Bachelor of Management Studies

Syllabus for Advanced Quantitative Techniques for semester V

Old Syllabus	Proposed Syllabus				
Title of the Paper:	Title of the Paper :				
Advance Quantitative Techniques	Advance Quantitative Techniques				
Subject Code 5001	Subject Code				

PAPER TITLE Advance Quantitative Techniques	L	Cr	P/T	D (EE)	EE	IE	т
	04	04	Tutorials	2:30 hrs	75 Marks	25 Marks	100 Marks

#L=Lectures per week, Cr=Credits, P/T=Practical/Tutorials, D=External Exam Duration, EE=External Examination, IE=Internal Examination, T=Total Marks

Old Syllabus	Proposed Syllabus
Objectives:	Objectives:
Outcomes:	 To understand relevance and need of quantitative methods for making business decisions. To enable the students to read and interpret statistical information and be able to perform statistical analysis. To apply various statistical tools to solve business problems.

 Learning Outcomes: To develop an understanding of how to conduct an appropriate statistical analysis of the data and interpret the results.
• To integrate the knowledge of Quantitative Techniques and take correct managerial decisions.

	Old Syllabus	Proposed Syllabus							
Unit1	Topic and Details Old Syllabus	Details Modu Mod		Module Specific Content		Instruction	Credits	Evaluation	
								IE Weightage	EE Weighta ge
1	Testing of Hypothesis – One Sample Test Meaning and type of hypothesis, types of error, large sample test (significance difference between mean and proportions), small sample test (t- test, difference between means).	1	 To understand null and alternative hypothesis. To understand the difference between Type I error and Type II error. Make use of t- test and state the appropriate decision 	Testing of Hypothesis – One Sample Test Meaning and type of hypothesis, types of error, large sample test (significance difference between mean and proportions), small sample test (t- test, difference between means).	30	20	1	07	20
11	 Analysis of Variance F- test on variance ratio test Analysis of variance in one way and two way classification. x² test (chi- square test) Introduction, x² - defined, condition for applying x² - test, yate correction, use of x² test. 		 To incorporate the F- test for equality of variance in the hypothesis test for two means To understand the chi- square test of two qualitative variables and interpret the results. 	 Analysis of Variance F- test on variance ratio test , Analysis of variance in one way and two way classification. x² test (chi- square test) Introduction, x² - defined, condition for applying x² - test, yate correction, use of x² test. 	20	10	01	05	15

	Network Analysis Concept of Network Analysis – Concept of PERT – Concept of CPM – Problem solving using PERT/ CPM	 To understand the role and application of PERT/CPM for project scheduling. To compute critical path and project completion time. 	Network Analysis Concept of Network Analysis – Concept of PERT – Concept of CPM – Problem solving using PERT/ CPM	30	15	01	07	20
IV	Testing of Hypothesis – Two Samples Test Testing of Hypothesis for two samples independent Testing of Hypothesis for two samples related Testing of Hypothesis for two samples proportion	 To allocate various resources to various activities for optimisation. To determine the order of machines to be processed for each job and minimise total elapsed time. 	Assignment Problem and Sequencing Mathematical formulation of assignment model – Hungarian method for solution – Special cases in assignment problems Processing <i>n</i> jobs through two/three machines	20	15	01	06	20

Evaluation Scheme:

A. Internal Exams: Total Marks: 25

The internal testing should be continual and spread over the semester:

Criteria	Marks
Written test	20
Assignments	5
Total:	25

B. External Exams: Total Marks: 75

Q.1 & Q.8 are compulsory. 5 out of the remaining to be attempted by the students.

Q.1 Concepts and Definitions12 MarksQ.2 to Q.7 Numericals / Theory Questions10 Marks

Q.8 Numerical / Theory Question

References:

- Business Statistics, J K Sharma, Pearson publications.
 Fundamental of Statistics, S. C. Gupta, Himalaya Publication.
 Statistical Methods, S. P. Gupta, S. Chand Publication.