

Micropropagation techniques Question Bank

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Unit-I

2 Marks

1. What is plant tissue culture?
2. Define totipotency.
3. Define morphogenesis.
4. Define embryogenesis.
5. Define explant.
6. Define re-differentiation.
7. Define de-differentiation.
8. Define callus.
9. Define caulogenesis.
10. Define rhizogenesis.

5 marks

1. State the advantages and disadvantages of plant tissue culture.
2. Write a short note on sterilization methods used in PTC.
3. Discuss the types of tissue culture media and list out the nutritional requirements for media preparation.

10 marks

1. Discuss the important history of plant tissue culture
2. A) Prepare a short note on totipotency.
B) Discuss the morphogenesis and embryogenesis.

Unit-II

2 Marks

1. Define micropropagation.
2. What is ovary culture or gynogenesis?
3. Define synthetic seeds.
4. Write down the advantages of synthetic seeds.

5 Marks

1. State the applications of micropropagation in PTC.
2. Prepare a short note on synthetic seeds.

10 marks

1. What is ovary culture? Describe procedure, importance and limitations of ovule culture.

2. A) Discuss the stages of micropropagation with suitable diagrams
- B) State the applications of micropropagation in tissue culture.

Unit-III

2 Marks

1. What is anther culture or androgenesis?
2. What is meristem culture?
3. List out the factors affecting anther culture.

6 Marks

1. Write down the applications of meristem culture.
2. Prepare a short note on callus culture.

10 marks

1. What is anther culture? Describe procedure, factors influencing, applications and limitations of anther culture.
2. A) Discuss the meristem culture technique with suitable diagrams.
B) Write down the application and limitation of meristem culture.

Unit-IV

2 Marks

1. What is somatic embryogenesis?
2. What is cell suspension culture?
3. Differentiate somatic hybridization and sexual hybridization.

6. Marks

1. Assess the somatic embryogenesis and their types
2. Prepare a short note on cell suspension culture

10 marks

3. Explain the somatic hybridization technique with applications
4. A) Discuss the protoplast isolation technique with suitable diagrams.
B) Write down the application and limitation of meristem culture.

Unit-V

2 marks

1. Define soma clonal variation?
2. What is cryopreservation?

6 marks

1. Discuss the cryopreservation with its applications.
2. Write the application of soma clonal variation.