Step Academy official

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STUDENT NAME	
PAPER CODE	52523
TIME ALLOWED	60
Paper Date	03-02-2026

CLASS	New 1st Year (FSC/ICS)
SUBJECT	Physics
TOTAL MARKS	25
Paper Type	

Q1. Choose the correct answer. **5X1=5**

1.
If the magnitude of scaler products and vectors product of two vectors are $2\sqrt{3}$ and 2 respectively , the angle between the vectors is:

(A) 30^o **(B)** 60^o **(C)** 120^o **(D)** 180^o

2. The value of 'g' at the centre of the Earth is:

(A) Infinite **(B)** 2g **(C)** 3g **(D)** Zero

3. The distance covered by a freely falling body in first 2 seconds, when its initial velocity was zero will be:

(A) 9.8m **(B)** 39.2m **(C)** 19.6m **(D)** 4.9m

4. SI unit of impulse is:

(A) kg ms^{-2} **(B)** N m **(C)** N s **(D)** N m^2

5. Impulse can be defined as:

(A) 1=f x d **(B)** 1= f x t **(C)** 1 = f x v **(D)** None

Q2. Write short answers of the following questions. **5X2=10**

1 . What is the significance of vectors product?

2 . Two vectors have unequal magnitudes. Can their sum be zero? Explain.

3 . Describe briefly effects of air resistance on the range and maximum height of a projectile.

4 .
Show that rate of change in momentum is equal to force applied. Also state Newton's second law of motion in terms of momentum.

5 . How can a small force produce a large momentum?

Q3. Write detailed answers of the following questions. **2X5=10**

1 . Derive three equations of motion by graphical method.

2 .
A cricket ball is hit upward with velocity of 20 m s^{-1} at an angle of 45^o with the ground. Find its: (a) time of flight (b) maximum height (c) how far away it hits the ground.