Roll No. : _____

Objective Paper Code **8475**

Intermediate Part Second

PHYSICS (Objective) GROUP - I

Time: 20 Minutes Marks: 17

Q.No.1 **You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.**

S.#	Questions	A	B	C	D
1	At high frequencies, a R-L-C series circuit behaves like:	R-C circuit	R-L circuit	Capacitive circuit	Parallel resonance circuit
2	At what frequency will an inductor of 1H have a reactance of 500Ω ?	500Hz	250Hz	350Hz	80Hz
3	The back motor effect in generators is in agreement with the law of conservation of:	Charge	Momentum	Energy	Mass
4	The turns ratio $\frac{N_s}{N_p}$ of a step-up transformer is:	Greater than 1	Less than 1	Equal to 1	Equal to zero
5	Lorentz force is given by:	$\vec{F} = q(\vec{v} \times \vec{B})$	$\vec{F} = q\vec{E} + q(\vec{v} \times \vec{B})$	$\vec{F} = q\vec{E}$	$\vec{F} = I(\vec{L} \times \vec{B})$
6	The SI unit of permeability of free space is:	Wb	Wbm^{-2}	$WbA^{-1}m^{-1}$	It has no unit
7	The charge carriers in electrolytes are:	Free electrons	Holes	Protons	Positive and negative ions
8	If time constant of R-C circuit is small, the capacitor is charged or discharged:	Rapidly	Slowly	Intermediately	At constant rate
9	When an insulating medium is placed between two charges, the Coulomb's force:	Increases	Decreases	Becomes double	Remains same
10	The half life of radon gas is:	1620 years	23.5 minutes	3.8 days	4.5×10^{9} years
11	Which basic force of nature has only repulsive nature?	Weak nuclear force	Strong nuclear force	Gravitational force	Electric force
12	The radius of 3rd orbit in hydrogen atom is:	0.477 nm	0.053 nm	0.212 nm	0.159 nm
13	A black body is:	Ideal radiator	Ideal reflector	Poor absorber	Poor radiator
14	Position was discovered by:	De Broglie	Heisenberg	Compton	Anderson
15	The current flowing into the base of a transistor is 25 microA while its collector current is 5mA. The current gain of transistor will be:	2000	200	500	1000
16	The Boolean expression of OR gate is:	$X = A+B$	$X = A \cdot B$	$X = \overline{A+B}$	$X = \overline{A \cdot B}$
17	An example of donor impurity is:	Silicon	Germanium	Phosphorous	Aluminum