S.S.C. PUBLIC EXAMINATIONS - PHYSICAL SCIENCE

WEIGHTAGE TO ACADEMIC STANDARDS

	Academic Standards	Weightage	Marks
I	Conceptual Understanding	40%	20
II	Asking Questions & Making Hypothesis	10%	05
III	Experimenting & Field Investigation	16%	08
IV	Information Skills	14%	07
V	Communication Through Diagram	10%	05
VI	Application to Daily Life, Concern to Biodiversity	10%	05
	Total	100%	50

NUMBER OF QUESTIONS ON ACADEMIC STANDARDS

Marks	AS-I	AS-II	AS-III	AS-IV	AS-V	AS-VI	Total
1 MQs	4	1	–	1	1	1	8 Qs
2 M Qs	–	2	–	1	–	–	3 Qs
4 MQs	–	–	–	1	1(1)	1	3(1) Qs
8 MQs	2(2)	–	1(1)	–	–	–	3(3) Qs
Total Maks	20 M	5 M	8 M	7 M	5 M	5 M	17(4) Qs

Number in ( ) indicates Internal Choice

UNIT-WISE WEIGHTAGE

Name of the Unit	1 M	2 M	4 M	8 M	Total Questions	Total Marks
Chemical Reactions and Equations	1	–	–	1	2	9
Acids, Bases and Salts	2	–	1(1)	–	3	6(4)
Metals and Non-metals	1	–	–	(1)	1	1(8)
Carbon and its compounds	1	1	–	(1)	2	3(8)
Light-Reflection and Refraction	–	1	2	–	3	10
The Human Eye and Colourful World	1	–	–	1	2	9
Electricity	2	1	–	(1)	3	4(8)
Magnetic effects of Electric current	–	–	–	1	1	8
Total	8×1 = 8M	3×2 = 6M	3×4 =12M	3×8 =24M	17	50

Number in ( ) indicates Internal Choice

SSC PUBLIC EXAMATINATIONS 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 weather 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 infront 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 3×10^8 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.