

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: UK1DSCSTA111 |  | Total Marks: 42 |
| Course Title: Descriptive Statistics with R |  |  |
| 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 sample | Remember | CO1 |
| 2. | Define interquartile range | Remember | CO5 |
| 3. | A school principal wants to see which subject the 1000 students in his school liked best. Which choice **best** represents a sample?   1. The girls in the school. 2. 1 classroom for each grade. 3. All the students in the school. 4. The students making a B in math. | Understand | CO1 |
| 4. | Give a situation in which sampling is inevitable | Understand | CO2 |
| 5. | For a positively skewed distribution what is the relation between mean, median and mode | Understand | CO5 |
| 6. | What do you mean by a primary data? | Understand | CO2 |

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. | What do you mean by statistical population? | Understand | CO1 |
| 8. | What do mean by a frequency distribution? | Understand | CO3 |
| 9. | Prepare a less than cumulative frequency distribution for the following data   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Marks | 0-10 | 10-20 | 20-30 | 30-40 | 40-60 | | Number of students | 5 | 10 | 18 | 26 | 22 | | Apply | CO4 |
| 10. | How would you determine median of a data? | Apply | CO5 |

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)** |
| 11A. | How will you access the consistency of the data obtained in two samples using R programming?   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Sample 1 | 74 | 101 | 4 | 82 | 6 | 71 | 14 | 0 | | Sample 2 | 72 | 8 | 81 | 97 | 22 | 11 | 16 | 1 | | Apply | CO5 |
| OR | | | |
| 11B | How would you prepare a sub divided bar diagram using R programming for the following data?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | 2008 | 2009 | 2010 | 2011 | | TCS | 80 | 89 | 100 | 112 | | Infosys | 115 | 101 | 90 | 84 | | Wipro | 72 | 89 | 91 | 99 | | Apply | CO4 |
| 12A. | Explain nominal, ordinal, interval and ratio types of data with examples. | Analyze | CO1 |
| OR | | | |
| 12B | Explain advantages and disadvantages of census and sampling. | Analyze | CO1 |
| 13A. | Discuss about statistical population, census, primary and secondary data. Explain when will you chose secondary data over primary data. | Evaluate | CO1 |
| OR | | | |
| 13B | How would you prepare a deviation bar diagram using R programming for the following data?   |  |  |  | | --- | --- | --- | | Years | Sales | Net profits | | 1985 - 86  1986 - 87  1987 - 88 | 10%  14%  12% | 50%  -20% -10% | | Evaluate | CO4 |
| 14A. | Write an R Program to create a histogram for the data: 9,13,21,8,36,22,12,41,31,33,19,23,21,23,45,6,7,5,33,22,11,12,27,28,32,29,29,27 | Create | CO4 |
| OR | | | |
| 14B | Marks of 20 students in a mathematics test are the following. 11, 4, 27, 18, 18, 3, 24, 22, 11, 22, 18, 11, 18, 7, 29, 18, 11, 6, 29, 11. Use R Program to find the value of kurtosis of the data. | Create | CO5 |

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| **Cognitive Level** | **Marks** | **Percentage** |
| Remember | 2 | 4.8 |
| Understand | 8 | 19.0 |
| Apply | 11 | 26.2 |
| Analyse | 7 | 16.7 |
| Evaluate | 7 | 16.7 |
| Create | 7 | 16.7 |
| **TOTAL** | **42** | **100** |

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| **Course Outcomes** | **Marks** | **Percentage** |
| CO1 | 25 | 36 |
| CO2 | 2 | 3 |
| CO3 | 2 | 3 |
| CO4 | 23 | 33 |
| CO5 | 18 | 26 |
| **TOTAL** | 70 | **100** |