Building Mathematical Ability
2 credits

Max. Marks: 70+30

Objectives
To enhance the Mathematical and Statistical ability of the students.

Unit 1: Mathematics
Ratio and Proportion, continued ratio, inverse ratio, continued proportion, direct and inverse proportion, variation, inverse variation, joint variation.
Mathematical logic: Introduction, proposition and truth values, logical connectives, tautology and contradiction, logical equivalences, converse, inverse and contrapositive of a conditional statement.

14 hrs.

Unit 2: Commercial Mathematics:
Cost price, selling price, profit and loss, simple interest, compound interest (reducing balance and flat rate of interest), stocks and shares, annuity. Housing loan and insurance, simple equated monthly installments (EMI) calculation.
Income tax: simple calculation of individual tax liability.

14 hrs.

Unit 3: Statistics
Sources of data: primary and secondary; types of data, graphical representation of data. Population, sample, variable, parameter, statistic, simple random sampling, use of random number tables.
Measures of central tendency: arithmetic mean, median and mode; measures of dispersion: range, variance, standard deviation and coefficient of variation.

Bivariate data: scatter plot, Pearson’s correlation coefficient, simple linear regression.

14 hrs.

References:

Scheme of Examination
End-semester examination: 70 marks
Continuous Assessment: 30 marks (Test/s: 20 marks, Assignment: 10 marks)

Total: 100 marks

Question paper pattern for end-semester examination
a. 40 multiple-choice questions of one mark each = 40 marks
b. 15 multiple-choice questions of two marks each = 30 marks

Total: 100 marks

Chairperson 11/12/15

Mr. J. T. JAINHAB21
Professor of Statistics
Signature