

2022

M.Sc.

2nd Semester Examination

BOTANY

PAPER—203

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Unit 203.1 Plant Anatomy

1. Answer any two questions. 2×2

(a) Define colleter.

(b) What is p-Protein? Mention its function.

(Turn Over)

- (c) What is anomocytic type of stomata?
- (d) State the common types of apotracheal axial parenchyma present in wood.

2. Answer any *two* questions. 2×4

- (a) Write a short note on glandular trichome.
- (b) Briefly describe the different types of parenchyma cells present in secondary xylem.
- (c) What is pit? Write a note on lignification pattern in xylem.
- (d) Define latex and write its chemical composition in brief.

3. Answer any *one* question. 1×8

- (a) Briefly describe the chemical composition of primary cell wall. How moisture content of wood can be calculated? 6+2
- (b) What are the components of phloem tissue? Describe in detail the ontogeny and phylogeny of sieve tubes. 2+6

Unit 203.2 Pharmacognosy

4. Answer any *two* questions. 2×2
- (a) Define pharmacognosy.
 - (b) What is meant by organoleptic study?
 - (c) Name two anticancer alkaloids from *Catharanthus sp.*
 - (d) Define secondary metabolites.
5. Answer any *two* questions. 2×4
- (a) Classify the glycosides on the basis of linkage between glycone and aglycone part.
 - (b) Write a note on micromorphological characteristics of crude plant drug *Cinchona*.
 - (c) Mention the salient features of alkaloids.
 - (d) Write down the health benefits of tea.

6. Answer any one question. 1×8
- (a) Describe the micromorphological and chemical characteristics of crude drug of *Strychnos*. 5+3
- (b) Discuss the synthesis of chorismic acid through shikimic acid pathway. 8

[Internal Assessment – 10 Marks]
