

# PRINCIPLES OF SEED TECHNOLOGY

## Question Bank

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### Unit-I

2 Marks

1. Define seed and draw the seed structure with suitable diagrams.
2. Differentiate between seed and grain
3. What is seed production? Write the importance of seed
4. What is GOT? Write their importance in seed production.
5. Define rouging. Write their importance in seed production.
6. What is seed multiplication ratio (SMR)? state any two examples.
7. Prepare a short note on Seed replacement rate
8. Differentiate between certified seed and truthfully labelled seed.
9. Prepare a short note on breeder seed.
10. What is certified seed?

6 marks

1. Define seed. Describe the seed structure with suitable diagrams
2. Describe the causes and maintenance of varietal deterioration
3. Explain the maintenance of the genetic purity during seed production
4. Differentiate between Breeder seed, foundation seed and certified seed.

10 marks

1. What is seed quality? Explain the seed quality characters and discuss the significance of seed quality.
2. Define seed. Explain the different classes of seed including truthfully labelled seed.

### Unit-II

2 marks

1. Why GA<sub>3</sub> application is important for hybrid seed production of rice?
2. List out the name of any four rice hybrids.
3. What is supplementary pollination? Why supplementary pollination is essential for hybrid seed production?
4. Discuss the Pushtovoit varietal renovation model in sunflower.
5. What is seed certification? Write the purpose of seed certification.
6. What is isolation distance? Why isolation distance is essential for varietal/hybrid seed production?
7. What is off type? Why off types need to remove from the seed plot?
8. State the power of seed inspector.

6 marks

1. Explain the seed production techniques for rice varieties
2. Assess the foundation and certified seed production techniques in maize open pollinated varieties
3. Describe seed production techniques for sorghum varieties
4. Assess the Foundation and certified seed production technique for pearl millet varieties
5. Discuss the seed production techniques for rapeseed and mustard varieties
6. Evaluate the seed production techniques for sunflower open pollinated varieties.
7. Relate the seed production technique for Castor varieties
8. Describe seed production techniques for Cotton varieties
9. Explain seed production techniques for Redgram varieties
10. Explain the hybrid seed production techniques for Redgram.
11. Write the seed production technique for tomato
12. Explain the hybrid seed production techniques for Tomato
13. Describe the seed production technique for Chilli
14. Write the seed production technique for Bhendi
15. Explain the seed production technique for Onion
16. Write the seed production technique for Cucurbits

10 marks

1. Explain the commercial hybrid seed production technique for rice
2. Explain the commercial hybrid seed production technique for maize
3. Discuss the commercial hybrid seed production techniques for sorghum
4. Explain the commercial hybrid seed production techniques for pearl millet
5. Explain the seed production techniques for black gram and green gram.
6. Explain the hybrid seed production technique for sunflower
7. Explain the hybrid seed production techniques for cotton.
8. What you mean by seed certification? Discuss the seed certification procedures.

### Unit-III

2 marks

1. What is grow out test (GOT)
2. What is rDNA technology?
3. What is GM crop?
4. What is seed drying?
5. What is Equilibrium moisture content?
6. What is seed processing?
7. List out any four seed processing equipment's.

6 marks

1. Discuss the gist of seed (control) order 1983
2. Discuss the GOT test used for varietal identification
3. Prepare a not on DNA test for varietal identification
4. Asses the methods used for transgene insertion in crop plants
5. Write the application of GM technology in crop
6. Explain the different types of Seed dryers
7. Describe the seed processing equipment air screen cleaner working principle with suitable diagram
8. List out the any ten seed processing equipment's and their uses.

10 marks

1. Assess the GOT and DNA tests used for varietal identification
2. What is GM crop? Evaluate the most commonly used methods for transgene insertion in plant. Discuss the GM crop application and potential risks
3. Explain the methods of seed drying and write their advantages and disadvantages
4. Describe the planning and establishment of seed processing unit with suitable diagrams.
5. Evaluate the working principles of different seed processing equipment's.

#### Unit-IV

2 marks

1. What is seed treatment?
2. List out the name of seed treatment equipment's
3. What is seed storage?

6 marks

1. Explain the working principles of different types of seed treatment equipment
2. Discuss the pre-storage and mid storage seed treatments.
3. Discuss the factors affecting seed longevity in seed storage.
4. Prepare a note on seed packaging in relation to seed storage.
5. What is seed storage. Discuss the types of seed storage.

10 marks

1. Evaluate the pre-sowing, pre-storage and mid storge seed treatments
2. How to manage the insects during storage? Describe the storage warehouse and their maintenance

## Unit-V

2 marks

1. What is seed marketing?
2. What is the role of WTO?
3. What is IPR?
4. What is patent?
5. What is copyright?
6. What is seed pricing policy?
7. What is Plant breeder rights (PBRs)?
8. What is research exemption

6 marks

1. Discuss the different types of seed distribution systems
2. Discuss the seed marketing organization chart and seed marketing promotional activities.
3. Assess the Plant breeders right, farmers right, & research exemption

10 marks

1. What is seed pricing policy. Discuss the different pricing strategies and techniques. Write the overview of factors affecting the seed industry with suitable diagram.