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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)

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 Rauvolfia.

c) Write a brief note on 'classification of crude drug'.

d) Menttion 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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PG CBCS

M.Sc. Semester-II Examination, 2022

BOTANY

PAPER: BOT 201

(ANGIOSPERM TAXONOMY AND BIOSYSTEMATICS)

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 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.)

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

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