

Inter (Part-II) 2018

Physics	Group-I	PAPER: II
Time: 20 Minutes	(OBJECTIVE TYPE)	Marks: 17

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1- The half-life of Radon is:

- (a) 23.5 minutes (b) 3.8 days ✓
(c) 1620 years (d) 4.5×10^9 years

2- Very weak magnetic field produced by brain can be detected by:

- (a) Compass (b) Metallic needle
(c) Squids ✓ (d) Liquids

3- If F_1 and F_2 are the magnetic forces acting on α -particle and electron, respectively, when moving perpendicular to the magnetic field, then:

- (a) $F_1 = F_2$ (b) $F_1 > F_2$ ✓
(c) $F_1 < F_2$ (d) $F_1 = 4F_2$

4- The longest wavelength of Paschen series is:

- (a) 656 nm (b) 1094 nm
(c) 1875 nm ✓ (d) 2000 nm

5- For non-inverting amplifier, $R_1 = \infty$ and $R_2 = 0$ ohm, the gain of non-inverting amplifier is:

- (a) -1 (b) Zero
(c) +1 ✓ (d) Infinite

6- The electric potential at a mid-point in an electric dipole is:

- (a) 0 V ✓ (b) 0.5 V
(c) 1 V (d) 1.5 V

- 7- Lenz's law deals with:
(a) Induced emf (b) Induced current ✓
(c) Power (d) Electrical energy
- 8- If a step-up transformer were 100% efficient, the primary and secondary windings would have the same:
(a) Current (b) Power ✓
(c) Voltage (d) Direction of winding
- 9- The mass spectrum of naturally occurring Neon shows the most abundant isotope has atomic mass:
(a) 19 (b) 20 ✓
(c) 21 (d) 22
- 10- Two oppositely charged balls A and B attract the third ball C, when placed near them turn by turn. The third ball C must be:
(a) Positively charged
(b) Negatively charged
(c) Electrically neutral ✓
(d) Positively and negatively charged
- 11- The factor h/m_0c in Compton equation has the dimensions of:
(a) Pressure (b) Length ✓
(c) Momentum (d) Planck constant
- 12- mho m^{-1} is the SI unit of:
(a) Conductance (b) Conductivity ✓
(c) Resistance (d) Resistivity
- 13- The wavelength associated with the photon moving at a speed of 40 m/s is:
(a) 7.20 nm (b) 9.02 nm ✓
(c) 15.7 nm (d) 17.3 nm

- 14- The energy of the photon of wavelength 500 nm is:
- (a) 3.10 eV (b) 2.49 eV ✓
(c) 1.77 eV (d) 1.52 eV
- 15- The unit of \sqrt{LC} is:
- (a) Second ✓ (b) Ampere
(c) Hertz (d) Farad
- 16- At what frequency, 1 H inductance offers same impedance as $1\mu\text{F}$ capacitor:
- (a) 50 Hz (b) 159 Hz ✓
(c) 512 Hz (d) 1590 Hz
- 17- When a metal is heated, sufficiently electrons are given off by the metal. This phenomenon is known as:
- (a) Photoelectric effect
(b) Piezo electric effect
(c) Thermionic emission ✓
(d) Secondary emission

