Government Polytechnic, Mumbai

Unit Test:1

TERM: ODD 2024-25

Programme: CO/IT/EC/EE/IS

Course Name: BASIC PHYSICS /APPLIED PHYSICS

SEMESTER: First

Course code: SC23101/SC23103

Max. Marks: 20

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

a) Define the unit and write any two requirements of a good unit (CO1, R)

b) State three equations of motion with the usual meanings of symbols (CO2, R)

c) State Newton's third law of motion. Write any two examples of it. (CO2, R, A)

Q. 2. Attempt the following. **(4X2=8)**

a) Distinguish between Fundamental and Derived Quantity. (CO1, U)

OR

a) Distinguish Between Scalar and Vector quantity. (CO1,U)

b) Distinguish between Centripetal and centrifugal force. (CO2, U)

OR

b) Define error. Explain types of errors. (CO1, U)

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

a) Find the dimensional formula for -- (CO1,A)

pressure, force, density,

b) A train crosses a tunnel in 20 sec. At the tunnel's entry, the velocity is 50 km/hr, and at the tunnel's exit, the velocity becomes 100 km/hr. Find the length of the tunnel. (CO2, A)

c) State which of the following readings can be considered more accurate and explain why. (CO1,A)

i)3.75 ± 0.008 ii) 2.44 ± 0.005 iii) 4.18 ± 0.006

CO	R	U	A	Total
CO1	2	12	6	20
CO2	3	4	4	11
Total	5	16	10	31