

SCIENCE MOCK TEST PAPER

PS: I request all the students to solve this paper without referring their books in a neat piece of paper so that they will get practice for board exam.

General Instructions

- 1. The question paper comprises of two sections A and B. You are to attempt both the sections.*
- 2. All questions are compulsory.*
- 3. There is no overall choice However, internal choice has been provided in all the three questions of five marks category. Only one option in such questions is to be attempted.*
- 4. All questions of section A and all questions of section B are to be attempted separately.*
- 5. Questions 1 to 6 in section A and 17 to 19 in section B are short question. These carry one mark each.*
- 6. Questions 7 to 10 in section A and 20 to 24 in section B are short answer type questions and carry two marks each.*
- 7. Questions 11 to 14 in section A and 25 to 26 in section B are also short answer type questions and carry three marks each.*
- 8. Questions 15 and 16 in section A and question 27 in section B are long answer type questions and carry five marks each.*

SECTION A

1. A solution X is acidic in nature. What will be its reaction with:

(a) a mild base

(ii) Dilute Sulphuric acid

(1)

2. What is meant by an Esterification reaction? Give any one of its application. (1)

3. What is the cause of lateral inversion in case of a plane mirror? What is the relation between the object distance and distance between the object and image? (1)

4. Why are electromagnets used in large electric cranes? State any one reason. (1)
5. Why does a magnesium ribbon has a thin coating of white layer on its surface once it is exposed to air? (1)
6. What happens when we apply slaked lime to the walls during white-washing? Write the required chemical equation. (1)
7. Why is the colour of sky blue? Also add note on the Tyndall Effect. (2)
8. Describe the magnetic field around a current carrying solenoid? Draw the above related figure. (2)
9. One half of a convex lens is covered with black paper. Do you observe to form a image or not? State the valid reason with the help of a ray diagram. (2)
10. Give reasons for the following:
- (a) Plaster of Paris should be stored in moisture –proof container.
 - (b) Deflection is seen in galvanometer when we push a bar magnet inside it. (2)
11. What is astigmatism?
- (b) Mention its causes briefly and also add a note on its preventions. (3)

12. Complete the following equations and balance it:

- (i) Ethanol + Ethanoic acid $\xrightarrow{\text{Conc. H}_2\text{SO}_4}$
(ii) Sodium hydroxide + Hydrochloric acid
(iii) Ethyl ethanoate + Sodium hydroxide $\xrightarrow{\text{nickel or palladium}}$ (3)

13. Describe an activity to show that both air and moisture are required for corrosion to take place with the help of a neat labelled diagram? (3)

14. What happens when copper sulphate crystals are heated in air? How can they be brought to their initial colourisation? (3)

15. Deduce an expression to show that the heat governed by a conductor is equal to square of current, resistance and time taken. (5)

With the help of above result find the heat governed if:

$$V = 0.025\text{v}$$

$$I = 0.16\text{a}$$

$$T = 12\text{sec}$$

OR

Explain the phenomenon of electromagnetic induction with the help of a neat labeled diagram.

(b) If an object is placed at a distance of 30cm away from the convex mirror of focal length x cm such that it forms a virtual erect image of magnification +3cm. Find the value of x . (3+2=5)

16. Distinguish between ethanol and ethanoic acid based on their physical properties and chemical properties.

(OR)

Compare and contrast Mendeleev's periodic table and Modern Periodic table. (5)

SECTION B

17. How do we find out the amount of water contamination regulated by Coliform bacteria? (1)

18. How is the amount of urine regulated? Give the functioning of Nephrons in a kidney. (1)

19. Explain the three R'S in saving the environment. (1)

20. Write the functions of the following hormones: (Any 4)

- (a) Thyroxin
- (b) Adrenaline
- (c) Testosterone
- (d) Prolactin
- (e) Calcitonine
- (f) Insulin

(4x1/2 = 2)

21. Why is iodised salt advisable for the human beings? (2)

22. How is blood pressure measured? What are the features of Hypertension? (2)

23. Distinguish giving suitable examples between aerobic and anaerobic respiration. What are the end products of two types of respiration? (2)

24. Draw a neat labeled diagram of the fertilization process in plants and label the following parts:

- (a) Ovary
- (b) Pollen tube
- (c) Antipodal cells
- (d) Synergids

(2)

25. What are the brief benefits that society can get from Silviculture? Why do we need to conserve forests and wildlife? (3)

26. Explain how the absorption of food molecules is carried out in the small intestine? (3)

27. What are the brief methods to avoid pregnancy? Add a note on Parturition. (3+2=5)

OR

Explain the role of each part in human excretory system in filtering out waste products from the body. Draw the relevant diagram with neat labellings. (5)

ALL THE BEST