22102750

QP CODE: 22102750

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR EXAMINATIONS, AUGUST 2022

Fourth Semester

Core Course - ZY4CRT04 - RESEARCH METHODOLOGY, BIOPHYSICS & BIOSTATISTICS

(Common for B.Sc Biological Techniques and Specimen Preparation Model III, B.Sc Zoology and Industrial Microbiology Model III Double Main, B.Sc Zoology Model I, B.Sc Zoology Model II Aquaculture, B.Sc Zoology Model II Food Microbiology, B.Sc Zoology Model II Medical Microbiology)

2020 Admission Only

484C4EBD

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Comment on quantitative approach in research.
2. Give the name of any two sources of review literature.
3. What is workshop?
4. Define species richness.
5. What is Simpson's Index of Diversity 1-D?
6. Comment on normality.
7. Differentiate between stage and ocular micrometer.
8. Difference between stationary and mobile phase in chromatography.
9. What is the slaughterhouse rules?
10. What is right to information act?
11. What are ogives?
12. What is positive correlation? Give an example.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. Comment on the structure of a scientific paper.

14. Write an account on institutional websites.

15. Describe capture - recapture method.

16. Write the mechanism of gill net.

17. Explain the principles of microscopy. Discuss the working of Fluorescent microscope.

18. Explain the principle and working of pH meter.

19. What are the limitations of X-ray crystallography?

20. Discuss on ethical guidelines for using animals in research and education.

21. Explain the Procedure for testing hypothesis.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Elaborate the sources of information in Research.

23. Write an essay on bird presentation.

24. Explain the principle and working of Transmission Electron Microscope and Scanning Electron Microscope.

25. Calculate Mean, Median, and Mode from the data given in the following table.

Class interval	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-99
Frequency	2	1	3	1	7	3	6	7	1	3

(2×10=20)