

This Question Paper contains 4 Printed Pages.

19E(A)

GENERAL SCIENCE, Paper - I

(English Version)

Parts A and B

Time : 2½ Hours]

[Maximum Marks : 50

Instructions :

1. Answer the questions under **Part-A** on a separate answer book.
2. Write the answers to the questions under **Part-B** on the Question Paper itself and attach it to the answer book of **Part-A**.

Part - A

Time : 2 Hours

Marks : 35

SECTION - I

5×2=10

NOTE :

1. Answer **ANY FIVE** questions choosing at least **TWO** from each Group.
2. Each question carries **TWO** marks.

GROUP - A

1. Distinguish between a Rotatory motion and a Circular motion.
2. State Inverse Square law of Magnetism.
3. Mention the applications of Electrolysis.
4. Name 3 high level languages of Computer.

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PTO.

[2]

GROUP - B

5. What are the upper and lower limits of m for $l = 4$.
6. Draw the shape of CO_2 and NH_3 .
7. 15 ml. of Hexane is mixed with 45 ml. of Heptane. Calculate the V% of this solution.
8. Write names of two Hormones.

SECTION - II

4×1=4

- NOTE :**
1. Answer **ANY FOUR** questions from the following.
 2. Each question carries **ONE** mark.

9. What is Acceleration due to gravity ?
10. Explain the phenomenon of Resonance.
11. What are Isotopes ? Give an example.
12. What is the value of Planck's constant ?
13. Arrange the following acids in the increasing order of volatility.
 HCl , H_2SO_4 and CH_3COOH
14. What are Primary Nutrients ?

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SECTION - III

4×4=16

NOTE :

1. Answer **ANY FOUR** questions, choosing at least **TWO** from each Group.
2. Each question carries **FOUR** marks.

GROUP - A

15. Give a comparison between Newton's Corpuscular theory and Wave theory of light ?
16. Draw a neat diagram showing important parts of a Dynamo. Explain its construction and working.
17. What is the principle of a Nuclear Reactor ? How is a chain reaction controlled in a nuclear reactor ?
18. State the properties and uses of a Junction Diode.

GROUP - B

19. State the postulates and defects of Bohr's atomic model.
20. Explain how Sigma (σ) and Pi (π) bonds are formed.
21. Explain Long form of Periodic Table.
22. Describe the manufacture of Cement.

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SECTION - IV

1×5=5

NOTE :

1. Answer **ANY ONE** of the following questions.
 2. The question carries **FIVE** marks.
23. Draw a diagram showing the positive error and negative error of a Screw Gauge.
24. Draw the diagram showing the manufacture of Sugar from sugarcane.
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