect to the first medium and the refractive index of the first medium with respect to the second medium.
20. Give scientific reasons :
A convex lens is known as a converging lens.
21. Which type of telescopes are orbiting around the earth? Why is it necessary to put them in space?
22. Write short notes on the following :
Tinning.

LONG DESC - 100 WORDS

(Attempt any 1)

23. Have you seen a photographic camera in which a film is used? Compare the human eye with it. State similarities between them. State the points of difference between them.

24. Write the balanced equations for the following reactions :



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