FOCUS TUITION CENTRE

DECEMBER MONTHLY TEST-- 2020

SUBJECT: PHYSICS   **TIME: 1.30 Hrs**
STD: 11 (CBSE)   **MARKS: 50 MARKS**

SECTION -- A

ANSWER THE ALL QUESTIONS   **12 X 1 = 12**

1. What is the number of significant figures in 0.06070?

2. What does the LASER means?

3. The word 'Physics' comes from Greek word .Name the word and meaning?

4. What is principle based on rocket propulsion?

5. What does SONAR stands for?

6. Write the dimensional formula of Torque and pressure?

7. The SI and CGS unit of distance is -------?

8. Discuss if a body moving with uniform velocity is in equilibrium?

9. The displacement of a body is proportional to the square of time along a straight line. Is the body moving with constant velocity (or) constant acceleration?

10. Define angular velocity?

11. Is the rocket in flight is an example of projectile?

12. Write the equation of angular projection of projectile (a) Time of flight (b) Maximum Height

SECTION – B

ANSWER ANY FIVE QUESTIONS   **5 X 2 = 10**

13. Is circular motion possible at constant speed (or) constant velocity? Explain

14. Prove that the maximum horizontal range is four times the maximum height attained projectile when fixed at an inclination so as to have maximum horizontal range?

15. What is de-acceleration (or) retardation?

16. Write the dimensional formula of (a) Universal gravitational constant (b) Force

17. Write the rules for significant figures? (any 4)

18. Define One radian?

19. Difference between Distance and Displacement?

SECTION – C

ANSWER ANY FIVE QUESTIONS   **5 X 3 = 15**

20. Write a short note on Gross error?

21. ''All constants are dimensionless and all variables have dimensions''. Comment?

22. What are the limitations of dimensional analysis?

23. Give the characteristics of standard unit?

24. How can the random errors be minimized?

25. Define frequency and time period?

26. State for each of the following physical quantities. If it is a scalar (or) a vector.

   Velocity, speed, mass, acceleration , density , number of moles , volume , angular velocity,

   Angular frequency, displacement.

SECTION -- D

ANSWER THE ALL QUESTIONS   **4 x 4 =16**

27. Explain the various types of systematic errors? (or)

   Derive an expression for kinematic equation for motion?

28. Write the fundamental forces in nature? (or)

(a) A LASER beam at moon returns after 2.56 s from moon. What is the radius of the orbit of moon around the earth?

(b) The length and breadth of a rectangular block are 25.2 cm and 16.8 cm which have both been measured to an accuracy of 0.1 cm. Find the area of the rectangular block?

29. State and prove parallelogram law of vector addition. Discuss some special cases? (or)

   For angular projection given to a projectile find, (a) Time of flight (b) Maximum Height

   (c) Horizontal Range.

FOCUS TUITION CENTRE

DECEMBER MONTHLY TEST -- 2020

SUBJECT: PHYSICS   TIME: 1.30 Hrs
STD: 11 (MATRIC)   MARKS: 50 MARKS

SECTION -- A

CHOOSE THE BEST ANSWER.   10 X 1 = 10

1. Find add one out.

  a) Velocity   b) Mass   c) Speed   d) Number of moles

2. The dimensional formula of force is -------?

  a) $M^{-1}L^{3}T^{-2}$ b) $M^{0}L^{3}T^{-2}$ c) $M^{0}L^{0}T^{-2}$ d) $M^{-1}L^{3}T$

3. What is the number of significant figures in 0.06070?

  a) 3   b) 4   c) 5   d) 6

4. Which method used for long distance measurement?

  a) Triangulation method   b) Parallax method   c) Radar method   d) None

5. Which of the following pairs of physical quantities have same dimensions?

  a) Force and power   b) Torque and energy   c) Torque and power d) Force and Torque

6. If a particle has negative velocity and negative acceleration, its speed

 a) Increases   b) Decreases   c) remains same d) Zero

7. If a particle executes uniform circular motion, choose the correct statement?

  a) The velocity and speed are constant b) The velocity and acceleration are constant

  c) The acceleration and speed are constant

  d) The speed and magnitude of acceleration are constant

8. Which one of the following physical quantities cannot be represented by a scalar?

  a) Mass   b) Length   c) Momentum   d) Speed

9. If an object is dropped from the top of a building and it reaches the ground at t = 4 s, then the height of the building is -----?

  a) 77.4 m   b) 76.3 m   c) 78.4 m   d) 79.3 m

10. The unit of angular displacement is ------?

a) Radian   b) Radian per second   c) Stradian   d) Stradian per second

SECTION -- B

ANSWER ANY FIVE QUESTIONS   **5 X 2 =10**

11. What are the general features of scientific method?

12. What is meant by absolute error?

13. Define Unit.

14. Define Radian.

15. Write the equation for angular motion?

16. Define Scalar and vector? Give one example?

17. Define Acceleration?

SECTION -- C

ANSWER ANY FIVE QUESTIONS   **5 X 3 =15**

18. Briefly explain the types of physical quantities?

19. Define Distance and displacement?

20. Define precision and accuracy. Explain with one example

21. Write the rules for significant figures?

22. What are the limitations of dimensional analysis?

23. What is frame of reference?

24. Write a short note an Gross error?

SECTION -- D

ANSWER THE ALL QUESTION   **3 X 5 = 15**

25. Explain the various types of Systematic error?

26. Obtain an expression for the time period T of a simple pendulum?

27. Derive an expression for kinematic equation for motion?

28. Discuss the properties of scalar products?