JYOTI NIVAS COLLEGE AUTONOMOUS
SYLLABUS FOR 2018 BATCH AND THEREAFTER

Programme: B.B.A   **Semester: II**

QUANTITATIVE TECHNIQUES- 1

Course Code: 18BB201   **No. of Hours: 60**

COURSE OBJECTIVES:

- To provide basic knowledge of quantitative methods
- To enhance knowledge about application of Mathematics to various commercial situation.
- To provide knowledge about application of Mathematics in day to day life.

LEARNING OUTCOMES:

- To enable students it calculation of various types of interest and application of it.
- to enable them to solve their various day to day business situations in matrix form and solve them.
- To enable them to apply various ratios and progression in their business related issues.
- To provide basic knowledge of mathematics and application to commercial situation.

UNIT 1:Commercial Arithmetic: **20 HRS**

Simple and compound interest, effective rate of interest, depreciation, annuities and present value. Discounting of bills, true discount, bankers gain (application problems)Ratio- concept of ratio- duplicate, triplicate, sub duplicate and sub triplicate ratios, related problems.Proportion- Properties, third fourth and inverse proportion (related commercial problems).

UNIT 2:Linear Programming: **06 HRS**

Linear inequalities of two variables, definition of linear programming problem , Formulation of a Linear Programming Problem (LPP) - Graphical method

UNIT 3:Matrices and Determinants: **15 HRS**

Types of matrices, problems on addition, subtraction, multiplication, transpose, adjoint and inverse of matrices - determinants. Solution of simultaneous equations in two variables using Cramer's rule, application problems.

UNIT 4: Progressions: **06 HRS**

Arithmetic progressions - finding the 'n'th term of an AP and also sum of 'n' terms of an AP. Geometric progression- finding 'n'th term of a GP.

UNIT 5:Theory of equations: **13 HRS**

Introduction-Meaning–Type of Equations–Simple, Linear and Simultaneous Equations (only two variable) Elimination and Substitution Method only. Quadratic Equation –Factorization and Formula Method

$(ax^2 + bx + c = 0)$. Problems on commercial application

SKILL DEVELOPMENT

- Develop an amortisation table for loan amount – EMI calculation.
- Calculation of savings bank account interest.
- List out examples where Cramer's rule is applied in day to day life. Collect data and solve for 5 such examples using Cramer's Rule.
- Collect the objectives and constraint of 5 small companies and solve through LPP
- List out examples where Progressions is applied in day to day life. Collect data and solve for 5 such examples using Progressions.

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7. Wilson. M - Business Mathematics – Himalaya Publishing House – Edition I, 2004
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