

HOLIDAY HOMEWORK INSTRUCTIONS.

- 1) HOMEWORK SHOULD BE WRITTEN IN ASSIGNMENT BOOK MAINTAINED NOT IN PAGES.
- 2) ASSIGNMENT TO BE WRITTEN 10 TIMES.
- 3) IT SHOULD BE HANDWRITTEN NOT TYPED
- 4) SUBMISSION DATE :- 14th OCT 2019 (MONDAY).

Holiday Homework Instructions:

- ① Homework should be written in Assignment Book maintained
- ② Assignment to be written 10 times
- ③ It should be Handwritten, not typed
- ④ Submission date: 14th Oct 2019 Monday

2 mark questions:

- 1) Mention the strongest and weakest force in nature.
- 2) Name any two fundamental forces in nature.
- 3) Mention any two conservative laws.
- 4) Define accuracy in the measurement. How does accuracy depends on precision in the measurement.
- 5) What are the sources of systematic error?
- 6) Mention any two uses of dimensional analysis.
- 7) Distinguish between path length and displacement.
- 8) Define displacement and acceleration.
- 9) Define average velocity and instantaneous velocity.
- 10) Distinguish between speed and velocity.
- 11) Distinguish between scalars and vectors.
- 12) State and explain law of triangle of addition of two vectors.
- 13) Obtain the relation between g and G .
- 14) Define stress and strain.
- 15) Distinguish between streamline flow and turbulent flow.

3 marks questions:

- 1) Derive the expression for maximum height of projectile.
- 2) Obtain an expression for time of flight of a projectile.
- 3) Obtain the expression for horizontal range of a projectile.
- 4) State Kepler's laws of planetary motion.
- 5) Explain stress-strain curve.
- 6) Write three types of Modulus of Elasticity.
- 7) Derive an expression for young's modulus of a wire in terms of its radius.
- 8) State and explain Pascal's law.
- 9) State and explain Bernoulli's theorem.
- 10) What is capillary Rise? Write the expression for height of capillary rise in the capillary tube and explain the terms.

5 marks questions:

- 1) What is $v-t$ graph? Show that $v^2 = v_0^2 + 2as$ using $v-t$ graph.
- 2) Derive the equation $x = v_0 t + \frac{1}{2} a t^2$ by graphical method.
- 3) What is uniform circular motion? Derive an expression for centripetal acceleration.
- 4) Obtain the expression for acceleration due to gravity at a depth of earth.
- 5) Obtain the expression for acceleration due to gravity at a point placed above the surface of earth.
- 6) Obtain the expression for total energy of a circularly orbiting satellite.