

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Third Semester

Zoology – Core

RESEARCH METHODOLOGY

(For those who joined in July 2021-2022 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer:

- Identify the primary purpose of literature review is to facilitate detailed background of
 - Present studies
 - Feature studies
 - Previous studies
 - All the above

- What is the major attribute of Correlation Analysis?
 - Association among variables
 - Difference among variables
 - Regression among variables
 - Variations among variables
- Why is it important to spend time writing an abstract for research report?
 - Reviewers only review the abstract
 - It is the only opportunity for you to report the applications and strengths of the research.
 - Readers sometimes use it to decide if they wish to read the full article
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- When was the first journal published?
 - 1665
 - 1675
 - 1955
 - 1645
- What is the correct name for the microscope lens located in the eyepiece?
 - Condenser
 - Objective
 - Binocular
 - Ocular

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- State that the Buffer solutions are used with pH probes for the purpose of
 - Calibration
 - Linearization
 - Cleaning
 - Electrode inspection
- Who invented centrifugation?
 - Newton
 - G.G. Stokes
 - Antonin Prandtl
 - Al-Kindi
- Which one is free space, X-ray travels in _____
 - Periodic oscillations
 - Non-Periodic oscillations
 - Straight line
 - Zig-zag path
- Who is developed by Electrophoresis?
 - Tswett
 - Tsvedberg
 - Tiselius
 - Sanger

- Why does bomb calorimeter require high pressure oxygen?
 - To increase the ignition temperature
 - To increase the kinetic energy
 - To increase the rate of reaction
 - To ensure that the given sample in the crucible burns completely

PART B — (5 × 5 = 25 marks)

Answer ALL the questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

- Narrate the scope of the microbiology. Classify the importance of scientific research.

Or

 - Narrate the collection of review of literature survey in research.
- State that the organization of scientific paper.

Or

 - Summarise the importance of plagiarism software in research.

13. (a) Explain about the general principles of fluorescence.

Or

(b) Describe the applications of P^H Meter.

14. (a) Narrate the isolation steps of mitochondria.

Or

(b) Describe about the isolation of amino acid.

15. (a) Explain about the general principles of electrophoresis.

Or

(b) Classify the spectroscopic techniques.

PART C — (5 × 8 = 40 marks)

Answer ALL the questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Categorize the writing of scientific research report.

Or

(b) Enumerate the scientific result in interpretation.

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17. (a) How to write the standard scientific article? - Discuss.

Or

(b) Highlight the way of presentation in seminar and conference.

18. (a) Discuss about the working principles of SEM.

Or

(b) Justify the different steps of cytotechniques.

19. (a) Summarise the different type of centrifuge.

Or

(b) Discuss about the gas liquid chromatography.

20. (a) Highlight about the types of electrophoresis.

Or

(b) Justify the working principles of bomb calorimeter.

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