



Reg. No.:

Name:

University of Kerala

First Semester FYUGP Degree Examination, December 2025

Discipline Specific Core Course

STATISTICS

UK1DSCSTA107 - BASIC STATISTICS I

Academic Level: 100-199

2024 Admission onwards

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark
Each.Answer all questions

Qn No.	Question	CL	CO
1	Identify the primary purpose of sampling	RE	4
2	Write down the name of the new organization formed by merging CSO and NSSO?	RE	1
3	Selecting every 10th student from a list is an example of Options : A)Stratified Sampling B)Cluster Sampling C)Systematic Sampling D)Random Sampling	UN	4
4	Which partition value divides the data into 4 equal parts?	UN	3
5	The first central moment is always _____	UN	3
6	The 50th percentile is also known as the _____.	UN	3

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Define Simple Random Sampling With Replacement	UN	4
8	Define Convenience Sampling.	UN	4
9	Find the first quartile (Q1) for the following data: 12, 15, 18, 20, 22, 25, 28, 30, 21, 17.	AP	3
10	The following data shows the weights (in kg) of 25 students in a class: 42, 45, 67, 50, 53, 55, 68, 46, 52, 49, 50, 54, 56, 57, 44, 73, 70, 47, 85, 58,	AP	2

Qn No.	Question	CL	CO
	60, 59, 50, 62, 73. Prepare a frequency table using suitable class intervals.		

Part C. 28 Marks. Time: 60 Minutes (Cognitive Level: Apply (AP)/Analyse (AN)/Evaluate (EV)/Create (CR)) Long Answer: 7 marks each. Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO										
11	<p>A)</p> <p>Calculate D_3, D_7, P_{68} graphically using the following data.</p> <p>OR</p> <p>B)</p> <p>Draw a histogram for the data</p>	AP	3, 2										
12	<p>A)</p> <p>What do you understand by sampling errors and non-sampling errors. Discuss how we can eliminate both. If a Sample Survey is used to estimate the average Job Satisfaction Score, compare and contrast the impact of a large sampling error versus a large non-sampling error (like response bias) on the final reported estimate.</p> <p>OR</p> <p>B)</p> <p>Explain the methods of selecting simple random sample. Justify the steps required to select a sample of $n = 100$ employees using Simple Random Sampling Without Replacement (SRSWOR) from the entire population frame ($N = 5,000$)</p>	AN	4, 4										
13	<p>A)</p> <p>Write down the relation between raw moments and central moments.</p> <p>The first four raw moments about 5 of a distribution are 2,20,40,50. Obtain the mean, second, third, and fourth central moments.</p> <p>OR</p> <p>B)</p> <p>Compute the first four raw moments about the origin for the following frequency distribution.</p> <table border="1"><tr><td>x</td><td>2</td><td>4</td><td>6</td><td>8</td></tr><tr><td>f</td><td>3</td><td>5</td><td>7</td><td>5</td></tr></table>	x	2	4	6	8	f	3	5	7	5	EV	3, 3
x	2	4	6	8									
f	3	5	7	5									
14	<p>A)</p>	CR	2, 2										

Qn No.	Question	CL	CO														
	<p>A college has three departments: Commerce, Science, and Arts. Create suitable data showing admissions in three years (2022, 2023, 2024) and construct a multiple bar diagram.</p> <p>OR</p> <p>B)</p> <p>The waiting times (in minutes) for 50 customers at a bank. Construct a Histogram for the waiting time data. On the same graph, superimpose a Frequency Curve. Identify the modal class from the histogram and estimate the modal value by locating the peak of the frequency curve.</p> <table><tr><td>Class</td><td>0-5</td><td>5-10</td><td>10-15</td><td>15-20</td><td>20-25</td><td></td></tr><tr><td>frequency</td><td>8</td><td>15</td><td>12</td><td>10</td><td>5</td><td></td></tr></table>	Class	0-5	5-10	10-15	15-20	20-25		frequency	8	15	12	10	5			
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Model QP