

H-4/3(B)/22

Roll No.

IV Semester Examination, 2022

M.Sc.

BIOCHEMISTRY

Paper III

(Seed Science Technology)

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 correct answer :

1. Function of ABA is :

- (a) Creates stress (b) Stress hormone
(c) Closes stomata (d) Both (b) and (c)

2. Outer seed coat is :

- (a) Testa (b) Tegmen
(c) Hilum (d) Funiculus

P.T.O.

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3. ROS metabolism is related to :

- (a) Hormonal imbalance
(b) Damages cell
(c) Give protection against stress
(d) None of the above

4. is responsible for seed to overcome germination by absorbing water.

- (a) Vernalization (b) Scarification
(c) Stratification (d) Devernalization

5. The process in which all plant parts die only seed survives is called

- (a) Senescence (b) Complete senescence
(c) Both (a) and (b) (d) None of these

6. The major difference between orthodox seeds and recalcitrant seeds is in :

- (a) Development (b) Structure
(c) Viability (d) None of these

7. Synthetic seeds are :

- (a) Artificially made
(b) Somatic embryo in suitable matrix
(c) Genetically modified plants
(d) None of the above

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8. Preserved embryo's are termed as :

- (a) Synthetic seeds (b) Semisynthetic seeds
(c) Natural seeds (d) Fermented seeds

SECTION B

6×4=24

(Short Answer Type Questions)

Note : Attempt *one* question from each unit with internal choice.

Unit-I

1. Write short notes on dessication related compounds.

Or

Allegation of dormancy.

Unit-II

2. Write notes on :

Role of Gibberellic acid.

Or

Events involved in germination.

Unit-III

3. Write notes on :

Mechanism of dessication tolerance.

Or

Longevity markers ?

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Unit-IV

4. Write notes on :

Cryobanks

Or

Vitrification.

SECTION C

12×4=48

(Long Answer Type Questions)

Note : Attempt *one* question from each unit with internal choice.

Unit-I

1. Explain seed dormancy in detail.

Or

Explain role of chemicals with mechanism which break seed dormancy.

Unit-II

2. Explain the important post germination events.

Or

Explain metabolic pathways of cellular repair.

Unit-III

3. Explain important events in seed aging ?

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Or

Explain the mechanism of metaboletes in dessication tolerance.

Unit-IV

4. Describe cryopreservation of embryo.

Or

Describe synthetic seeds in detail.

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