

MASTER'S DEGREE (C.S.S) EXAMINATION, NOVEMBER 2024

2024 ADMISSIONS REGULAR

SEMESTER I - CORE COURSE ZOOLOGY

ZO1C04TM20 - Biostatistics and Research Methodology

Time : 3 Hours

Maximum Weight : 30

Part A

I. Answer any Eight questions. Each question carries 1 weight

(8x1=8)

1. Distinguish between primary data and secondary data.
2. Compare qualitative data and quantitative data.
3. Brief the various methods used for studying correlation.
4. Brief the different measures of Probability.
5. Elaborate the steps for testing a hypothesis.
6. Explain the terms (a) Confidence interval (b) P value (c) Critical value
7. Compare the terms 'observation' and 'facts'.
8. Express the need for conducting research studies.
9. List the importance points to be considered while preparing a research paper for journals.
10. Elaborate on types of reports.

Part B

II. Answer any Six questions. Each question carries 2 weight

(6x2=12)

11. Recognize the partition or positional values besides median.
12. Given is the distribution of 140 candidates obtaining marks X or higher in a certain examination. Calculate the mean marks obtained by the candidates using step deviation method.

marks X or more	10	20	30	40	50	60	70	80	90	100
cumulative frequency	140	133	118	100	75	45	25	9	2	0

13. Discuss the Karl Pearson's coefficient of correlation.
14. Explain in detail the methods to draw linear regression line.
15. A certain drug was administered to 500 people out of a total of 800 included in the sample to test its efficacy against typhoid. The results are given below: Find out the effectiveness of the drug against the disease (the table value of chi-square for 1df at 5% level of significance is 3.84).

	Typhoid	No Typhoid	Total
with drug	200	300	500
without drug	280	20	300
total	480	320	800

16. Identify the motivation factors which prompts one to take up research.
17. Discuss the characteristics of research.
18. Elaborate on plagiarism checking softwares.

Part C

III. Answer any Two questions. Each question carries 5 weight

(2x5=10)

19. Compare measures of central tendency with that of measures of dispersion. Discuss the merits and demerits.
20. Compare the types and methods of correlation and regression analysis.
21. Write an essay on different types of researches conducted by researchers.
22. Elaborate on the different presentation techniques adopted to communicate the scientific reports.