# CBSE | DEPARTMENT OF SKILL EDUCATION
# CURRICULUM FOR SESSION 2020-2021

## APPLIED MATHEMATICS (Subject Code - 840)

## RATIONALIZED CURRICULUM FOR CLASS–XII (SESSION 2020-21)

### Total Marks: 100 (Theory-70 + Practical -30)

**Unit 1. Fundamentals of Calculus**    **14 marks**

Basics of Limits & Continuity
Differentiation of non-trigonometric functions
Basic applications of derivatives in finding Marginal Cost, Marginal Revenues etc.,
Increasing and Decreasing Functions
Maxima and Minima
Integration as reverse process of differentiation
Integration of simple algebraic functions

**Unit 2. Algebra**    **07 marks**

Introduction of Matrices
Algebra of Matrices
Determinants of Square Matrices (Application only)

**Unit 3. Logical Reasoning**    **08 marks**

Number Series
Coding, decoding and odd man out
Direction tests
Blood relations
Syllogism
Binary numbers
Logical operations and truth tables

**Unit 4. Commercial Mathematics**    **10 marks**

Calculating EMI
Calculation of Returns
Compound Annual Growth Rate (CAGR)
Stocks, Shares, Debentures, Valuation of Bonds
GST
Concept of Banking

**Unit 5. Probability**                                                          **10 marks**

   Introduction to probability of an event
   Mutually exclusive events
   Conditional probability
   Law of Total Probability
   <mark>Basic application of Probability Distribution (Binomial Distribution, Poisson distribution and Normal Distribution)</mark>

**Unit 6. Two-Dimensional Geometry**                                             **04 marks**

   Slope of a line
   Equation of a line in point slope form, slope intercept form and two-point form

**Unit 7. Linear Programming**                                                   **10 marks**

   Introduction, related terminology such as constraints, objective function, optimization
   Different types of LP
   <mark>Mathematical formulation of LP problem</mark>
   Graphical method of solution for problems in two variables

**Unit 8. Analysis of time-based Data**                                          **07 marks**

   Index numbers: meaning and uses of index number, construction of index numbers, <mark>construction of consumer price indices</mark>
   Time series and trend analysis: Component of time series, additive models, <mark>finding trend by moving average method</mark>

**NOTE: HIGHLIGHTED TOPICS (30 %) ARE DELETED FOR SESSION 2020-2021.**

# Reduction in Syllabus of Applied Mathematics (840) for Class XII for Session 2020-2021

| UNIT | CHAPTER | TOPICS DELETED |
|------|---------|----------------|
| 1. | Fundamentals of Calculus | Increasing and Decreasing Functions, Maxima/Minima |
| 2. | Algebra | Determinants of Square Matrices (Application only) |
| 3. | Logical Reasoning | Blood Relations, Syllogism, Logical Operations and Truth Tables |
| 4. | Commercial Mathematics | Compound Annual Growth Rate (CAGR), Concept of Banking |
| 5. | Probability | Basic Applications of Probability Distribution (Binomial Distribution, Poisson and Normal Distribution |
| 6. | Two-Dimensional Geometry | - |
| 7. | Linear Programming | Mathematical Formulation of LPP |
| 8. | Analysis of Time-Based Data | Construction of Consumer Price Indices, Finding Trend by Moving Average Method |