

X SCIENCE FULL LENGTH PRACTICE TEST

TIME : 3 HR

MARKS : 75

GENERAL INSTRUCTIONS :

- (i) *The question paper comprises of 3 sections A, B AND C, you have to attempt all the sections separately.*
- (ii) *All questions are compulsory.*
- (ii) *Section A consists of 1 mark each, Section B consists of 3 marks each & Section C consists of 5 marks each.*

SECTION – A

1. Which sodium compound is used as an antacid in medicine?
2. Name the bi-product of Chlor alkali process which is used for manufacturing bleaching powder.
3. What do you observe when penta hydrated copper-sulphate crystals are heated? Give reaction also.
4. Bacteria and fungi are called decomposers. Why?
5. What will be the amount of energy available to the organism of the 2nd trophic level of a food chain, if the energy available at the first trophic level is 10,000 joules?

SECTION – B

6. Four elements P, Q, R and S have atomic numbers 12, 13, 14, 15 respectively. Answer the following questions by giving reasons:
 - (a) What is the valency of P?
 - (b) Classify these elements as metals and non metals.
 - (c) Which of these elements will form basic oxides?
7. (a) Write the chemical names of CH_3COCH_3 and $\text{C}_2\text{H}_5\text{COOH}$.
(b) What happens when acetic acid and ethanol reacts in presence of concentrated H_2SO_4 ? Write the chemical equation involved.
8. Write any three advantages of vegetative propagation.
9. Mention any 3 limitations of harnessing wind energy on a large scale.
10. Name the eye defect in which eye lens become cloudy or milky. Name the method for its correction. A person uses a lens of power – 2.0 D for correcting his distant vision and for correcting his near vision he used lens of power + 2.0 D. Calculate the focal length of lenses required to correct these defects.
11. Define the following terms:
 - (i) Recycling
 - (ii) Sustainable development
 - (iii) Chipko Andolan
12. What is the difference between a direct current and an alternating current? How many times does AC used in India change direction in one second?

13. A chemical compound is used in glass and soap industry.
 (a) Give chemical name and formula of the substance.
 (b) How many molecules of water of crystallisation are present in the compound?
 (c) How will you prepare the above compound? Give equation.
14. (a) Explain electrolytic refining of copper.
 (b) How aluminium is used to join railway track? Explain the process with equation.
15. (a) Write the electron-dot structure of Sodium, Oxygen and Magnesium.
 (b) Show the formation of MgO by the transfer of electrons
 (c) What are the ions present in these compounds?
16. What is hypermetropia? How it is caused and how it can be corrected? Explain with a suitable diagram.
17. Explain why? :
 (a) Stars twinkle on a clear night (b) Sky appears blue
 (c) Sun is visible 2 minutes before actual sunrise and 2 minutes after sunset
18. (a) Why solar cooker box covered with a plane glass plate?
 (b) Differentiate between renewable and non-renewable resources of energy.
19. How is the sex of a new born determined in humans?
20. (a) Why did Mendeleev left some gaps in his periodic table?
 (b) Mention any 2 limitations of Newlands law of Octaves?

SECTION – C

21. Draw the ray diagram in each case to show the position and nature of the image formed when the object is placed:
 (i) At the centre of curvature of a concave mirror (ii) Between the pole P and focus F of a concave mirror
 (iii) In front of a convex mirror (iv) At 2F of a convex lens
 (v) At infinity in front of a concave lens.
22. (i) Draw the pattern of magnetic field lines through and around a current carrying solenoid. What does the magnetic field pattern inside the solenoid indicate?
 (ii) How can this principle be utilized to make an electromagnet
 (iii) State two ways by which strength of this electromagnets can be increased.
23. (a) "Fossils are related to evolution". Justify this statement. Give two ways by which age of fossils can be estimated.
 (b) List two differences between acquired trait and inherited trait.
24. Both soap and detergent are some type of salts:
 (a) What is the difference between them? (b) Describe in brief cleaning action of soap
 (c) Draw diagram of a micelle (d) Why do soaps not form lather in hard water
 (e) List any problem that arise due to the use of detergents instead of soap
25. What is contraception? What are the different methods of contraception?