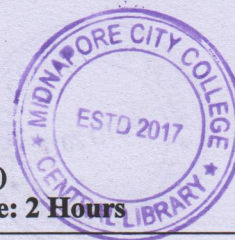


PG (NEW) CBCS
M.Sc. Semester-II Examination, 2019
BOTANY
PAPER: BOT-203
(PLANT ANATOMY & PHARMACOGNOSY)

Full Marks: 40

Time: 2 Hours



Use separate Answer-scripts for each unit

BOT 203.1

Plant anatomy

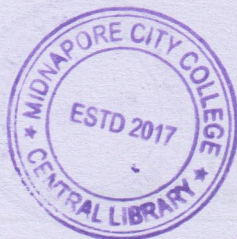
Marks-20

1. Answer any two questions of the following: 2×2=4
 - a) What is Rhitidome?
 - b) Mention different constituents of phloem.
 - c) Distinguish between pycnoxylic and monoxylic wood.
 - d) Mention one each of commercial importance of coir and jute.

2. Answer any two questions of the following: 4×2=8
 - a) Define periderm. Write down different components of periderm mentioning their specific function. 1+3
 - b) Write a concise note on salt glands with reference to the functions, types, and distribution in plant. 1+2+1
 - c) How do stomata differ from hydathodes? Briefly describe and diagrammatically represent a typical stomatal complex found in members of Poaceae. 1+3
 - d) Define articulated and nonarticulated laticifers and cite one example of each. Mention the economic importance of *Hevea brasiliensis*. 2+2

3. Answer any one question of the following: 8×1=8
 - a) What does it meant by differentiation? Briefly write "Histogen theory" and show with sketch the differentiation of shoot apex in angiosperms as per this theory. 2+(3+3)
 - b) Write a comprehensive note on cell wall of higher plants and show different layers of cell wall. What are different mechanical tissues found in plant? 3+2+3

(Turn over)



(2)

BOT 203.2
Pharmacognosy

Marks-20

4. Answer any two questions of the following: 2×2=4
- What is the organoleptic method of drug identification?
 - Differentiate the primary and secondary plant metabolism.
 - Name two dietary sources of flavonoids.
 - Name two saponine glycosides and their respective sources.
5. Answer any two questions of the following: 4×2=8
- Write short note on different ways of detection of adulteration.
 - What is phytoestrogen? Mention its role in human health. 1+3
 - What are carotenoids? Mention the function of carotenoids in plants. 1+3
 - Briefly note down the signaling for alkaloid biosynthesis in plants.
6. Answer any one question of the following: 8×1=8
- What are different active principles of Digitalis? Discuss its different medicinal uses. Mention the mechanism of action of digoxin in human body. 2+2+4
 - What are the chemical components of *Rauvolfia serpentina*? How do they work? Discuss in details about acetate melonate pathway. 2+3+3
