

**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.

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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