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**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF DESIGN
MID TERM EXAMINATION - NOV 2023**

Semester : SEMESTER -I - 2023

Course Code : PHY1009

Course Name : Sem I - PHY1009 - Essentials of Physics

Program : BSE

Date : 6-NOV-2023

Time : 9:30AM - 11:00AM

Max Marks : 50

Weightage : 25%

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.
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PART A

ANSWER ALL THE QUESTIONS

(5 X 2 = 10M)

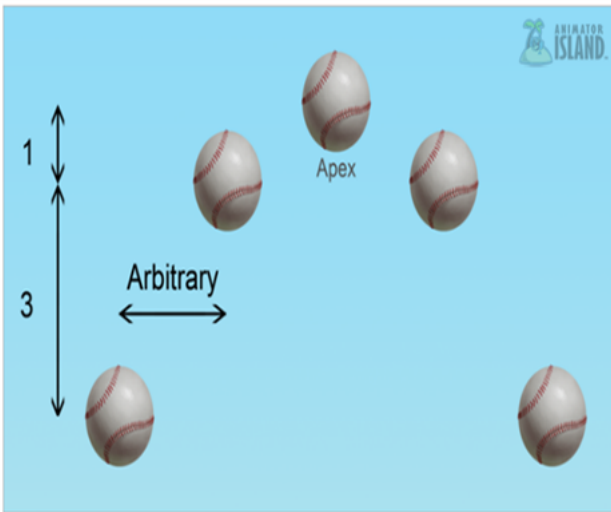
1. A car takes 2 hours to cover 200 km. Is it a scalar or vector
(CO1) [Knowledge]
2. A vector is an object that has both a magnitude and a direction. (True/False)
(CO1) [Knowledge]
3. The gravitational force is *repulsive* because it always tries to push masses away, it never attracts them. (True/False)
(CO1) [Knowledge]
4. Friction is a force that opposes the motion of an object. (True/False)
(CO1) [Knowledge]
5. In general, Buoyancy is the **force that causes objects to float.** (True/False)
(CO1) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS

(2 X 10 = 20M)

6.



Write a short note based on the given diagram

(CO1) [Comprehension]

7. Draw the suitable diagrams which explains the Newton's law.

(CO1) [Comprehension]

PART C

ANSWER THE BELOW QUESTION

(1 X 20 = 20M)

8. Illustrate the type of collisions with suitable diagrams and relevant equations.

(CO1) [Application]