

SSC PUBLIC EXAMINATIONS 2024 - 25
GENERAL SCIENCE - PAPER-I
PHYSICAL SCIENCE
(ENGLISH VERSION)

Time : 2 Hours

Max. Marks : 50

Instructions :

1. Question paper consists of 4 sections and 17 Questions.
2. Internal Choice is there only for Q.No. 12 in Section-III and for all the Questions in Section-IV.
3. In the duration of 2 hours, 15 minutes of time is allotted to read the Question paper.
4. All answers should be written in the answer booklet only.
5. Answer should be written neatly and legibly.

SECTION-I

Note : 1) Answer all the Questions.

2) Each question carries 1 mark.

(8 × 1 = 8 M)

1. Predict, Exhalation air is hotter than Inhalation air in respiration process.
2. gas is released on the reaction of zinc granules with dilute sulphuric acid.

3.

Solution	A	B	C	D	E
pH value	4	1	12	7	9

Which is the strong alkaline solution among the solutions given in the table ?

4. Write any one physical property of metals.
5. Write any one use of carbon compound.
6. The least distance of distinct vision for a young adult which normal vision is about ()
a) 25m b) 2.5 cm c) 25 cm d) 2.5 m
7. Draw the symbol of an electric cell.
8. What is the SI unit of resistance of a conductor connected in an electric circuit ?

SECTION-II

Note : 1) Answer all the Questions.

2) Each question carries 2 marks.

(3 × 2 = 6 M)

9. Which of the following hydrocarbons undergo addition reactions.
 C_2H_6 , C_3H_8 , C_3H_6 , C_2H_2 and CH_4
10. A ray of light travelling in air enters obliquely into water. Predict and write whether that light ray bends towards the normal or away from the normal ? Why ?
11. Pose any two questions to understand the concept of Ohm's law.

SECTION-III

- Note :** 1) Answer all the Questions.
2) Each question carries 4 marks.

(3 × 4 = 12 M)

- 12 Draw any one of the following diagrams.
A) Draw the ray diagrams of image formed when the object is placed in front of a bi-convex lens in the following positions.
i) Beyond $2F_1$ ii) At F_1
B) Draw the diagram which shows that acid solution in water conducts electricity.
13. Write two important uses of washing soda and baking soda each.

14.

Material medium	Air	Ice	Ruby	Benzene
Refractive Index	1.0003	1.31	1.71	1.50

Observe the table and answer the following questions.

- i) Which material medium light travels faster ?
ii) In which material medium the speed of light is least ?
iii) In which material medium the speed of light is least ?
iv) Calculate the speed of light in Benzene ? (Speed of light in vacuum is $3 \times 10^8 \text{ ms}^{-1}$).

SECTION-IV

- Note :** 1) Answer all the Questions.
2) Each question carries 8 marks.
3) Each question has an internal choice.

(3 × 8 = 24 M)

15. Explain the following.
i) Twinkling of stars ii) Formation of Rainbow.
(OR)

Deduce the expression for the equivalent resistance of three resistors connected in parallel in an Electric Circuit.

16. Explain the following with an example.
i) Chemical combination ii) Chemical decomposition
iii) Chemical displacement iv) Chemical double displacement.
(OR)

Explain the cleaning action of soap.

17. Explain the procedure to show that compass needle is deflected on passing an electric current through a metallic conductor (Oersted's experiment).
(OR)

Explain the experimental procedure to investigate the conditions under which iron rusts.