GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of University Polytechnic

Diploma in Civil Engineering
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem I - N1DF104B - Applied Physics-I

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Explain the term “viscosity” and coefficient of viscosity.	K2	(2)
2)	Write down the dimension formula of energy, pressure and gravitational constant	K1	(3)
3)	Write the sum of numbers 346.32, 327.2 and 0.401 in approximate significant figure.	K2	(4)
4)	State and explain Newton’s second law of motion. Hence deduce the relation F = ma	K2	(6)
5)	Six observations have been taken for density of a material as 2.12, 2.5, 2.8, 3.4, 3.2 and 3.5 g/cm3. Identify absolute, relative and percentage error for given data.	K3	(6)
6)	The distance covered by the particle in time t is given by x = a + bt + ct2 + dt3, then find the dimensions of a, b, c and d	K3	(9)
7)	Find the dimensions of a and b in the given equation [P + a/V2] (V- b) = RT , where P is pressure , V is volume , R is gas constant and T is temperature.	K4	(8)
8)	The following vector A and B A = -i + 6j + 3k B = 3i -4j + 2k (i) Determine the dot and cross product of A and B (ii) Fine the angle between A and B	K4	(12)
	OR		
	Relate one newton into dyne by the method of dimensions analysis.	K4	(12)