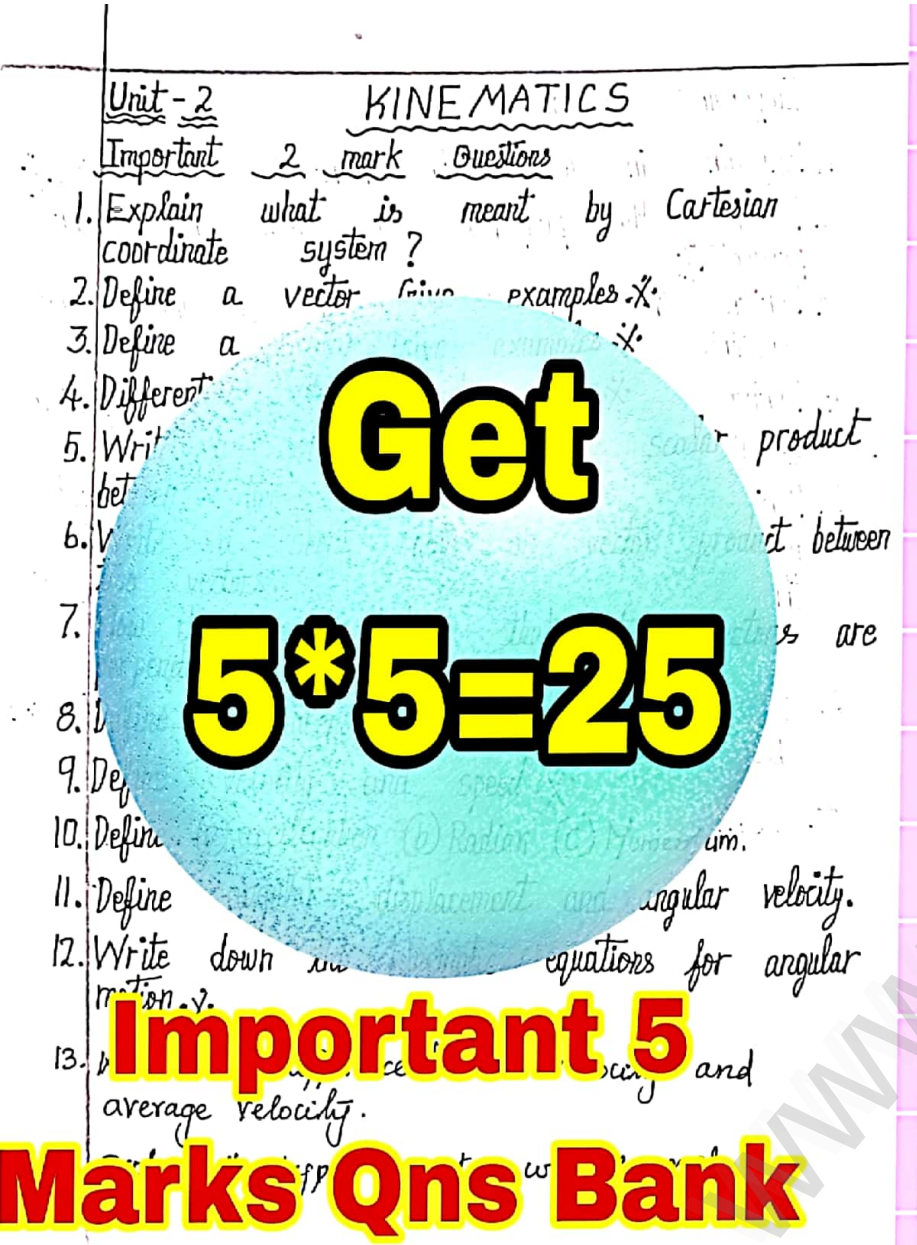
Unit - 2 KINEMATICS

Important 2 mark Questions

1. Explain what is meant by Cartesian coordinate system ?
2. Define a vector Give examples.
3. Define a
4. Different
5. Writ product bet
6. V t between
7. s are
8. D
9. De
10. Defin um.
11. Define ngular velocity.
12. Write down equations for angular motion.
13. and average velocity.

