MODEL PAPER - 1
S.S.C. PUBLIC EXAMINATIONS-2021
PHYSICAL SCIENCE

(English Medium)

Class : X   (Max. Marks : 50)   Time : 2hr.45min.

Instructions :

1. **There are four sections an 33 questions in this paper**
2. **Answer should be written in a given answer booklet**
3. **There is internal choice in Section - IV**
4. **Write all the questions visible and legibly**
5. **15 Minutes are given for reading the question paper and 2.30 hours for given for answering questions.**

Section - I

Note : 1. Answer all the Questions.
  2. Each Question carries $\frac{1}{2}$ mark $12 \times \frac{1}{2} = 6$

1. 1 Cal = _____ Joule
2. Complete the following equation

   Acid + Base $\rightarrow$ Salt + _____
3. Which of the following is Snell's law

   (A) $n_1 \sin i = \sin r / n_2$ (B) $n_1/n_2 = \sin r / \sin i$

   (C) $n_2/n_1 = \sin r / \sin i$ (D) $n_2 \sin i = $ constant
4. Which one of the following materials cannot be used to make a lens?

   A) Water   B) Glass   C) Plastic   D) Clay
5. Match the following

   x : Least distance of distinct vision   (   )   P) 25cm
   y : Angle of vision   (   )   Q) 30cm
                                                           R) 60^0

[Turn Over

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6. L - Shell : 8 :: M-Shell : ▢

7. Number of elements present in period-2 of the long from of periodic table

    A) 2   B) 8   C) 18   D) 32

8. joule / coulomb is the same as

    A) Watt   B) Volt   C) Ampere   D) Ohm

9. Write the formula of magnetic flux density.

10. Name the phenomenon where in a metal such as iron is damage when exposed to moist air for a long time?

11. Write electronic configuration of carbon atom

12. What type of hybridiration is present in BF_3 molecule?

Section - II

Note : **1. Answer all the Questions.**

        2. Each Question carries 1 Mark   **8 × 1 = 8**

13. Define "Temperature"

14. Define pH scale

15. Write lens formula

16. How do you correct the defect presbyopia?

17. What is the name of the process of extraction of metals from their ores?

18. What is nl^x method?

19. An element has atomic number 19. Where would you expect this element in the periodic table.

20. Draw the shape of V-I graph fo Non-Ohmic conductor.

Section - III

Note : **1. Answer all the Questions.**

        2. Each Question carries 2 Marks   **8 × 2 = 16**

21. How do you appreciate the role of higher specific heat of water in stabilising atmospheric temperature during winter and summer seasons?

22. How does the flow of acid rain into a river make the survival of aquatic life in a river difficult?

23. Write the materials required to conduct ohm's law verification experimentally.

24. Rajkumar said to you that the magnetic field lines are open and they start at north pole of bar magnet and end at south pole. What questions do you ask Rajmumar to correct him by saying "field lines are closed"?

25. What is " Catenation"?

26. How many types of eye defects? What are they?

27. An electron is an atom has the following set of four quantum numbers

n	l	m_l	m_s
2	0	0	$+\dfrac{1}{2}$

i) Name of the element   ii) Which orbital it belong to

28. Define "Dobereiner's law of trials" and give one example.

Section - IV

Note : 1. Answer all the Questions.

         2. Each Question carries 4 Marks   **5 × 4 = 20**

29. Explain the correction of the eye defect Hypermetropia

<div align="center">OR</div>

Define the following terms

A) Refractive index   B) laws of refraction

30. Explain how the elements are classified into s,p,d and f-block elements in the periodic table.

<div align="right">**[Turn Over**</div>

OR

Explain the formation of sodium chloride on the basis of the concept of electron transfer from one atom to another atom.

31. Compounds such as alcohols and glucose contain hydrogen but are not categorized as acids. Describe an activity to prove it.

OR

Suggest an experiment to prove that the presence of air and water is essential for corrosion. Explain the procedure.

32. Observe the table and answer the following questions.

Substance	Lead	Brass	Zinc	Copper	Iron	Aluminium	Ice	Seawater	water
Specific heat (Cal/g^0-C)	0.003	0.092	0.093	0.095	0.115	0.21	0.50	0.95	1

a) What is the SI unit of specific heat?

b) Which liquid used as coolant?

c) Which metal is slowly heated up among all given in table?

d) Which metal is best for cooking utensils?

OR

Fill the following table which is related to convex lens.

Position of the object	Position of the image	Real/virtual image	Inverted / erected image	Enlarged / Diminished image
Beyond 2F2			Inverted	Diminished
	Beyond 2F1	Real		Enlarged
at F2	Infinity	Real		
	same side of the object	Erected		Enlarged

33. Draw the set up of Ohm's law experiment

OR

Draw the shapes of d-orbitals.

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