



QP CODE: 21100864



21100864

Reg No : .....

Name : .....

**B.Sc DEGREE (CBCS) EXAMINATION, MARCH 2021**

**Fourth Semester**

**Core Course - ZY4CRT04 - RESEARCH METHODOLOGY, BIOPHYSICS & BIostatISTICS**

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

2017 Admission onwards

DBB425AE

Time: 3 Hours

Max. Marks : 60

**Part A**

*Answer any **ten** questions.*

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

1. Differentiate Theoretical and Applied research.
2. Name any one science journal.
3. Define E- Journal.
4. What is biodiversity?
5. Write names of two narcotizing agents used.
6. Expand ppm.
7. Define pH. What is its significance?
8. Comment on the uses of spectrophotometer.
9. Name any four animal rights and laws in India.
10. What is Refinement?
11. What is a histogram?
12. What is type I error in hypothesis testing.

(10×1=10)

**Part B**

*Answer any **six** questions.*





*Each question carries 5 marks.*

13. Briefly explain the importance of proper methodology in research.
14. Briefly describe any five types of presentation techniques used in research.
15. Write an account on Biodiversity indices with special reference to Simpson index.
16. Write on trawl net.
17. Describe the principle and working of polarization microscopy.
18. Briefly discuss the technique of Micrometry.
19. Explain PAGE and Agarose gel electrophoresis.
20. Write an account on the care and welfare of laboratory animals.
21. Find standard deviation of the following numbers: 1, 2, 3, 4, 5.

(6×5=30)

### **Part C**

*Answer any **two** questions.*

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

22. Write an essay on research report writing.
23. Explain Quadrature. Add notes on different types and importance of species area curve.
24. Write an essay on Electron microscopy and its Types.
25. Describe measures of central tendency. Explain different types and formulas used to calculate when data is grouped and ungrouped.

(2×10=20)

