

Roll No



**PRESIDENCY UNIVERSITY  
BENGALURU**

**SET A**

**SCHOOL OF DESIGN  
END TERM EXAMINATION - JAN 2024**

**Semester :** Semester I - 2023

**Course Code :** PHY1009

**Course Name :** Essentials of Physics

**Program :** B.Sc. Multimedia-VFX SFX GAMING

**Date :** 10-JAN-2024

**Time :** 1:00 PM - 4:00 PM

**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 QUESTIONS**

**4X5M=20M**

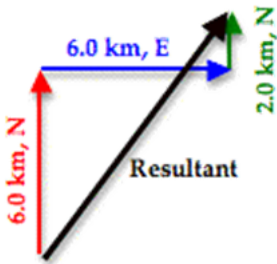
1. Define scalar and vector with suitable diagrams  
(CO2,CO3,CO1) [Knowledge]
2. Sketch the suitable diagrams for Newton's laws.  
(CO3,CO2,CO1) [Knowledge]
3. Define work and power with suitable examples.  
(CO2,CO3,CO1) [Knowledge]
4. How do you reduce the pressure points with respect to human requirements. Explain with suitable examples  
(CO3,CO2,CO1) [Knowledge]

**PART B**

**5X10M=50M**

**ANSWER ALL THE QUESTIONS**

5.



Define scalar and vector. Redraw the diagram and calculate the magnitude of the overall displacement.

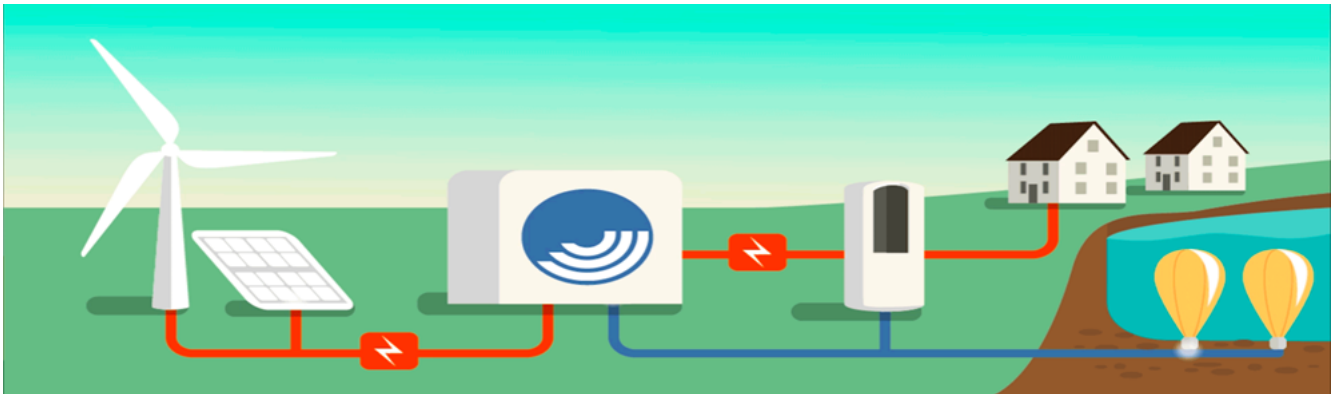
(CO3,CO2,CO1) [Comprehension]

6. Sketch the diagrams for

1. Gravitational force
2. Impulse
3. Friction
4. Buoyancy force

(CO1,CO2,CO3) [Comprehension]

7.



Explain the possible parameters based on the above diagram.

(CO3,CO2,CO1) [Comprehension]

8. Explain the principles of pulleys and levers with neat diagrams

9. Define stiffness and trusses. How to increase the stiffness? draw suitable diagrams

**PART C**

**ANSWER ALL THE QUESTIONS**

**2X15M=30M**

10. Explain the factors involved to maintain the stiffness of the objects with suitable diagrams

(CO2,CO3,CO1) [Application]

11. Define stability of bodies at rest. Illustrate the types of stability with suitable examples.

(CO3,CO1,CO2) [Application]