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## Third Semester B.Sc. Degree Examination, March 2022.

### First Degree Programme under CBCSS

#### Zoology

#### Core Course - III

# ZO 1341 - METHODOLOGY AND PERSPECTIVES OF ZOOLOGY

(2015 – 2018 Admission)

Time: 3 Hours

Max. Marks: 80

- I. Answer all questions in one or two sentences (Each question carries 1 mark)
- Define hypothesis.
- 2. What is scientific law?
- Define stratified sampling.
- 4. What is sampling error?
- 5. Define resolving power.
- 6. Define standard deviation.
- 7. What is simulation?
- 8. What is partition coefficient?
- 9. Name two fixatives used in electron microscopy.
- 10. Expand CCMB and CIFT.

 $(10 \times 1 = 10 \text{ Marks})$ 

- II. Answer any eight of the following (Each question carries 2 marks) (Answer not to exceed one paragraph each)
- 11. Write short notes on scientific knowledge.
- 12. What is virtual testing?
- 13. What is Abbe's formula?
- 14. Write notes on direct observations.
- 15. What is negative staining?
- 16. Write short notes on Student's t- test.
- 17. Define mode and mention any two of its merits.
- 18. What is goodness of fit?
- 19. Write short notes on adsorption chromatography.
- 20. Write briefly on levels of significance.
- 21. Write short notes on differential centrifugation.
- 22 Write a brief note on the activities of RGCB.

 $(8 \times 2 = 16 \text{ Marks})$ 

- III. Answer any six of the following (Each question carries 4 marks) (Each answer should not exceed 120 words)
- 23. Write notes on principle and types of centrifugation.
- 24. Distinguish between theoretical and practical knowledge.
- 25. Write notes on ethics in science.
- 26. Explain different types of experiments.

- 27. Describe binomial probability distribution.
- 28. Explain various graphical representation of data.
- 29. Explain briefly the principle and working of fluorescent microscope.
- 30. Distinguish between light microscope and electron microscope
- 31. Explain different types of microtomes.

$$(6 \times 4 = 24 \text{ Marks})$$

- IV. Answer any two of the following (Each question carries 15 marks)
- 32. Explain in detail the principle, types and applications of chromatography.
- 33. Define sample. Explain the various methods of sampling.
- 34. Write an essay on testing of hypothesis.
- 35. Elaborate different steps involved in the histological preparation of tissues.

 $(2 \times 15 = 30 \text{ Marks})$