

Skill Enhancement Course
Quantitative & Logical Thinking

SEC-1

Course Objectives

1. To select and apply appropriate methods to solve real world problems;
2. To interpret quantitative model and understand a variety of methods of communicating them;
3. To improve decision making skills, problem solving skills and setting goals.

Course Outcomes

After completion of the course, learners will be able to

CO1: To apply appropriate methods to solve real world problems,

CO2: To understand various methods to solve the difficulties and communicating thereafter,

CO3: To draw conclusion and / or make decisions based on analysis and critique of quantitative information using proportional reasoning.

Unit –I:

Whole numbers, Integers, Rational and irrational numbers, Fractions, Square roots and Cube roots, Surds and Indices, Problems on Numbers, Divisibility; Steps of Long Division Method for Finding Square Roots.

Unit –II:

Basic concepts, Different formulae of Percentage, Profit and Loss, Discount, Simple interest, Ratio and Proportion, Mixture, Time and Work, Pipes and Cisterns, Basic concepts of Time, Distance and Speed; relationship among them

Unit –III:

Concept of Angles, Different Polygons like triangles, rectangle, square, right-angled triangle, Pythagorean Theorem, Perimeter and Area of Triangles, Rectangles, Circles.

Unit-IV:

Analogy basing on kinds of relationships, Simple Analogy; Pattern and Series of Numbers, Letters, Figures. Coding-Decoding of Numbers, Letters, Symbols (Figures), Blood Relations. Logical Statements – Two premise argument, more than two premise argument using connectives; Venn Diagrams, Mirror Images, Problems on Cubes and Dices.

Suggested Readings

Skill Enhancement Compulsory Course-II – Quantitative and Logical Thinking (Special Course) – Odisha State Higher Education Council, Bhubaneswar (The recommended Books are to be decided by the Board of Studies)