

G-3/355/22

Roll No.

III Semester Examination, January 2022

M.Sc.

BOTANY

Paper I

(Plant Development and Plant Resources)

Time : 3 Hours]

[Max. Marks : 80

Note : *All questions are compulsory. Question Paper comprises of 3 Sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

SECTION A

1×8=8

(Objective Type/Multiple Choice Questions)

Choose the correct answer :

1. A dicot root differs from monocot root in the presence of :
(a) Piliferous layer (b) Exodermis
(c) Ill developed pith (d) Radial vascular bundle
2. The lateral branch in a root arises out of the :
(a) Epidermis (b) Cortex
(c) Pericycle (d) Phloem

P.T.O.

3. Histogen Theory was proposed by :

- (a) Schmidt (b) Hanstein
(c) Nageli (d) Clause

4. Intraxylary phloem is also known as :

- (a) Included phloem (b) External phloem
(c) Internal phloem (d) None of these

5. Velamen is a characteristic feature of :

- (a) Epiphytes (b) Hydrophytes
(c) Xerophytes (d) Mesophytes

6. Hydrophytes are characterised by the presence of :

- (a) Sunken stomata (b) Collenchyma
(c) Sclerenchyma (d) Reduced vascular tissues

7. The botanical name of Sal is :

- (a) Pterocarpus marsupium
(b) Shorea robusta
(c) Tectona grandis
(d) Azadirachta indica

8. Quinine is obtained from :

- (a) Cinchona (b) Withania
(c) Atropa (d) Rauwolfia

SECTION B

6×4=24

(Short Answer Type Questions)

Note : Answer the following questions in **250** words.

Unit-I

1. Write a brief note on Root microbe interaction.

Or

Write a note on Lateral Roots.

Unit-II

2. Describe anomalous secondary growth in any *one* stem you have studied.

Or

Write a note on secondary xylem.

Unit-III

3. Write a note on stomata.

Or

Describe briefly the ecological adaptations in xerophytes.

Unit-IV

4. Describe the origin, distribution and economic importance of any *one* oil yielding crop.

Or

Describe the origin, distribution and economic importance of any *one* fibre yielding crop.

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

Unit-I

1. Write a detailed note on seed dormancy and the methods to overcome dormancy.

Or

What are the chief features of meristematic tissues ? Describe various types of meristems and their functions.

Unit-II

- 2. Write a note on organisation of shoot Apical meristem.**

Or

What is secondary growth ? Describe secondary growth in dicots with the help of suitable diagram.

Unit-III

3. Describe the morphological and anatomical features alongwith ecological adaptations in hydrophytes.

Or

Write a note on development of leaf.

Unit-IV

4. What are Cereals ? Describe any *two* cereal crops you have studied along with their economic importance.

Or

Describe the following :

- (a) One fibre yielding crop
- (b) One timber yielding crop

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