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| **University of Kerala** | | |
| Discipline: Physics |  | Time: 1 Hour 30 Minutes (90 Mins.) |
| Course Code: UK1MDCPHY102 |  | Total Marks: 42 |
| Course Title: Elementary Data Analysis |  |  |
| Type of Course: **MDC** |  |  |
| Semester: 1 |  |  |
| Academic Level: 100-199 |  |  |
| Total Credit: 3, Theory: 3 Credit  (Applicable for 4 Credit Course with 1 Credit Practical Also) |  |  |

Part A.

6 Marks. Time: 6 Minutes. (Cognitive Level: Remember/Understand) Objective Type. 1 Mark Each. Answer All Questions

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 1. | List any two examples for quantitative data. | Remember | 1 |
| 2. | Recall the term sample space. | Remember | 2 |
| 3. | Explain the concept of variance. | Understand | 3 |
| 4. | Describe the concept of cell reference in spread sheet. | Understand | 4 |
| 5. | Explain bivariate analysis. | Understand | 1 |
| 6. | Explain the concept of skewness. | Understand | 3 |

Part B.

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

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome (CO)** |
| 7. | Discuss discrete and continuous data. | Understand | 1 |
| 8. | Explain complementary event. | Understand | 2 |
| 9. | You are given marks scored by a student for different subjects. Describe the method of finding mean. If you are given grouped data, explain the formula for finding mean. | Understand | 3 |
| 10. | Illustrate the procedure to sort a given set of data in spread sheet and to calculate the range. | Apply | 4 |

Part C.

28 Marks. Time: 60 Minutes. (Cognitive Level: Apply/Analyse/Evaluate/Create)

Long Answer. 7 marks each. Answer all 4 Questions, choosing among options\* within each question.

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome (CO)** |
| 11. | A. Explain different ways of representing data in graphical form, with a focus on. Bar Diagram, Histogram, Pie Chart and Frequency Polygon.  OR  B. i) Discuss the concept of cumulative distribution.  ii) Explain the method of presenting cumulative distribution as ogive. | Understand | 1 |
| 12. | A. Discuss conditional probability. Explain using suitable example.  OR  B. Explain addition law and multiplication law of probability, with examples. | Understand | 2 |
| 13. | A. Describe the different probability distributions and their applications.  OR  B. i) Discuss the concept of mean, median and mode.  ii) Explain the method of finding median for even and odd number of data. | Understand | 3 |
| 14. | A. Present the concept of pivot table in spreadsheet and illustrate its potential in analyzing data.  OR  B. Illustrate the method of filtering data, with a focus on, number filtering and date filtering with examples. | Apply | 4 |