

PG CBCS
M.Sc. Semester-II Examination, 2022
BOTANY
PAPER: BOT 203

Full Marks: 40

Time: 2 Hours

Write the answer for each unit in separate sheet

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.

BOT 203.1: PLANT ANATOMY

Marks: 20

GROUP-A

1. Answer any one question of the following:

8×1=8

- a) What are transfer cells? Write the structures, types and developmental process of laticifers tissue. 2+2+1+3
- b) Define periderm. Describe the structural developmental details of cork cells. State various modes of periderm development. 2+3+3

GROUP-B

2. Write any two questions of the following:

4×2=8

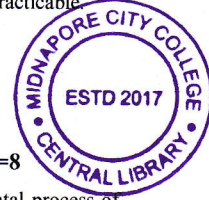
- a) Distinguish with illustrations between paracytic and diacytic type of stomata.
- b) Elucidate different types of p-protein and their ultrastructure.
- c) Write the salient features of a very primitive vessel element
- d) Write short notes on nodal anatomy.

GROUP-C

3. Answer any two questions of the following:

2×2=4

- a) What is differentiation?
- b) Write the chemical nature of pectin.
- c) Distinguish between secretion and excretion with an example in each.
- d) Describe the structure of salt gland.



(P.T.O)

(2)

BOT 203.2: PHARMACOGNOSY

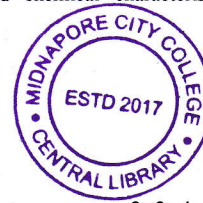
Marks: 20

GROUP-A**1. Answer any one question of the following:****8×1=8**

- a) Illustrate the Shikimic acid pathway in plants. Mention its importance in synthesis of secondary metabolites. 6+2
- b) Write schematically the biosynthesis pathway of glycosides. Give examples of some glycosides having pharmaceutical applications 2+6

GROUP-B**2. Answer any two questions of the following:****4×2=8**

- a) Mention the chemical properties of carotenoides, scientific name of its source plant and therapeutic uses. 2+1+1
- b) Describe the organoleptic, micro-morphological and chemical characteristic features of Rauwolfia.
- c) Write a brief note on 'classification of crude drug'.
- d) Mention different detection procedures of adulterations

**GROUP-C****3. Answer any two questions of the following:****2×2=4**

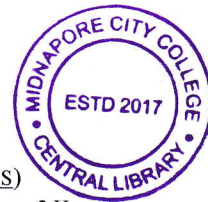
- a) Describe the trichome structure of Strychnos seed.
- b) What is phytoestrogen? Mention its two uses.
- c) Write any two active principles of Digitalis.
- d) What are terpenoids?

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(ANGIOSPERM TAXONOMY AND BIOSYSTEMATICS)

Full Marks: 40

Time: 2 Hours



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BOT 201.1: ANGIOSPERM TAXONOMY

Marks: 20

GROUP-A

1. Answer any one question of the following: 8×1=8
- a) Write briefly about the utilities of herbarium. Write down the demerits of digital herbarium. Name two important herbaria one from India and other from abroad with their respective acronyms. 4+2+2
- b) Schematically write down the classification of Takhtajan. Characterize the subclass Liliidae. 4+4

GROUP-B

2. Answer any two questions of the following: 4×2=8
- a) Differentiate between flora and vegetation.
- b) Write short notes on APG system of classification.
- c) Write the principles of ICN.
- d) Differentiate monophyly, paraphyly and holophyly.

GROUP-C

3. Answer any two questions of the following: 2×2=4
- a) What is eudicot?
- b) Mention two primitive features of Magnoliidae
- c) What is nomina conservation?
- d) Define homograph. Give an example.

(P.T.O.)

(2)

BOT 201.2: BIOSYSTEMATICS

Marks: 20

GROUP-A

1. Answer any one question of the following:

1×8=8

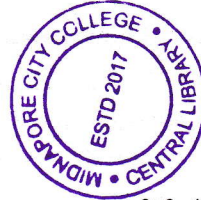
- a) Define ethnobotany. Discuss about different branches of ethnobotany, Write down the utility of ethnomedicine in human welfare.
- b) What does it mean by cytology? Write down the role of cytology in solving taxonomic debates.

GROUP-B

2. Answer any two questions of the following:

2×4=8

- a) Write the importance of biodiversity.
- b) Discuss micro- morphological characters of taxonomy.
- c) Write down the principles of numerical taxonomy.
- d) Write about the categories of biosystematics.



GROUP-C

3. Answer any two questions of the following:

2×2=4

- a) Define sementides.
- b) What is OEUs?
- c) What are attributes?
- d) Write principal activities of IUCN
