MODEL PAPER - 1

GENERAL SCIENCE, Paper – I & II
(English Version)

Time: 3 Hours 15 Minutes **Maximum Marks: 100**

Instructions:

1. This paper consists of Part-A and Part-B.
2. Part-A contains questions from Physical Science and Part-B contains from Biological Science.
3. Part-A and Part-B contains 4 sections each.
4. There are 33 questions in the paper.
5. There is an internal choice in **Section IV** of Part-A and Part-B.
6. Write all the questions visibly and legibly.
7. 15 minutes are given for reading the question paper.

PART – A (PHYSICAL SCIENCE)

SECTION I

6 x 1 = 6

Notes: 1. Answer **all** the questions.
2. Each question carries **1** mark.

1. Why does ice floats on water?
2. Draw the simple figure of a soap molecule.
3. In an experiment of finding focal length of lens the observation are as shown in the table.

U (in cm)	40	30	20
V (in cm)	24	30	38

a) Which lens is used in this experiment? b) What is the focal length of the given lens?

4. What happens when a small piece of sodium is dropped into ethanol?
5. Write lens formula
6. **Assertion (A):** In a group from top to bottom the atomic size is increasing.
Reason(R): In the group from top to bottom the atomic number increases hence shell number also increases.
Choose the correct option and write it in your answer booklet.
A) Both A and R are true and R is correct explanation of A
B) Both A and R are true and R is not correct explanation of A
C) A is true but R is false
D) A is false but R is correct

SECTION II

4 x 2 = 8

Notes: 1. Answer **all** the questions.
2. Each question carries **2** marks.

7. Frame any two questions to understand differentiate between evaporation and boiling?
8. Write the general formula of Alkanes, Alkenes and Alkynes.
9. Observe the table and answer the following questions.

Ore	Bauxite	Zinc Blende	Horn Silver	Zincite	Cinnabar	Galena	Lime stone
Formula	$Al_2O_32H_2O$	ZnS	AgCl	ZnO	HgS	PbS	$CaCO_3$

a) What are the ores of Zinc? B) What is the ore of Aluminium?

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

SECTION III

3 x 4 = 12

Notes: 1. Answer **all** the questions.
2. Each question carries **4** marks.

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11. Draw the diagram of AC generator and label the parts
12. Observe the table and answer the questions

Element	**Electronic configuration**
A	$1s^2 2s^2$
B	$1s^2 2s^2 2p^6 3s^2$
C	$1s^2 2s^2 2p^2 3s^2 3p^3$
D	$1s^2 2s^2 2p^6$

a) Which are the elements coming within the same period?
b) Which are the elements coming within the same group?
c) Which are the noble gas element?
d) To which group and period does the element 'C' belong?

13. What is thermite process? Mention its applications in daily life?

SECTION IV

3 x 8 = 24

Notes: 1. Answer **all** the questions.
2. Each question carries **8** marks.
3. Each question has internal choice.

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14. What is the reason behind formation of mirage? Explain

(OR)

Explain the correction of the eye defect Hypermetropia with suitable diagrams.

15. What is hybridisation? Explain the formation of BF_3 molecules using hybridisation.

(OR)

Explain the significance of three Quantum numbers in predicting the positions of an electron in an atom.

16. State Ohm's law. Suggest an experiment to verify it and explain the procedure.

(OR)

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