

# INTERNATIONAL INDIAN SCHOOL BURAIDAH

## Chapter 4: Motion in a Plane

1. Differentiate scalar and vector quantities
2. Write and give example null vector, equality vector, multiplication of vector by real number
3. Explain addition and subtraction of vector graphical method.
4. What is the relation between linear velocity and angular velocity?
5. Draw a x-y graph of position and displacement vector
6. Write Triangular law of vector addition.
7. Write parallelogram law of vector addition
8. What is resolution of a vector, example, and explain
9. What is uniform circular motion? What is its direction of velocity and acceleration?
10. What is centripetal acceleration?
11. Find magnitude and direction of resultant of two vectors A and B in terms of their magnitude and angle  $\theta$  between them (analytical method)
12. Derive equation of motion by method of calculus.
13. What is centripetal acceleration and linear velocity
14. A ball is projected with initial velocity 100m/s and angle 30 degree with horizontal , calculate Time of maximum height ,
  - a. Time of maximum height
  - b. Time of flight
  - c. Maximum height
  - d. Horizontal range
15. What is projectile? Derive equation for
  - a. Time of maximum height ,
  - b. Time of flight
  - c. Maximum height
  - d. Horizontal range