

Kanya Maha Vidyalaya, Jalandhar  
Scheme and Curriculum of Examinations of ThreeYear Degree Programme  
(Under Credit Based Continuous Evaluation Grading System) (CBCEGS)  
Bachelor of Science (Bio-Technology)  
Semester-II  
Session: 2023-24

Bachelor of Science (Bio-Technology) Semester-II										
Course Code	Course Title	Course Type	Hours per week	L-T-P	Total Credits	Marks				Examination time (in Hours)
						Total	Ext.		CA	
							Th	P		
BBTL-2333	Biostatistics	C	3	3-0-0	3	50	40	-	10	3

C-Compulsory

Bachelor of Science (Bio-Technology)  
Semester-II  
Session 2023-24  
Course Title: Biostatistics  
Course Code: BBTL-2333  
Course Outcomes

Upon completion of this course, students should be able to:

CO 1: Calculate summary statistics (mean, median, mode, range, standard deviation and variance) from the data.

CO 2: Familiar with the concepts of probability, conditional probability and Bayes theorem.

CO 3: Familiar with the concepts of correlation and regression, Scatter diagram, linear correlation and linear regression lines.

CO 4: State the null hypothesis and alternative hypothesis (both one way and two ways) appropriate to a given scenario and determine if it is appropriate to use the Chi-Square test for testing the significance of fit between data and predicted data.

Bachelor of Science (Bio-Technology)

Semester-II

Session 2023-24

Course Title: Biostatistics

Course Code: BBTL-2333

Examination Time: 3 Hours

Max. Marks: 50

L-T-P

Theory: 40

3 0 0

CA:10

Instructions for the Paper Setter:

Eight questions of equal marks (08 marks each) are to be 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 subdivided 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.

The students can use only Non Programmable & Non Storage Type Calculator and statistical tables.

Unit-I

Elementary Statistics: Collection of data. Frequency distribution and its graphical representation. The mean, median, mode, standard deviation, variance, covariance of data.

Unit-II

Probability: Basic concepts, sample space and events, use of counting method in probability, addition law, Multiplication Law, Conditional Probability and Independent Events, Bayes theorem with application (without proof).

Unit-III

Introduction to Correlation & Regression: Scatter diagram, linear correlation, linear regression lines

Unit-IV

Hypothesis Testing: Sample Statistics and parameters, Level of significance, Concept of Null and Alternate Hypothesis, Normal test for single mean (Z-test), Chi-square test (Goodness of fit and association of attributes).

Text Book:

P.N. Arora, P.K. Malhan, Biostatistics, Himalaya Publishing House, thoroughly revised edition, 2020

Reference Books

1. S.C Gupta, V.K Kapoor, Fundamentals of mathematical statistics, Sultan Chand and Sons, Delhi, Ninth edition, 1997.
2. W. Mendenhall and T. L Sincich, Statistics for engineering and sciences, Chapman and Hall, sixth edition, 2016.
3. S.P. Gupta, Statistical methods, Sultan Chand and Company, New Delhi, 1978.