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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: VI (New)	Term	: II	Academic Year	: 2011-12
Course No.	: BOT 367	Title	: Principles of Seed Technology		
Credits	: 3 (2+1)				
Day & Date	: Monday, 23.04.2012	Time	: 09.00 to 12.00	Total Marks	: 80

- Note :
1. Solve **ANY EIGHT** questions from **SECTION "A"**.
 2. All questions from **SECTION "B"** are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 Define seed technology. State role and goals of seed technology in Agricultural development.
- Q.2 a) Define seed quality. What are the characters of good quality seed?
b) Explain the stages of seed multiplication.
- Q.3 Give the brief account of foundation seed production of Maize and Tomato on the following points.
- 1) Isolation distance
 - 2) Seed rate
 - 3) Spacing
 - 4) Seed Yield
- Q.4 Explain the causes of genetic deterioration of improved variety and the important safeguards.
- Q.5 Define seed certification. Enlist objects and explain the procedure of seed certification.
- Q.6 What is field inspection? Explain different objectives and the stages of field inspection.
- Q.7 Discuss important features of the seed Act, 1966 and explain sanctioning legislation.
- Q.8 What do you mean by seed treatment? Discuss various methods of treating the seed.
- Q.9 Write short notes on (Any Two)
- 1) Seed sampling
 - 2) Carry-over Seed
 - 3) Power of Seed Inspector
- Q.10 What is seed storage and types of storage stages? Give general principles of seed storage. Describe factors affecting longevity of seed in storage.

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SECTION "B"

Q.11 a) Fill in the blanks:

- 1) _____ year was declared as a seed year by FAO.
- 2) The size of foundation seed tag is _____ x _____ cm.
- 3) _____ of groundnut pod is essential preconditioning operation.
- 4) _____ type of germination is found in wheat.

b) State True or False.

- 1) Seed marketing is one of the vital components of seed technology.
- 2) Rogueing is the main responsibility of seed grower.
- 3) The genetic shift is more in autogamous crop varieties.
- 4) The number of seeds required for germination test are 500.

Q.12 a) Write full forms of following:

- | | | | |
|---------|---------|--------|--------|
| 1) MSCS | 2) ICIA | 3) SSC | 4) FAO |
|---------|---------|--------|--------|

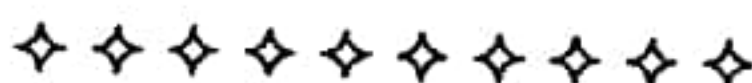
b) Match the pairs :

"A"

- 1) Hulling of rice
- 2) Shanti hybrid
- 3) Staggered sowing
- 4) ELISA test

"B"

- a) Pearl millet hybrid
- b) Seed health test
- c) Preconditioning operation
- d) Hybrid seed production



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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: VI (New)	Term	: II	Academic Year	: 2010-11
Course No.	: BOT 367	Title	: Principles of Seed Technology		
Credits	: 3 (2+1)				
Day & Date	: Friday, 29.04.2011	Time	: 09.00 to 12.00	Total Marks	: 80

- Note :
1. Solve ANY EIGHT questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

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SECTION "A"

What are the components of quality regulation of seed through Act? Enlist the statutory bodies established in India under Seed Act 1966 and describe protection of plant varieties and farmers right (PPVFR) Act 2001.

- a) Define seed technology. Explain its role and goals in Agricultural development.
- b) Define seed quality. What are the characters of good quality seed?

Define seed certification. What are fundamental concepts of the seed certification and describe the procedure of seed certification.

- Q.4 Write in detail the certified seed production of Sorghum hybrid CSH-9 along with information on ____.
- 1) Parentage and Year
 - 2) Source of seed
 - 3) Planting ratio F:M
 - 4) Isolation distance(m)
 - 5) Synchronization and staggering
 - 6) Field inspection
 - 7) Rogueing
 - 8) Harvesting and yield
- Q.5 Write short notes on :
- a) Seed bill 2004.
 - b) Seed treatment
- Q.6 Define seed production. Describe in detail the stages of seed production.
- Q.7 Differentiate between
- a) Seed and grain
 - b) Field and Seed inspector.
- Q.8 Define seed deterioration and variety deterioration. Describe the factors affecting deterioration and suggest the remedial measures for it.
- Q.9 What are basic requirements of seed marketing? Write in detail the structure of seed marketing.
- Q.10 What is seed storage and types of storage steps? Give general principles of seed storage. Describe factors affecting longevity of seed in storage.

