

## FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2023

(Regular/Improvement/Supplementary)

## BOTANY

## GBOT4B04T: RESEARCH METHODOLOGY, REPRODUCTIVE BOTANY &amp; PALYNOLOGY

Time: 2 Hours

Maximum Marks: 60

**SECTION A: Answer the following questions. Each carries *two* marks.****(Ceiling 20 Marks)**

1. What are the different steps of scientific methods?
2. Define Hypothesis. Explain different types.
3. Write general rules for constructing diagrams.
4. Explain the random method of sampling. Write its advantages.
5. What are the different classes of data?
6. Write the principle pH meter.
7. Define acids and write general properties of acids.
8. What are the different chromatographic methods used in science.
9. Discuss the principle of centrifugation. Write different types.
10. What are the functions of tapetum?
11. What is Pollinium?
12. Write the role of pollen in taxonomic studies.

**SECTION B: Answer the following questions. Each carries *five* marks.****(Ceiling 30 Marks)**

13. How will you prepare a scientific paper?
14. Explain the different methods of measures of dispersion.
15. Give an account of different types of bar diagrams.
16. Define Spectrophotometry. What is its significance? Write different types.
17. Write a note on expression of concentration.
18. Write the structure of mature embryo sac.
19. Explain the different barriers of fertilization.

**SECTION C: Answer any *one* question. Each carries *ten* marks.**

20. What is colourimetry? Explain the different types of colourimetry.
21. With help of figure explain the development of Polygonum type embryo sac.

**(1 × 10 = 10 Marks)**