

QP CODE: 20100864



Reg No :

Name :

B.Sc DEGREE (CBCS) EXAMINATION, MARCH 2020

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

EB4290A1

Time: 3 Hours

Marks: 60

Part A

*Answer any **ten** questions.*

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

1. Define Empirical research.
2. Which is the first step in research process?
3. What is Debate?
4. What is line transect?
5. Differentiate between sweep nets and dip nets.
6. Define Taxidermy.
7. What is the term magnification denotes in microscopy?
8. What is spectrophotometer?
9. What is Replacement?
10. What do you mean by consent in bioethics?
11. What is Quantitative data?
12. Define Correlation.

(10×1=10)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Explain the importance of literature reviewing in defining a problem for research.
14. Elaborate with examples the sources or depositories of scientific information in scientific research.
15. What is meant by the term biodiversity index? Classify it based on the thrust of index.
16. Differentiate between molarity and normality.
17. Compare and contrast SEM, TEM and STEM. Add a note on its uses.
18. Write down the differences between light and electron microscope.
19. Explain how pH of a solution can be determined? Discuss on working and principle of pH meter.
20. Which are the legislations related to biodiversity and wild life? Explain any three laws.
21. Frequency distribution of weight in grams of fishes are given below.
Weight in grams 450-460 460-470 470-480 480-490 490-500 500-510
No of fishes 6 9 10 7 5 12
Calculate the standard deviation.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Describe how to prepare a project report.
23. Write a detail account on biodiversity measurements.
24. Give an account of the different chromatographic techniques used for separation.
25. Find Arithmetic Mean, Median and Mode of the following data

Class Interval	15-25	25-35	35-45	45-55	55-65	65-75
Frequency	4	11	19	14	0	2

(2×10=20)