(P.T.O.)

SECTION "B"

Q.11 Define the following terms.

- | | |
|-----------------------|--------------------|
| 1) Rouging | 2) Off types |
| 3) Isolation distance | 4) Seed health |
| 5) Viability | 6) Seed processing |
| 7) Seed | 8) Seed vigour |

Q.12 a) Write full forms of following.

- | | |
|--------|---------|
| 1) NSC | 2) STL |
| 3) FAO | 4) ISTA |

b) Match the pairs.

"A"

- 1) Germination
- 2) Official sample
- 3) Mutation
- 4) Inert matter

"B"

- a) Genetic deterioration
- b) Component of physical purity
- c) T.Z.Solution
- d) Seed inspector

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2012-13
Course No. : BOT 367	Title : Principles of Seed Technology	
Credits : 3 (2+1)		
Day & Date : Monday, 15.04.2013	Time : 09.00 to 12.00	Total Marks : 80

- Note :**
1. Solve ANY EIGHT questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 a) What is mean by Seed Technology?
b) Describe role and goals of Seed Technology.
- Q.2 a) Define seed dormancy. Enlist its types.
b) Describe the causes of seed dormancy and methods of breaking it.
- Q.3 a) What do you mean by deterioration of a variety?
b) What are the reasons of variety deterioration and solutions to overcome them?
- Q.4 In hybrid seed production using cytoplasmic genetic male sterility in sorghum, maize and bajra, explain following:
1) What do you mean by A,B and R line?
2) Differentiate between A line and B line and between B line and R line.
- Q.5 a) What is Seed Act? What is its importance?
b) Explain its applicability, sanctioning regulations and regulatory legislation.
- Q.6 Define seed marketing. Describe marketing structure and draw a figure illustrating central marketing cell.
- Q.7 a) Describe different stages of seed multiplication.
b) Explain field inspection and roguing.
- Q.8 Furnish the information on following points with regards to hybrid seed production of maize.
1) Seed source 2) Land and isolation requirement 3) Sowing
4) Roguing 5) Harvesting
- Q.9 a) Define seed treatment. Enlist different types of seed treatment.
b) Describe various seed treatment methods and significance.
- Q.10 Write short notes on (Any Two)
1) Seed drying
2) Central Seed Certification Board
3) Seed storage

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SECTION "B"

Q.11 Define the following terms.

- | | |
|-------------------|-------------------|
| 1) Roguing | 2) Germination |
| 3) Seed viability | 4) Breeder's seed |
| 5) Isolation | 6) Working sample |
| 7) Variety | 8) Seed lot |

Q.12 a) Expand the following abbreviations.

- | | |
|---------|----------|
| 1) ICAR | 2) NBPGR |
| 3) PBR | 4) ISTA |

b) Write isolation distance for certified seed of the following crop.

- | | |
|---------|------------|
| 1) Okra | 2) Soybean |
| 3) Gram | 4) Bajra |

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : VI (New)	Term : II	Academic Year : 2013-14
Course No. : BOT 367	Title : Principles of Seed Technology	
Credits : 3 (2+1)		
Day & Date : Saturday, 26.04.2014	Time : 09.00 to 12.00	Total Marks : 80

