Government Polytechnic, Mumbai
Unit Test:2

TERM: ODD 2024-25   Programme:CO/IT

Course Name: APPLIED PHYSICS   SEMESTER: First

Course code: SC23103   Max. Marks: 20

Q.1.Attempt the following.   (2X3=6)

a) State Coulomb's law of electrostatics and define unit charge (CO3, R)

b) State Snell's law. (CO5, R)

c) Calculate the intensity of the electric field at a point 0.4 m from a charge of 1.6 µC, when placed in air. (CO3,A) **Q. 2. Attempt the following.**

  (4X2=8)

a) Obtain expression for equivalent resistance (Rs) of a series combination of resistances. (CO4, U)

<div align="center">OR</div>

a) State any four properties of magnetic lines of force. (CO4,U)

b) Write three applications of optical fibres each in i) medical field ii) Electronics field (CO5, U)

<div align="center">OR</div>

b) The refracting angle of prism and the angle of minimum deviation are equal. The R.I. of material of prism is √2 . Find angle of minimum deviation. (CO5, A)

Q.3.Attempt any TWO of the following.   (3X2=6)

a)Draw a neat labelled diagram for optical fiber.   (CO5,U)

b)State Fleming's left-hand rule.   (CO4,R)

c)Write three applications of optical fibres (CO5,A)

CO	R	U	A	Total
CO3	2	-	2	4
CO4	3	8	-	11
CO5	2	7	7	16
Total	7	15	9	31

12