

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 rest mass energy of electron positron pair is : (A) 0.51 MeV (B) 0.71 MeV (C) 1.02 MeV (D) 2 MeV
2	The SI unit of impedance is : (A) Ohm (B) Farad (C) Volt (D) Ampere
3	To convert galvanometer into voltmeter, high resistance is connected to the galvanometer in : (A) Parallel (B) Series (C) Anti parallel (D) Perpendicular
4	In transistor, concentration of impurity is highest in : (A) Collector (B) Emitter (C) Base and collector (D) Base
5	At high frequency, RLC series circuit behaves like : (A) R-C circuit (B) R-L circuit (C) RLC series circuit (D) L-C circuit
6	If electric and gravitational forces on an electron balance each other, then electric field intensity will be : (A) mgq (B) $\frac{q \cdot}{m\sigma}$ (C) $\frac{mg}{q}$ (D) $\frac{q}{4\pi\epsilon_0 r^2}$
7	The temperature of steam coming out of turbine in nuclear reactor is : (A) 200 °C (B) 300 °C (C) 600 °C (D) 1300 °C
8	The dimensions of motional emf are same as that of : (A) Magnetic induction (B) Magnetic flux (C) Potential difference (D) Magnetic force
9	The value of Stefan's constant ' σ ' is given by : (A) $5.67 \times 10^{-8} Wm^{-2} K^{-2}$ (B) $5.67 \times 10^{-8} Wm^{-2} K^{-4}$ (C) $5.67 \times 10^{-8} Wm^2 K^2$ (D) $5.67 \times 10^{-8} W^2 m^2 K^{-2}$
10	A charge of 4C is placed in the field of intensity $8NC^{-1}$. The force on the charge is : (A) 2 N (B) 4 N (C) 16 N (D) 32 N
11	The example of crystalline solid is : (A) Zirconia (B) Natural rubber (C) Polystyrene (D) Nylon
12	Heat sensitive resistors are called : (A) Resistor (B) Thermistor (C) Inductor (D) Capacitor
13	The atoms can reside in metastable state for about : (A) $10^{-2}s$ (B) $10^{-3}s$ (C) $10^{-4}s$ (D) $10^{-8}s$
14	$X = A + B$ is the mathematical notation for : (A) OR gate (B) NOR gate (C) NOT gate (D) NAND gate
15	Binding energy per nucleon for isotope iron-58 has a value of : (A) 6.6 MeV (B) 7.7 MeV (C) 8.8 MeV (D) 9.9 MeV
16	For step up transformer : (A) $N_s < N_p$ (B) $N_s > N_p$ (C) $N_s = N_p$ (D) $N_s \geq N_p$
17	Brightness of screen of CRO is controlled by : (A) Grid (B) Anode (C) Cathode (D) Filament