

*This Question Paper contains 4 Printed Pages.*

**19E(B)**

**GENERAL SCIENCE, Paper-I**

*(English version)*

**Parts A and B**

**Time : 2½ Hours]**

**[Maximum Marks : 50**

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**Part - B**

**Time : 30 minutes**

**Marks : 15**

- NOTE :**
1. Answer **all** the questions.
  2. Each question carries ½ mark.
  3. Candidates must use the **CAPITAL LETTERS** while answering the multiple choice questions.
  4. Marks will **not** be awarded in case of any over-written, re-written or erased answers.

**I. Pick up the correct answer and fill in the brackets with the CAPITAL LETTER of the correct answer chosen.**

$10 \times \frac{1}{2} = 5$

**1. According to Kepler concept, the orbit of a planet around the Sun is .....**

**[.....]**

- (A) circular
- (B) elliptical
- (C) rectangular
- (D) linear

**2. Radio-waves have wave-lengths from .....**

**[.....]**

- (A) 1 m to 100 km.
- (B) 10 m to 1 km.
- (C) 1 m to 1 km.
- (D) 1 m to 50 km.

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**P.T.O.**

3. .... is used to take photographs of objects in darkness. [.....]  
(A) Infra-red spectrum  
(B) Radio waves  
(C) UV spectrum  
(D) Microwaves
4. Aluminium is an example for ..... magnetic substance. [.....]  
(A) Dia  
(B) Para  
(C) Ferro  
(D) None
5. If three cells of 1 V, 1.5 V and 2 V are connected in parallel, then the total e.m.f. will be ..... [.....]  
(A) 2.5 V  
(B) 2 V  
(C) 1.5 V  
(D) 4.5 V
6. Among 3p, 4s, 3d and 4p, the orbital having least energy is ..... [.....]  
(A) 4s  
(B) 3p  
(C) 3d  
(D) 4p
7. Which of the following is an ore of Mg ? [.....]  
(A) Beryl  
(B) Barytes  
(C) Carnallite  
(D) Hematite
8. Weak acids ionize upto ..... [.....]  
(A) 50%  
(B) 100%  
(C) Less than 100%  
(D) More than 100%

[3]

9. Drugs which act on blood circulation are ..... [.....]

- (A) Hormones (B) Vitamins  
(C) Cardio-vascular (D) Antibiotics

10. Bond length (in Å units) in Graphite is ..... [.....]

- (A) 2.45 (B) 1.42  
(C) 4.21 (D) 2.81

II. *Fill in the blanks. Each question carries  $\frac{1}{2}$  mark.*  $10 \times \frac{1}{2} = 5$

11. Time of ascent is directly proportional to .....

12. When a body is projected upwards, the acceleration due to gravity is taken as .....

13. Distance between two successive nodes is .....

14. The size of Corpuscles are ..... for different colours.

15. Permeability of free space  $\mu_0 =$  ..... Henry/metre.

16. Napthalene is soluble in .....

17. The presence of alcoholic functional group is tested by addition of ..... metal.

18. .... is the by-product of alcohol industry.

19. Cullet is .....

20. Deodorant soap contains .....

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P.T.O.

III. Match the following.

$$5 \times \frac{1}{2} = 2\frac{1}{2}$$

### PHYSICS

(i) **Group - A**

**Group - B**

- |                         |         |                                                |
|-------------------------|---------|------------------------------------------------|
| 21. Atomic number       | [.....] | (A) Stability of atom.                         |
| 22. Mass defect         | [.....] | (B) amu                                        |
| 23. Mass number         | [.....] | (C) number of protons.                         |
| 24. Unit of atomic mass | [.....] | (D) eV                                         |
| 25. Unit of energy      | [.....] | (E) sum of the number of protons and neutrons. |

### CHEMISTRY

$$5 \times \frac{1}{2} = 2\frac{1}{2}$$

(ii) **Group - A**

**Group - B**

- |               |         |              |
|---------------|---------|--------------|
| 26. Methane   | [.....] | (A) $C_2H_6$ |
| 27. Ethane    | [.....] | (B) $C_2H_2$ |
| 28. Propane   | [.....] | (C) $C_2H_4$ |
| 29. Ethylene  | [.....] | (D) $C_3H_8$ |
| 30. Acetylene | [.....] | (E) $CH_4$   |