

Your Roll No.

Department of Botany
School of Chemical & Life Sciences
Jamia Hamdard, New Delhi 110062
B.Sc. (Hons.) Botany
Semester III Examination March 2024
BBO-SEC301: Seed Science & Technology

Time: **2 hrs.**

Maximum Marks: **45**

Note: This paper consists of sections A, B & C.

Attempt **ALL** questions (VSAQ) under Section A.

Attempt **ANY 5** questions (SAQ) out of 6 under Section B.

Attempt **ANY 2** questions (EAQ) out of 3 under Section C.

CLO1: demonstrate a thorough understanding of the principles and concepts of seed science, including seed biology, quality assessment and enhancement methods;

CLO2: apply principles of seed production, seed testing, harvesting and packaging; and

CLO3: analyse factors influencing seed storage, including seed longevity, and demonstrate the ability to design effective seed storage systems while adhering to National and international regulations.

BTL: 1-Remember; 2-Understand; 3-Apply; 4-Analyse; 5-Evaluate; 6-Create

VSAQ: Very Short Answer Questions

SAQ: Short Answer Questions

EAQ: Essay Answer Questions

CLO: Course Learning Outcome

Section A

Attempt **ALL** the following VSAQs.

(15 x 1 = **15 Marks**)

Q.No.	Question	CLO	BTL	Marks
1.	What is the role of endosperm in a seed?	1	2	1
2.	Differentiate between dormancy and quiescence.	1	3	1
3.	Name a seed borne fungus and the disease caused by it.	1	1	1
4.	Define seed viability.	2	1	1
5.	Expand GOT .	2	1	1
6.	Mention some pollinating agents.	2	2	1
7.	Differentiate between primary and composite sample.	2	3	1
8.	What is the objective of seed purity analysis?	2	4	1
9.	Give the role of red and far-red light on seed germination.	1	2	1
10.	Name any ONE method of seed enhancement.	1	1	1
11.	Mention any ONE biochemical change associated with seed storage.	3	3	1
12.	Expand DUS .	3	1	1
13.	How do you calculate germination percentage?	2	2	1
14.	Define seed vigour.	1	1	1
15.	Name the class of seed which is the progeny of breeder seed.	3	1	1

P.T.O.

Section B

Attempt **ANY 5** of the following SAQs.

(5 x 3 = 15 Marks)

Q.No.	Question	CLO	BTL	Marks
1.	Bring out significant differences between seed and grain.	1	3	3
2.	What is seed priming? What are the methods of seed priming?	1	2	3
3.	Differentiate between epigeal and hypogeal germination.	2	3	3
4.	What is the objective of seed purity analysis? Briefly, describe how it is carried out?	2	3	3
5.	Briefly describe methods to enhance seed longevity.	3	3	3
6.	What are international seed certification standards?	3	1	3

Section C

Attempt **ANY 2** of the following EAQs.

(2 x 7.5 = 15 Marks)

Q.No.	Question	CLO	BTL	Marks
1.	With the help of labelled diagrams, explain the structure and function of various structural components of monocotyledonous and dicotyledonous seed.	1	3	7.5
2.	Explain criteria of selection of suitable agro-climatic region, season, land selection and isolation distance with regards to varietal seed production.	2	4	7.5
3.	What is seed certification? Outline the objective of seed certification, classes of seed and DUS testing.	3	1	7.5

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