

Second Semester Examination-2018

M.Sc. BOTANY

Paper Code: BOT-203

Plant Anatomy & Pharmacognosy

Full Marks : 40

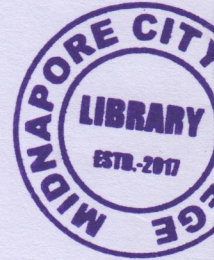
Time: 2 Hours

Write the answer for each unit in separate Sheet

Unit -I

Plant Anatomy

1. Answer any four questions of the following: 1×4=4
- What is totipotency?
 - Define polyderm.
 - Mention the importance of phloem fibre.
 - Give an example of plants which show the resin duct and salt gland.
 - What is P-protein?
 - Differences between axial parenchyma and ray- parenchyma.
 - What is leaf gap and leaf trace?
2. Answer any two questions from the following: 3×2=6
- Write the ultrastructure of cell wall in briefly.
 - Write the structure of seceretory trichomes in case of *Drosera* sp. and *Nepenthes* sp.
 - Write in brief the origin of xylem.
3. Answer any on question from the followings: 10×1=10
- What do you mean by intra and interxylary phloem? Write the different types of stomata accoring to Metchalfe and chalk. Mention the ontogery of different types of stomata. 2+5+3=10
 - Write the different types of Laticiferous cells. Mention the economic importance of Latex. Write down the evolutionary trends in case of nodal anatomy 3+4+3=10



(Turn Over)

Unit –II
Pharmacognosy

- 1. Answer any four questions of the following:** **1×4=4**
- a) What is the scope of pharmacognosy?
 - b) From where you isolate 'Morphine'?
 - c) What is 'Tannins'?
 - d) What do you mean by 'Secondary metabolites'?
 - e) Mention the active principals of Rauvolfia.
 - f) Write the name and use of alkaloids found in Belladonna.
 - g) Name two eargot alkaloids.
- 2. Answer any tow questions from the following:** **2×3=6**
- a) Illustrate about the classification of 'Tannins' shortly.
 - b) Write short note on 'Anthocyanin'.
 - c) What is Flavones and Flavonols?
 - d) Write short note on the Pharmacological importance of 'Green Tea'.
- 3. Answer any one question from the followings.** **1×10=10**
- a) i) Briefly illustrate the classification of Natural products. **5**
 ii) Briefly write the steps of "Shikimate Pathway" of plant natural product production. **4**
 iii) What is Organoleptic evaluation of drug? **1**
 - b) i) What is glycosides? **1**
 ii) What is Allicin? Where it is found? **1+1**
 iii) Give the steps of biosynthesis of glycosides. **4**
 iv) What is digitoxin? From where it is found? **3**
