Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAMME

Bachelor of Science (Information Technology)
Session 2019-20

Additional optional paper for Specialization in Data Science

Course Code	Course Name	Course Type	Marks				Examination Time (in Hours)
			Total	Ext.		CA	
				L	P		
BITL-2117	*Statistical Techniques for Data Science	O	75	60	-	15	3
	Total		**75**				

Note:

O- Optional

*One additional/optional paper will be studied by the candidate if she opts for Specialization in Data Science

Bachelor of Science (Information Technology)Semester- II
(Session 2019-20)
COURSE CODE: BITL–2117
Statistical Techniques for Data Science

Examination Time: 3 Hrs   **Max. Marks: 75**
Theory: 60
CA:15

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts(not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

UNIT - I
Fundamentals of descriptive statistics: various types of data, levels of measurement, categorical variables and numerical variables. Frequency distribution tables
Introduction to asymmetry: Moments, Kurtosis and Skewness

UNIT - II
Correlation Analysis: Definition, Types, Techniques for measuring correlation - Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation Coefficient
Regression Analysis: Types and objectives, Methods - Regression lines and coefficient

UNIT - III

Introduction to inferential statistics: Concept of a sample and a population.
Testing of hypothesis: null and alternative hypothesis
Chi square test, Analysis of variance, ANOVA

UNIT - IV

Using MS Excel tools: Regression Data Analysis tool, Correlation Analysis tool, Covariance Analysis tool, ANOVA Data Analysis tool

References/Textbooks:

1. Statistical Methods by S. P. Gupta
2. Basic Statistics by B.L. Agarwal
3. Fundamentals of Numerical Methods and Statistical techniques, Anshuman Sharma
4. Excel Data Analysis for Dummies, Stephen L. Nelson by Wiley Publications