 University of Kerala  
 UoK -FYUGP

**TEMPLATE 5**

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| **University of Kerala** | | |
| Discipline: Statistics |  | Time: 1 Hour 30 Minutes (90 Mins.) |
| Course Code: UK1DSCSTA110 |  | Total Marks: 42 |
| Course Title: STATISTICAL METHODS-I |  |  |
| Type of Course: DSC |  |  |
| Semester: 1 |  |  |
| Academic Level: 100-199 |  |  |
| Total Credit: 4, Theory: 3 Credit |  |  |

Part A. 6 Marks. Time: 6 Minutes  
Objective Type. 1 Mark Each. Answer All Questions

(Cognitive Level: Remember/Understand)

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| **Qn. No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 1. | Define primary data | Remember | CO 1 |
| 2. | List any two relative measures of dispersion | Remember | CO 4 |
| 3. | Compare median and mode | Understand | CO 3 |
| 4. | Less than ogive and grater than ogive intersect at \_\_\_\_\_\_\_\_ | Understand | CO 2 |
| 5. | Give any two examples of secondary data | Understand | CO 1 |
| 6. | Locate mean,median,mode in a positively skewed curve | Understand | CO 4 |

Part B. 8 Marks. Time: 24 Minutes  
Short Answer. 2 Marks Each. Answer All Questions (Cognitive Level: Understand/Apply)

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| **Qn. No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 7. | Distinguish between ratio and interval scale with suitable examples | Understand | CO 1 |
| 8. | Explain the term percentile and write the formula for measuring rthpercentile | Understand | CO 3 |
| 9. | Demonstrate the procedure to draw less than ojive curve for a grouped frequency table | Apply | CO 2 |
| 10. | Explain how will you use moments in studying skewness and kurtosis | Apply | CO 4 |

Part C. 28 Marks. Time: 60 Minutes  
Long Answer. 7 marks each. Answer all 4 Questions, choosing among options within each

question.  
(Cognitive Level: Apply/Analyse/Evaluate/Create)

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| **Qn. No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 11. | A. The following data provide the study hours per week of a student 4, 6, 8, 5, 7, 6, 4. Calculate the mean, median and mode.  OR  B. The mean weekly wages of a sample of 15 employees of a company are $1035. The mean weekly wages of a sample of 20 employees of another company are $1090. Find the combined mean for these 35 employees | Apply | CO 3 |
| 12. | |  |  | | --- | --- | | Class Intervel | Frequency | | 0-10 | 13 | | 10-20 | 15 | | 20-30 | 8 | | 30-40 | 10 |  1. Calculate the skewness and kurtosis for the above frequency table.   OR   1. Examine the skewness value and interpret how it affects the understanding of the data distribution. | Apply | CO 4 |
| 13. | |  |  | | --- | --- | | Class Intervel | Frequency | | 0-10 | 25 | | 10-30 | 22 | | 30-80 | 21 | | 80-100 | 6 |   Figure out histogram for the above data and describe how does the histogram provides insights about the central tendency of the data  OR  Draw a multiple bar diagram for the following data   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Branches | B1 | B2 | B3 | B4 | | 2018 | 56 | 86 | 121 | 87 | | 2017 | 87 | 95 | 106 | 99 | | Analyze | CO 2 |
| 14. | A. For the following data set  Marks 0-10 10-20 20-30 30-40 40-50 50-60 60-70  No.of Students 5 10 18 26 22 15 4   1. Calculate the first four moments (mean, variance, skewness, and kurtosis).   Interpret about the distribution of data using the moments  OR  B. Consider the following two data sets. Data Set I: 8 16 20 35 27 36 45 75 Data Set II: 5 13 17 32 45 23 82 12  Calculate the mean and variance for each of these two data sets. Comment on the relationship between the two means. And variances | Apply | CO 4 |

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| **Cognitive Level** | **Marks** | **Percentage** |
| Remember | 2 | 4.8 |
| Understand | 8 | 19 |
| Apply | 25 | 59.5 |
| Analyse | 7 | 16.7 |
| Evaluate |  |  |
| Create |  |  |
| **TOTAL** | **42** | **100** |

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| **Course Outcomes** | **Marks** | **Percentage** |
| CO1 | 3 | 7.1 |
| CO2 | 11 | 26.2 |
| CO3 | 10 | 23.8 |
| CO4 | 18 | 42.9 |
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| **TOTAL** | 42 | **100** |