Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF DESIGN
END TERM EXAMINATION - JAN 2023

Semester : SEMESTER I - 2022
Course Code : PHY1009
Course Name : Sem I - PHY1009 - Essentials of Physics
Program : B.Sc. Multimedia-VFX SFX GAMING

Date : 01-FEB-2023
Time : 10.00AM - 1.00PM
Max Marks : 100
Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART – A

ANSWER ALL THE FOLLOWING QUESTIONS 10X3=30M

1. We call the gravitational force_____because it always tries to pull masses together, it never pushes them apart

(CO1) [Knowledge]

2. A car takes 2 hours to travel 200 km in East direction. Is it a vector or scalar

(CO1) [Knowledge]

3. The rate of change of velocity with time is displacement (True/False)

(CO1) [Knowledge]

4. If m is an object's mass and v is its velocity, then the object's momentum p is _____

(CO1) [Knowledge]

5. The force is applied continually over a period of time is called as Torque (True/False)

(CO1) [Knowledge]

6. The force acting on an object for a short time interval is called

(CO2) [Knowledge]

7. The work done per unit time is called Power (True/False)

(CO1) [Knowledge]

8. A Pulley is simply a collection of one or more wheels over which you loop a rope to make it easier to lift things (True/False)

(CO1) [Knowledge]

9. If the object is in rest position, the energy associated with it is called

(CO2,CO1) [Knowledge]

10. Reducing local stress of an object will increase the stability (True/False)

(CO2) [Knowledge]

PART – B

ANSWER ALL THE FOLLOWING QUESTIONS 3X10=30M

11. Define collision. Explain the types of collisions and verify the conservation of momentum and kinetic energies with the relevant equations.

(CO2) [Comprehension]

12. Explain the types of energies and apply to a simple pendulum motion. Draw a suitable diagram.

(CO2) [Comprehension]

13. Define stability. Explain the types and factors affecting the stability with suitable diagram

(CO3) [Comprehension]

PART – C

ANSWER ALL THE FOLLOWING QUESTIONS 2X20=40M

14. There are several ways to reduce drag forces on an object moving through a fluid. Draw one suitable diagram for each type

(CO2) [Application]

15. What is composite material. Draw a suitable diagram for which the composite materials are used and label it.

(CO3) [Application]