

G-4/409/21

Roll No.

M.Sc. IV Semester Examination, 2021**BOTANY****Paper I****(Plant Reproduction and Utilization of 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 Questions)**

- 1.** When pollentube enters the ovule through micropyle the process is called :
 (a) Porogamy (b) Mesogamy
 (c) Chalazogamy (d) Aporogamy
- 2.** Double fertilisation was discovered by :
 (a) Karl Shnarf (b) P. Maheshwari
 (c) S.G. Nawaschin (d) E. Strasburger

P.T.O.

- 3.** A microspore is the first cell of :
 (a) Male sporophyte (b) Female sporophyte
 (c) Male gametophyte (d) Female gametophyte
- 4.** Development of megaspore within ovule is known as :
 (a) Parthenogenesis
 (b) Megasporogenesis
 (c) Megagametogenesis
 (d) Embryogenesis
- 5.** In non-endospermic seeds food is stored in :
 (a) Chalazosperm (b) Cotyledons
 (c) Perisperm (d) Embryosac
- 6.** *Cocos nucifera* is a classical example of :
 (a) Nuclear Endosperm
 (b) Cellular Endosperm
 (c) Helobial Endosperm
 (d) None of the above
- 7.** Who is the father of Green Revolution in the world ?
 (a) Normon Borlaug (b) M.S. Swaminathan
 (c) E.P. Odum (d) R. Smith

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8. The study of how people of a particular culture and region make use of indigenous plants is known as :

- (a) Pathology (b) Taxonomy
(c) Ecology (d) Ethnobotany

SECTION B

4×6=24

(Short Answer Type Questions)

Note : Attempt one question from each unit.

Unit-I

1. Write a short note on double fertilization.

Or

Write a note on types of pollination.

Unit-II

2. Describe the structure and functions of tapetum.

Or

Write a brief note on the structure of anther.

Unit-III

3. Differentiate between endospermic and non-endospermic seeds.

Or

Write a brief note on Apomixis.

Unit-IV

4. Write a short note on innovations for meeting world food demand.

Or

Discuss the characteristics and give 5 (five) names of plants used for pollution control.

SECTION C

12×4=48

(Long Answer Type Questions)

Note : Attempt one questions from each unit.

Unit-I

1. Describe the different methods of plant propagation.

Or

Describe pollen-stigma Interaction.

Unit-II

2. Explain microsporogenesis.

Or

Write a note on organisation of embryo sac.

Unit-III

3. Describe the following :

- (a) Nuclear Endosperm
(b) Cellular Endosperm

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Or

Describe embryo development in dicotyledons.

Unit-IV

4. Write down the basic aspects of Green Revolution.

Or

Write a brief note on ethnobotanically important plants of Chhattisgarh.

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