BC-105

BUSINESS MATHEMATICS-I

External Marks: 80
Internal Marks: 20
Time: 3 Hours

Note: Paper setter will set nine questions in all. Question No. 1 comprising of five short types questions carrying four (4) marks each is compulsory. It covers the entire syllabus. Answer to each question should not be more than one page. Candidate is required to attempt four questions from the remaining eight questions carrying 15 marks each.

Logarithms, Anti-logarithms

Sequences and Series: Arithmetic & Geometric Progressions.

Differentiation: Idea of simple derivative of different functions (excluding Trigonometrical functions); Rules of differentiation (simple standard forms).

Maxima and Minima of functions of one variable (including 2nd or 3rd order derivatives) relating to cost, revenue and profit.

Matrices and Determinants: concept of matrix, types, and algebra of matrices; properties of determinants; calculation of values of determinants up to third order, adjoint of a matrix, elementary row or column operations; Finding inverse of a matrix through adjoint and elementary row or column operations; solution of a system of linear equations having unique solution and involving not more than three variables.

Compound Interest and Annuities: different types of interest rates, concept of present value and amount of a sum; types of annuities; present value and amount of an annuity (including the case of continuous compounding); valuation of simple loans and debentures; problems relating to sinking funds.

REFERENCES

- Allen R.G.D. : Basic Mathematics; Macmillan, New Delhi.
- Dowling E.T.: Mathematics for Economics; Sihaum Series, McGraw Hill, London.
- Holden: Mathematics for Business and Economics; Macmillan India, New Delhi.
- Kapoor, V.K. : Business Mathematics; S.Chand & Sons, Delhi.
- Loomba Paul: Linear Programming; Tata McGraw Hill, New Delhi.
- Soni, R.S. : Business Mathematics; Pitamber Publishing House.
- Vohra, N.D. : Quantitative Techniques in Management; Tata McGraw Hill, New Delhi.
- Gupta, S.C. Kapoor, V.K.: Fundamentals of Mathematical Statistics; S. Chand & Sons, Delhi.