

# School of Basic and Applied Sciences

Forensic Science

ETE - Jun 2023

Time : 3 Hours

Marks : 50

## Sem II - MBS28T2111 - Research Methodology

*Your answer should be specific to the question asked*

*Draw neat labeled diagrams wherever necessary*

1. What is the distinction between primary data and secondary data, and what are the advantages and disadvantages of each? K1 CO3 (2)
2. Differentiate research methodology and research methods, and describe its role in the overall research process. K2 CO2 (2)
3. Difference between depended and independent variables. K2 CO5 (2)
4. How is the strength of a correlation determined based on the value of the correlation coefficient? K2 CO4 (2)
5. How can you perform a comprehensive literature analysis to discover research gaps? K1 CO1 (2)
6. What is the concept of central tendency in statistics, and why is it important in summarizing and describing a dataset? Consider the following dataset representing the ages of 10 individuals in a group: 28, 32, 27, 25, 29, 30, 27, 25, 26, 30. Calculate mean, median and mode. K3 CO3 (5)
7. What is the distinction between research methods and research methodology, and how do they contribute to the overall research process? K3 CO1 (5)
8. In the garden pea, yellow cotyledon color is dominant to green, and inflated pod shape is dominant to the constricted form. Considering both of these traits jointly in self-fertilized dihybrids, the progeny appeared in the following numbers: 193 green, inflated 184 yellow constricted 556 yellow, inflated 61 green, constricted Do these genes assort independently? Support your answer using Chi-square analysis K4 CO6 (6)
9. What are the common challenges and biases that researchers may encounter during the data collection phase, and how can they be addressed or minimized? K4 CO5 (8)
10. Discuss the different methods of sample collection with suitable examples. K4 CO2 (8)
11. Explain standard deviation. With a standard deviation of Rs. 40, the average daily salary of 50 factory workers was Rs. 200. A rise of Rs. 20 has been offered to each employee. What is the new daily average salary and standard deviation? K3 CO4 (8)