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. What is the shape of V-I graph of Ohmic conductor?

2. S-I unit of heat is _____

3. The colour of pheolphthalein indicator in baric solution is _____
    A) Yellow   B) Green   C) Pink   D) Orange

4. x : Refractive index $n = \dfrac{c}{v}$

    y : Refractive index has no units

    A) Both are correct   B) x is correct, y is wrong
    C) x is wrong, y is wrong   D) Both are wrong

5. Which electronic shell is at a higher energy level K or L?

6. Lithium _____ and potassium constitute a dobereiners triad.

7. Match the suitable answers of section-B with section-A

Section-A	Section-B
x) N_2	P) 120^0
y) BF_3	Q) 180^0
	R) 3 bonds

[Turn Over

8. The impurity present in the ore is called as _____

    A) Gangue   B) Flux   C) Slag   D) Mineral

9. What is the maxium focal length of the human eye lens?

10. The midpoint of a thin lens is called _____

    A) Centre of curvature   B) Optic Centre

    C) Focus   D) Radius of curvature

11. Write the name of simplest hydrocarbon

12. Weber/meter2 =

    A) Oersted   B) Tesla   C) Newton   D) Watt

Section - II

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

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

13. Which rule is violated in thew electric configuration $1s^0 2s^2 2p^4$?

14. What is the flux through the plane taken parallel to the field?

15. Mention any one of methods of prevention of corrosion.

16. Write the formula of specific heat

17. What is refraction?

18. What are factors which affect the resistance of a material?

19. What is shape of BF_3?

20. Define the modern periodic law.

Section - III

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

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

21. What role does specific heat play in keeping a watermelon cool for a long time after removing at from a fridge on a hot day?

22. Why does not distilled water conduct electricity?

23. Frame any two questions to understand difference between convex lens and concave lens.

24. Write the materials required to conduct Oersted experiment.

25. Define power of lens and write their unit

26. Write the four quantum numbers for $1s^1$ electron.

27. When we sit at camp fire, objects beyond the fire are seen swaying. Give reason for it.

28. Define "mineral".

Section - IV

Note : 1. Answer all the Questions.

2. Each Question carries 4 Marks $5 \times 4 = 20$

29. How do you correct the eye defect Myopia?

OR

Define the following terms

A) Electric current   B) Resistance

30. Discuss the construction of the long form of the periodic table

OR

Explain the formation of $BeCl_2$ molecule using hybridisation.

31. Explain the procedure of finding specific heat of solids experimentally

OR

How do you verify experimentally that $\sin i / \sin r$ is a constant?

32. Complete the following table

S.No	Sample Solution	Red litmus paper	Blue litmus paper	Phenolphthalein solution	Methyl orange solution
1	Hcl				
2	NaOH				

[Turn Over

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OR

Observe the table and answer the following questions.

Alkane	Methane	Ethane	Propane	Butane
Molecular formula	CH_4	C_2H_6	C_3H_8	C_4H_{10}

a) What is the general formula of Alkanes?

b) Write the moleular formula of next alkane comes after Butane.

c) How many carbons in Pentane?

d) How many bonds present in Methane?

33. Draw ray diagrams for the following positions of convex lens?

A) Object is placed at F_2 B) Object is placed at $2F_2$

OR

Draw the shape of s and p orbitals.