☆☆	Roll No _____	HSSC-(P-II)-A-2024 (For All Sessions)	Paper Code	8	4	7	4

Physics (Objective)

(GROUP-II) **Time: 20 Minutes** **Marks : 1**

RWP-2-24

Note: Write Answers to the Questions on the objective answer sheet provided. Four possible answers A, B, C and D to each question are given. Which answer you consider correct, fill the corresponding circle A, B, C or D given in front of each question with Marker or Pen ink on the answer sheet provided.

1.1 The rest mass of photon is:

(A) *Zero* (B) $1.67 \times 10^{-27}\ kg$ (C) $1.67 \times 10^{-31}\ kg$ (D) $9.1 \times 10^{-31}\ kg$

2. X-rays are also known as:

(A) Cathode rays (B) Positive rays (C) r-rays (D) Alpha rays

3. The atomic number of $^{141}_{56}$Ba is:

(A) 141 (B) 56 (C) 85 (D) 92

4. One unified mass scale (1U) is equal to:

(A) $1.66 \times 10^{-19}\ kg$ (B) $1.66 \times 10^{-27}\ kg$ (C) $1.66 \times 10^{-31}\ kg$ (D) $1.66 \times 10^{-28}\ kg$

5. Value of dielectric constant for vacuum is:

(A) Less than 1 (B) Greater than 1 (C) One (D) 1.5

6. Gold band on resistor represent its tolerance equal to:

(A) $\pm 10\%$ (B) $\pm 5\%$ (C) $\pm 15\%$ (D) $\pm 20\%$

7. An apparatus placed within a metal enclosure is "shielded" from:

(A) Electric field (B) Magnetic field (C) Gravitational field (D) Electromagnetic field

8. The SI unit of magnetic induction is:

(A) Weber (B) Tesla (C) Newton (D) Joule

9. The sensitivity of Galvanometer can be increased by decreasing:

(A) C/BAN (B) B/ACN (C) CB/AN (D) NC/AB

10. The minus sign in Faraday's law of electromagnetic induction shows that the direction of induced emf is such that it opposes the change in:

(A) Electric flux (B) Electromagnetic flux (C) Gravitational flux (D) Magnetic flux

11. The emf induced in a generator is:

(A) $N\omega\, AB\, Sin\theta$ (B) $N\omega\, IB\, Sin\theta$ (C) $NAB\, Sin\theta$ (D) $N\omega B\, Sin\theta$

12. If I_0 is the peak value of A.C current, its average value over a complete cycle is:

(A) $\sqrt{2}\, I_0$ (B) $I_0/\sqrt{2}$ (C) $\sqrt{\frac{I_0}{2}}$ (D) Zero

13. The value of angular frequency "ω" is equivalent to:

(A) $2\pi\, T$ (B) $4\pi\, f$ (C) $2\pi\, f$ (D) $\pi\, f$

14. Based on the geometrical structure and arrangement of atoms, there are ____ crystal systems:

(A) 6 (B) 5 (C) 7 (D) 8

15. The potential barrier for the Ge^n at room temperature is:

(A) 0.7 v (B) 1.0 v (C) 0.6 v (D) 0.3 v

16. The mathematical notation for exclusive OR-operation is:

(A) $X = \overline{A + B}$ (B) $X = A\,\overline{B} + B\,\overline{A}$ (C) $X = \overline{AB + BA}$ (D) $X = \overline{A - B}$

17. The photoelectric effect explained by:

(A) Darission (B) Gerwer (C) Hertz (D) Einstein