2026

M.Sc. 2nd Semester Examination

BOTANY

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Paper : BOTC457X0

[Research Methodology and Ethics]

Full Marks : 50 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group - A

Answer any ***four*** questions : 2×4=8

1. Define empirical research.
2. How are primary data different from secondary data?
3. What are predatory journals?
4. How is hypothesis testing related to any research?
5. What are the disadvantages of Impact factor?
6. What is drafting of research report?

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Group - B

Answer any ***four*** questions : 4×4=16

7. Ranen Ghosh and Bipin Pal published a paper in 2017 in the Journal of Economic Botany on its 22nd volume of the pages 217-222, entitled "Jute productivity of lateritic soil after urea treatment" — Make a reference of the paper in international journal style.

8. How do the h-index and i10-index help to determine the research standard or impact of an individual academician?

9. Comment on the factors that motivate one to carry out research work. Enumerate the objectives behind carrying out any research. 2+2

10. How is h-index calculated? Mention the ethical checks a researcher should complete before submitting an abstract/manuscript to an unknown journal. 2+2

11. Enlist the qualities of good research. 4

12. Write comprehensive notes on :

    Applied versus Fundamental research and Quantitative versus Qualitative research. 2+2

Group - C

Answer any ***two*** questions : 8×2=16

13. Define research methodology. How are research methods related to research methodology? Give an elaborate

account of different steps to be followed sequentially while conducting a research work. 2+2+4

14. What is plagiarism checking? Write a comprehensive note on the procedure of plagiarism check. Name two softwares used for the check. 2+4+2

15. Describe the essential structural elements required to construct a standard scientific research paper in botany. Define the term 'Impact Factor' (IF) of a journal.

    What will be the impact factor of a journal in 2025, if that journal published total number of papers in 2022, 2023, 2024 and 2025 are 131, 139, 111, and 137 respectively, while the total number of citations made of the published papers are 27, 41, 29 and 33 in those years? 4+2+2

16. What is literature survey? What is the necessity of it in carrying out research on any topic? How is it utilised in research work? 2+2+4

[Internal Assessment : 10 marks]

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