Step Academy official

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STUDENT NAME	
PAPER CODE	96862
TIME ALLOWED	60
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CLASS	New 1st Year (FSC/ICS)
SUBJECT	Physics
TOTAL MARKS	25
Paper Type	

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

1. Velocity of an object 1% uncertainty and mass has 2% uncertainty. What is the total uncertainty?

(A) 3% **(B)** 2% **(C)** 4% **(D)** 1%

2. Identify which pair from the following does not have identical dimensions.

(A) Work and torque **(B)** Angular momentum and Planck's constant **(C)** Moment of inertia and moment of force **(D)** Impulse and momentum

3. The dimension of pressure are:

(A) MLT^2 **(B)** ML^2T **(C)** $ML^{-1}T^2$ **(D)** MLT^3

4. The dimensions of power are:

(A) $[ML^{-2}T^3]$ **(B)** $[MLT^2]$ **(C)** $[ML^2T^{-3}]$ **(D)** $[M^2L^2T^1]$

5. Which pair has same dimensions?

(A) Work and power **(B)** Momentum and impulse **(C)** Force and torque **(D)** Torque and power

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

1 . Differentiate between base and derived quantities.

2 . How many significant figures should be retained in the following?

3 . Using rule of significant figures, compute $\frac{5.348 \times 10^{-10} \times 3.64 \times 16^4}{1.336}$ up to appropriate significant figures.

4 . Can a measurement be precise but not accurate?

5 . Dimension of coefficient of viscosity.

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

1 .
The length and width of a rectangular plate are measured to be 18.3 cm and 14.60 cm, respectively. Find the area of the plate and state the answer to correct number of significant figures.

2 .
What is meant by signigicant figures? write two reasons for using them in measurements. How to find the uncertainty in a timing experiment such as the time period of a simple pendulum?