18U518　　　　　　(Pages: 2)　　　　Name: ……………………..

Reg. No……………...………

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2020
(CUCBCSS-UG)
(Regular/Supplementary/Improvement)
CC15U ZO5 B09 - GENERAL METHODOLOGY IN SCIENCE, BIOSTATISTICS AND INFORMATICS
Zoology - Core Course
(2015 Admission onwards)

Time: Three Hours　　　　　　　　　　　　　　　　　　　Maximum: 80 Marks

A. Answer *all* questions. Each question carries 1 mark:

1. Define 'hypothesis'.

2. What is meant by serendipity?

3. What is sampling error?

4. Define null hypothesis.

5. What is empiricism?

6. What is degree of freedom?

7. What is pseudoscience?

8. Expand HTML.

9. What is digital divide?

10. Define IPR.

(10 x 1 = 10 Marks)

B. Answer any *ten* questions in *two or three* sentences. Each question carries 2 marks:

11. What is chi square test? Give its significance.

12. What is INFLIBNET?

13. Differentiate between frequency curve and frequency polygon.

14. Explain the health issues of e-waste.

15. What is artificial intelligence?

16. Describe the merits and demerits of random sampling.

17. What is histogram? How is it drawn and when?

18. Differentiate between primary and secondary data.

19. Calculate arithmetic mean of the following data.

　　　　　38, 47, 59, 62, 71, 85, 36, 64, 98, 25

20. Define patent. Mention the steps involved in filing a patent.

21. Differentiate between inductive and deductive reasoning.

22. What are search engines?

(10 x 2 = 20 Marks)

C. Answer any *five* questions in *not more than a paragraph* each. Each question carries 6 marks:

23. Explain the concept of 'knowledge'. What are different types of knowledge?

24. What is frequency table? How is it prepared?

25. Give an account of open access initiatives.

26. Explain the importance of models, simulations and virtual testing in science.

27. Describe scientific data archiving.

28. Calculate the mean, median and mode from the following data.

Marks obtained by students	0-10	10-20	20-30	30-40	40-50
No. of Students	25	27	37	21	14

29. Explain various aspects of green computing.

30. Explain the concept of Bio- computing.

(5 x 6 = 30 Marks)

D. Write essays on any *two* of the following. Each question carries 10 marks:

31. Write an essay on the application of e-governance in Kerala.

32. Describe different sampling methods used in biostatistics.

33. a) Define mean and standard deviation. Give its merits and demerits

b) Calculate the standard deviation of the following data.

Length in cm.	10	20	30	40	50	60
No. of shells	10	15	20	10	3	7

34. Explain the procedure of designing an experiment.

(2 x 10 = 20 Marks)

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