

## (Academic Sessions 2020 – 2022 to 2022 – 2024 )

**PHYSICS**224-1<sup>st</sup> Annual-(INTER PART – II)

Time Allowed : 20 Minutes

Q.PAPER – II ( Objective Type )

GROUP – I

Maximum Marks : 17

**PAPER CODE = 8477**

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) $\frac{q}{mg}$	(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) $5.67 \times 10^{-8} W m^{-2} K^{-2}$	(B) $5.67 \times 10^{-8} W m^{-2} K^{-4}$		
	(C) $5.67 \times 10^{-8} W m^2 K^2$	(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) Polystrene	(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