



U7739

Reg. No.:

Name:.....

**University of Kerala**

First Semester Degree Examination, November 2024

Four Year Under Graduate Programme

Discipline Specific Core Course

Statistics

UK1DSCSTA105 Elementary Statistics

Academic Level: 100-199

Time:2 Hours**Max.Marks:56****Part A.**

Answer All Questions, Objective Type. 1 Mark Each.

(Cognitive Level: Remember/Understand)

6 Marks. Time: 5 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
1.	In which city, Indian Statistical Institute is located?	Remember	CO1
2.	A bar diagram typically represents	Remember	CO5
3.	How is interval data different from ratio data?	Understand	CO2
4.	What are the two methods of selecting simple random sample?	Understand	CO3
5.	Give an example for three dimensional charts.	Understand	CO5
6.	Define the relationship between mean, median and mode for a symmetric distribution.	Understand	CO6

Part B.

Answer All Questions, Two-Three sentences. 2 Marks Each.

(Cognitive Level: Understand/Apply)

10 Marks. Time: 20 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
7.	How is data classified into different categories in statistics?	Understand	CO2
8.	Explain the difference between frequency and relative frequency.	Understand	CO4
9.	In which situation would conducting a census be more beneficial than sampling?	Apply	CO3
10.	Explain the type of frequency table displays individual data points without grouping them into ranges.	Apply	CO4
11.	In a business report, when should you choose to use diagrams instead of tables for presenting statistical information.	Apply	CO5

Part C.

Answer all 4 questions, choosing among options (A or B) within each question.

Short Answer. 4 Marks Each. (Cognitive Level: Apply/Analyse)

16 Marks. Time: 35 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
12 A.	Represent the following data by a histogram.	Apply	CO5
	Marks: 0-10 10-20 20-30 30-40 40-50		
	Number of Students: 3 20 30 15 6		
12B	Prepare a blank table to show the exports of the 3 companies X,Y and Z to 5 countries Iran, Iraq, Saudi arabia, Dubai, Muscat in each of the years 1991,1992 and 1993.	Apply	CO2
13 A.	The mean marks obtained by 50 boys in a class is 40 and mean marks of 30 girls of the same class is 46. Find the mean of the marks of all the students taken together.	Apply	CO6
13B	Calculate median and mode of the marks obtained by 10 students given below. Roll No: 1 2 3 4 5 6 7 8 9 10 Marks: 23 32 25 38 56 12 32 38 48 70	Apply	CO6
14 A.	Explain what is meant by stratified random sampling and mention its advantages over simple random sampling.	Analyse	CO3
14B	Explain the limitations of statistics.	Analyse	CO1
15 A.	Distinguish between skewness and kurtosis.	Analyse	CO6
15B	Explain the requisites of a good table.	Analyse	CO4

Part D.

Answer all 4 questions, choosing among options (A or B) within each question.

Long Answer. 6 Marks Each. (Cognitive Level: Analyse/Evaluate/Create)

24 Marks. Time: 60 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
16A.	Explain critically a few of the definitions of Statistics and state the one which you think to be the best.	Analyse	CO1
16B	Illustrate the various scaling techniques used in the statistical data with examples.	Analyse	CO2
17A.	The mean age of combined group of men and women is 33 years. If the average age of men is 42 and that of women is 27, find the % of men in the group.	Evaluate	CO6
17B	The monthly income of 12 families in a town are the following (in Rs): 280,180,96,98,104,75,80,94,100,75,600,200. Calculate the AM, Median and Mode.	Evaluate	CO6
18A.	Calculate Arithmetic Mean and Standard Deviation of the following values: 95,94,96,93,87,79,73,69,68,67,78,82,83,89,95,103,108,117,130,97	Evaluate	CO6

18B	An analysis of monthly wages paid to the workers in two firms A and B gives the following result.	Evaluate	CO6												
	<table><tr><td></td><td>Firm A</td><td>Firm B</td></tr><tr><td>Number of worke</td><td>500</td><td>600</td></tr><tr><td>Average Monthly wage</td><td>186</td><td>175</td></tr><tr><td>Variance of wages</td><td>81</td><td>100</td></tr></table>				Firm A	Firm B	Number of worke	500	600	Average Monthly wage	186	175	Variance of wages	81	100
				Firm A	Firm B										
	Number of worke			500	600										
	Average Monthly wage			186	175										
Variance of wages	81	100													
(a)Which firm has larger wage bill															
(b) In which firm is there greater variability of wages.															
19A.	Prepare a blank table to show that the exports of three companies A, B and C to five countries UK,USA,Italy,France and Germany in each of the years 1995 to 1999.	Create	CO3												
19B	<p>Draft a blank table showing the distribution of students in your college, classified according to</p> <p>a) Sex</p> <p>b) Faculty of study (arts, science and commerce)</p> <p>c) Year of joining the college(1995,96 and 97) and Age Group(Below 16,17 -20,21-24)</p>	Create	CO4												