11th Physics

Quaterly Exam

Part IV ல் 5 Qns

Attend பண்ணலாம்

Important 5 Marks Questions:

1. Write a note on triangulation method and radar method to measure the larger distances. ✻
2. Explain in detail the various types of Errors. ✻
3. What do you mean by propagation of Errors? Explain the propagation of Errors in addition and difference.
4. Explain the principle of homogeneity of dimensions. What are its uses? Give example ✻
5. Explain the propagation of errors in divisions.
6. Explain the propagation of errors in multiplication.
7. Explain the Error Analysis.
8. What are the rules for counting significant figures. ✻

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Unit 1

Important 5 mark Questions

1. Explain in detail the triangle law of addition. ✗
2. Discuss the properties of scalar and vector products. ✗
3. Derive the kinematic equations of motion for constant acceleration. ✗
4. Derive the equations of motion for a particle (a) falling vertically (b) projected vertically
5. Derive the equation of motion, range and maximum height reached by the particle thrown at an oblique angle θ with respect to the horizontal direction.
6. Derive the Equations for Uniformly Accelerated Motion by Calculus method. ✗
7. Derive the Equations for motion under gravity.

unit 2

Unit 3

Conceptual Questions:

(13) Why it is not possible to push a car from inside?

(14) Why does a Parachute descend slowly?

(15) when walking on ice one should take short steps. why? ⁂

Important 5 Marks Qns:

(1) Prove the law of Conservation of linear momentum. Use it to find the recoil velocity of a gun when a bullet is fired from it. ⁂

(2) Explain the motion of blocks Connected by a string in i) Vertical motion ii) Horizontal motion ⁂

(3) Briefly Explain the origin of friction. Show that in an inclined plane, angle of friction is equal to angle of repose.

(4) What are Concurrent forces? State Lami's theorem ⁂

(5) State Newton's three laws and discuss their significance (Applications) ⁂

(6) Describe the method of measuring angle of repose ⁂

(7) Explain the need for banking of tracks. ⁂

(8) Explain the similarities and differences of Centripetal and Centrifugal forces? ⁂

(9) Explain the particle Moving in an inclined plan.

Important 5 Marks Qns:

1. Explain with graphs the difference between work done by a Constant force and by a Variable force ⁂
2. State and explain Work energy Principle, Mention any three examples for it. ⁂
3. Arrive at an expression for Elastic Collision in One dimension and discuss Various Cases ⁂
4. What is inelastic collision? in which way it is different from elastic collision. Mention few examples in day to day life for inelastic collision ⁂
5. Derive and Explain Work - Kinetic Energy Theorem. ⁂
6. Explain the Potential Energy near the surface of the Earth.
7. Explain the motion in a Vertical Circle.
8. Derive an Expression for loss of Kinetic Energy in Perfect inelastic collision.
9. Explain: Perfect inelastic Collision. (3 Marks)

unit 4

Important 5 Marks:

(1) Explain the types of equilibrium with suitable examples -X-

(2) Discuss the Conservation of angular momentum with example. -X-

(3) State and prove Parallel axis theorem. -X-

(4) State and Prove Perpendicular axis theorem -X-

(5) Discuss the rolling on inclined plane and arrive at the expression for the acceleration.

(6) Explain why a cyclist bends while negotiating a curve road? Arrive at the expression for angle of bending for a given velocity.

(7) Derive the expression for Moment of inertia of a rod about its center and perpendicular to the rod.

(8) Derive the expression for Moment of inertia of a uniform ring about an axis passing through the center and perpendicular to the plane.

(9) Derive the expression for Moment of inertia of a uniform disc about an axis passing through the center and perpendicular to the plane.

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