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International Examinations Papers

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**PHYSICS-1P**

**TOPIC- BASIC-UNITS**

# Basic-Units

Answer ALL questions.



1 (a) Which of these is a vector quantity?

- A density
- B force
- C mass
- D speed

(b) Which of these is a scalar quantity?

- A acceleration
- B energy
- C momentum
- D velocity

(c) When a book from a low shelf is placed on a higher shelf, the book gains

- A gravitational potential energy
- B mass
- C weight
- D work

(d) When an object falls at terminal velocity

- A it accelerates at  $10 \text{ m/s}^2$
- B it has no weight
- C the resultant vertical force is downwards
- D the vertical forces on it are balanced

(Total for Question 1 = 4 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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# Basic-Units

2 (a) State the similarity and the difference between scalars and vectors. (2)

similarity .....

difference .....

(b) Complete the table by ticking (✓) the correct boxes to show whether each quantity is a scalar or a vector.

The first one has been done for you. (3)

Quantity	Scalar	Vector
density	✓	
energy		
force		
momentum		
speed		
velocity		

(Total for Question 2 = 5 marks)



## Basic-Units

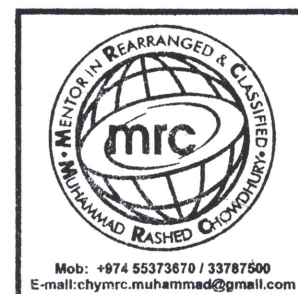
3 Some quantities are vectors, others are scalars.

(a) Complete the table ticking the boxes to show which quantities are vectors and which are scalars.

One has been done for you.

(2)

Quantity	Vector	Scalar
distance		
force		
momentum	✓	
speed		
velocity		



# Basic-Units

Answer ALL questions.



04 (a) Which of these is a scalar quantity?

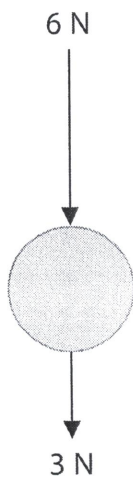
- A weight
- B mass
- C momentum
- D velocity

(b) Which of these is a vector quantity?

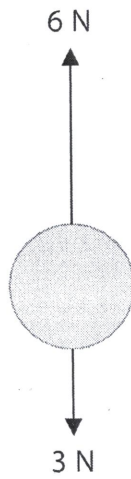
- A acceleration
- B temperature
- C charge
- D density

(c) The diagrams show the forces acting on four balls falling in air.

Which diagram shows a ball decelerating as it falls?



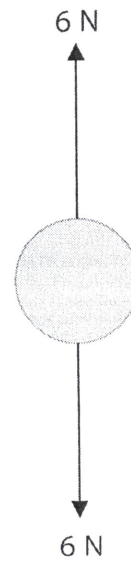
A



B



C



D

(Total for Question 1 = 3 marks)