

GOA UNIVERSITY SYLLABUS

**RAJHAUNS**

**A TEXTBOOK OF  
COMMERCIAL  
ARITHMETIC**

**SEMESTER II  
BA & BCom**

**Dr. C. N. Phadte  
Dr. Neeta Mazumdar**

**ECONOMY EDITION**

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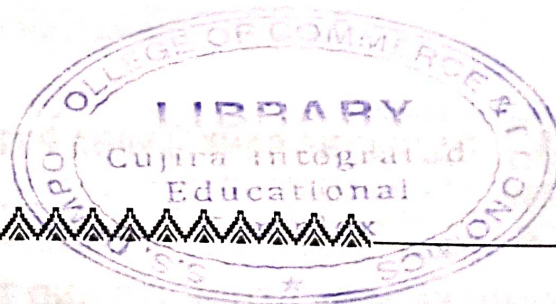
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## Chapter 1

# CO-ORDINATE SYSTEM

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## Rectangular Cartesian Co-ordinate System

### 1.1 Co-ordinate Geometry

Co-ordinate geometry is that branch of Mathematics which deals with the study of geometry by means of algebra. In co-ordinate geometry, a point in a plane is represented by an ordered pair of real numbers called co-ordinates of the point and a straight line or a curve is represented by an algebraic equation with real coefficients.

Thus we use algebra for the study of geometry.

### 1.2 The Cartesian system of Co-ordinates

When two numbered lines perpendicular to each other (usually horizontal and vertical) are placed together such that the two origins (the points corresponding to zero) coincide, then the resulting configuration is called a **Cartesian Co-ordinate system**

Let  $X'OX$  and  $Y'OY$  be two number lines perpendicular to each other, meeting at the point  $O$  then

- (i)  $X'OX$  is the X axis
- (ii)  $Y'OY$  is the Y axis
- (iii)  $O$  is the origin
- (iv)  $X'OX$  and  $Y'OY$  taken together are the co-ordinate axes.

