

Department of Botany
School of Chemical & Life Sciences
Jamia Hamdard, New Delhi-110062

B.Sc. (HONS WITH RESEARCH) / B.Sc. BOTANY
III SEMESTER EXAMINATION DECEMBER 2025

Paper Name: **Seed Science and Technology**Paper Code: **BBOSEC301**Time: **2 hours**Maximum Marks: **45**

Note: This paper has 3 sections A, B, and C.

Section A: Answer all the questions. **Section B:** Attempt any 5 out of 6.**Section C:** Attempt any 2 out of 3.

Abbreviations used:

CO-Course Outcomes

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-Bloom's Taxonomy Levels**

1- Remembering, 2-Understanding, 3-Applying, 4-Analyzing, 5-Evaluating, 6-Creating

SECTION A

Very Short Type Question (15 questions)

15 x 1 = 15 marks

Q.No.	Questions	Marks	CO	BTL
1	What is the function of hilum in seeds?	1	1	1
2	What are the major chemical components of seeds?	1	1	1
3	What is seed dormancy?	1	1	1
4	Define seed viability?	1	1	1
5	Name one factor affecting seed quality.	1	1	2
6	Why is seed priming useful?	1	1	1
7	Name one seed-borne disease?	1	1	1
8	What is breeder seed?	1	2	1
9	What is tetrazolium test used for?	1	2	2
10	Define recalcitrant seed?	1	2	1
11	Cite two main principles of seed storage.	1	3	1
12	What is DUS testing used for?	1	3	1
13	What does ISTA stand for?	1	3	1
14	Name one factor affecting seed longevity.	1	3	1
15	What is OECD seed certification?	1	3	1

Please turn over

SECTION B

Short Type Question. (Attempt any five out of six)

5 x 3 = 15 marks

Q.No.	Question	Marks	CO	BTL
1	What are the different types of seed dormancy? Explain the methods used to break seed dormancy.	3	1	4
2	Describe the genetic and environmental factors influencing seed quality.	3	1	3,4
3	Write in detail the stages of seed germination.	3	1	4
4	Discuss the structural and anatomical features of a typical monocotyledonous seed.	3	1	4
5	Describe the steps involved in seed harvesting and processing.	3	2	3,4
6	Explain the process of seed certification.	3	3	4

SECTION C

Long type Question (Attempt any two out of three)

2 x 7.5 = 15 marks

Q.No.	Question	Marks	CO	BTL
1	Write a note on national seed regulations and compliance in India.	7.5	3	4
2	Describe the principles, procedure, and significance of seed testing.	7.5	2	4
3	Explain seed processing and seed storage in detail.	7.5	2,3	4,5

END OF QUESTION PAPER