



Because of Today Tomorrow Will Be better

# RK Academy

One step Ahead to Your Success...



## WEEKLY TEST CHAPTER – UNIT & DIMENSION, SCALAR & VECTORS

CLASS: XI

SUBJECT: PHYSICS

FM: 20

TIME: 45 MIN

### (1 MARK)

1. Unit of luminous intensity

- (a) meter (b) kelvin (c) candela (d) mole

2. Dimension of angle

- (A)  $[M^1L^1T^1]$  (B)  $[M^0L^1T^1]$  (C)  $[M^0L^1T^0]$   
D. Dimensionless

3. No of significant figures in 1.03843800

- (A) 9 (b) 8 (c) 7 (d) none

4. Angle between two anti-parallel vectors.

- a. 0 (b) 90 (c) 180 (d) none

5. Which of the following is not a vector quantity?

- (a) Momentum (b) velocity (c) force (d) density

6. What is fundamental unit? Write 3 systems of unit. (2 MARKS)

7. If  $\vec{A} \times \vec{B} = \vec{A} \cdot \vec{B}$ , then find angle between these vectors. (2 MARKS)

8. Check the correctness of equation  $v = u + at$  using dimensional analysis. Derive dimension of area  $\times$  force. (3 MARKS)

9. If  $\vec{A} = 4\hat{i} + 2\hat{j} - 6\hat{k}$  and  $\vec{B} = \hat{i} + 5\hat{j} - 2\hat{k}$ , then find  $\vec{A} \times \vec{B}$ . (3 MARKS)

10. (5 MARKS)

- (a) state and derive triangle law of vector addition? Find expression for resultant.  
(b) if two forces of 3 N and 4 N are applied on an object at perpendicular to each other. Find the net force on it.



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- (B) 9 (b) 8 (c) 7 (d) none

4. Angle between two anti-parallel vectors.

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