- Note :**
1. Solve **ANY EIGHT** questions from **SECTION "A"**.
 2. All questions from **SECTION "B"** are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 What is seed technology? Enlist different branches of seed technology and write in short the goals of seed technology.
- Q.2 Define seed certification. Write in brief about duties and responsibilities of seed certification officers.
- Q.3 Explain in short genetic causes of deterioration of improved variety and enlist the important safeguards for maintaining genetic purity during seed production.
- Q.4 What is seed marketing? What are the major components of seed marketing? Give the factors affecting seed marketing.
- Q.5 What is mean by seed processing? Describe its importance. Enlist various steps in seed processing
- Q.6 Explain the stages of seed multiplication.
- Q.7 Write short notes on (Any Two)
- 1) Seed Sampling
 - 2) Seed Health
 - 3) National Seed Programme
- Q.8 Distinguish between (Any Two)
- 1) Seed and grain
 - 2) Breeder's and foundation seed
 - 3) Official sample and working sample
- Q.9
- a) What is Seed Act? (2)
 - b) Write about applicability of Seed Act. (3)
 - c) What are the functions of central seed committee? (3)
- Q.10 Describe seed production of hybrid cotton on following points.
- 1) Isolation requirement
 - 2) Planting ratio
 - 3) Seed rate and spacing
 - 4) Crossing programme

SECTION "B"

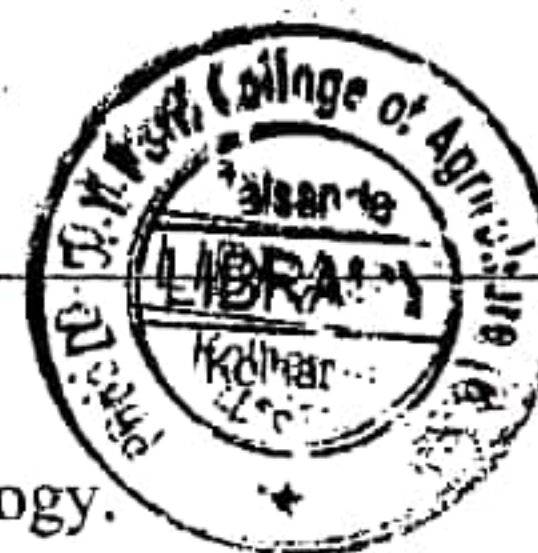
- Q.11 Define the following terms.
- 1) Seed
 - 2) Scarification
 - 3) Isolation
 - 4) Dead seed
 - 5) Pollen shedders
 - 6) Viability
 - 7) Germination
 - 8) Volunteer plant
- Q.12 Give full form of the following.
- 1) MSSC
 - 2) ISTA
 - 3) NSC
 - 4) ICAR
 - 5) NBPGR
 - 6) FAO
 - 7) STL
 - 8) ICRISAT

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B.Sc. (Agri.)

Note :

1. Solve **ANY EIGHT** questions from **SECTION "A"**.
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.



Q.1 What is Seed Technology? Explain role and goals of Seed Technology.

Q.2 Describe in brief about the hybrid seed production of Sorghum.

Q.3 Discuss in brief different methods of seed drying. Enlist advantages of seed drying.

Q.4 Explain in detail the objectives of establishment of National Seed Corporation.

Q.5 Define Seed certification and describe procedure of Seed certification.

Q.6 Describe in detail the basic requirement of Seed marketing.

Q.7 Describe in detail the stages of Seed multiplication / Seed classes.

Q.8 Discuss about maintenance of nucleus seed of pre released or newly released varieties.

Q.9 What is the purpose of passing Seed Act? Enlist the main features of Seed Act and explain Regulatory legislation.

10 Write short notes on (Any two).

1) Extraction of seeds in Tomato

2) Causes of varietal deterioration

3) Field Inspection

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11 Define the following terms.

1) A line	2) Detassel	3) Contaminants
4) Seed Dormancy	5) Grow out Test	6) Isolation Distance
7) Volunteer plants	8) Notified variety	

Q.12 A) Give full form of the following.

1) CSCB	2) NBPGR	3) ISST	4) SSCA
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B) Match the following pairs.

“B”

- 1) Inert matter
 - 2) Johnson grass
 - 3) Seed Act
 - 4) Nucleus seed
- a) Objectionable weed
 - b) 100 % pure
 - c) Component of physical purity
 - d) 1966

