

ROLL NO:							

Candidate must write code on the title page of answer book

1. Please check this question paper contains 10 printed pages
2. Code number given in the right hand side of the question paper should be written on the title page of the answer book by the candidate.
3. Please check that this question paper contains 36 of questions
4. Please write down the serial number of question papers before attempting it
5. Fifteen minutes are allotted to read this question paper during this time student will read the question papers and will not write any answer during this time

**PRE BOARD EXAMINATION 2021
PHYSICS (CLASS XII)**

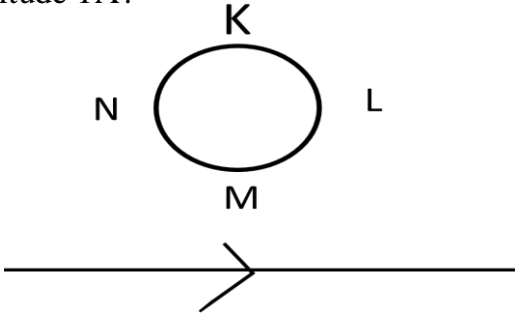
Time Allowed: 3.00Hrs.

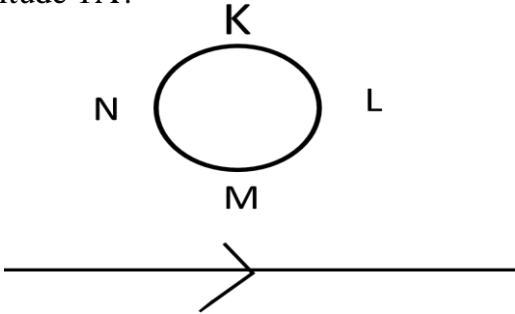
Maximum Marks: 70

General Instructions:

1. All questions are compulsory. There are 33 questions in all.
2. This question paper has five sections: Section A, Section B, Section C, Section D and Section E.
3. Section A contains ten very short answer questions and four assertion reasoning MCQs of 1 mark each, Section B has two case based questions of 4 marks each, Section C contains nine short answer questions of 2 marks each, Section D contains five short answer question of 3 marks each and Section E contains three long answer questions of 5 marks each.
4. There is no overall choice. However internal choice is provided. You have to attempt only one of the choices in such questions.

Sl. No	SECTION - A	Marks
	All questions are compulsory. In case of Internal choice, attempt any one of them.	
1	An electric dipole is kept with its dipole moment vector along x - axis . What will be the direction of the field strength at a point on its a) axial line b) equatorial line	1
2	Is ohm's law universally applicable for all conducting elements? If not, give examples of elements, which do not obey ohm's law. (OR) An electron is moving along positive x-axis in the presence of uniform magnetic field along positive y-axis. What is the	1

	direction of the force acting on it?	
3	<p>What is the magnitude of the induced current in the circular loop KLMN of radius r_1, if the straight wire PQ carries a steady current of magnitude 1A?</p> 	1
4	<p>A coil of inductance 2 mH carrying a current 2A is given. If the current is reversed in 0.01 seconds, how much back emf is produced?</p> <p>(OR)</p> <p>A wire of length 0.7 m long is falling at speed of 1.8 km/h perpendicular to a uniform magnetic field 1 T directed from east-west. Calculate the induced Emf.</p>	1
5	Does the apparent depth of a tank of water change if viewed obliquely? If so, does the apparent depth increase or decrease.	1
6	The refractive index of glass is 1.5. What is the speed of light in glass? (Speed of light in vacuum, $C = 3 \times 10^8$ m/s)	1
7	<p>A convex lens is held in water. What change, if any, do you expect in its focal length?</p> <p>(OR)</p> <p>A thin prism of 6° angle gives a deviation of 3°, what is the refractive index of material of prism?</p>	1
8	<p>State Bohr's quantisation condition for defining stationary orbits.</p> <p>(OR)</p> <p>Show graphically, the variation of the de-Broglie wavelength (λ) with the potential (V) through which an electron is accelerated from rest.</p>	1
9	What happens to the width of depletion layer of P-n junction	1

	direction of the force acting on it?	
3	<p>What is the magnitude of the induced current in the circular loop KLMN of radius r_1, if the straight wire PQ carries a steady current of magnitude 1A?</p> 	1
4	<p>A coil of inductance 2 mH carrying a current 2A is given. If the current is reversed in 0.01 seconds, how much back emf is produced?</p> <p>(OR)</p> <p>A wire of length 0.7 m long is falling at speed of 1.8 km/h perpendicular to a uniform magnetic field 1 T directed from east-west. Calculate the induced Emf.</p>	1
5	Does the apparent depth of a tank of water change if viewed obliquely? If so, does the apparent depth increase or decrease.	1
6	The refractive index of glass is 1.5. What is the speed of light in glass? (Speed of light in vacuum, $C = 3 \times 10^8$ m/s)	1
7	<p>A convex lens is held in water. What change, if any, do you expect in its focal length?</p> <p>(OR)</p> <p>A thin prism of 6° angle gives a deviation of 3°, what is the refractive index of material of prism?</p>	1
8	<p>State Bohr's quantisation condition for defining stationary orbits.</p> <p>(OR)</p> <p>Show graphically, the variation of the de-Broglie wavelength (λ) with the potential (V) through which an electron is accelerated from rest.</p>	1
9	What happens to the width of depletion layer of P-n junction	1