

RAN-2103001106020005
B.Sc. (Biotechnology) (Sem.- VI) Examination March - 2026
Plant Biotechnology (BT-21) Old
Time: 2 Hours]
[Total Marks: 50

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book	Seat No.: Student's Signature
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- Q.1. Define Any Four:** (8)
- Totipotency & Organogenesis
 - De & Redifferentiation
 - Growth Regulators
 - Callus & Vitrification
 - Germplasm conservation
- Q.2. Attempt Any Two:** (14)
- Discuss in detail the preparation of Murashige and Skoog plant tissue culture medium.
 - Describe Cytodifferentiation and Organogenic differentiation
 - Design Plant tissue culture laboratory on the basis of laboratory requirements and techniques.
- Q.3. Explain in detail Any Two:** (14)
- What is micropropagation? Discuss details of different types of micropropagation technique.
 - What is *in vitro* embryogenesis? How somatic embryos are generated? Discuss its applications.
 - What is cryopreservation? Discuss the details of steps involved in this technique.
- Q.4. Attempt Any Two of the following:** (14)
- Write detailed note on Single Cell culture.
 - What is protoplast? Give the details of the methods of isolation and factors affecting the isolation of protoplast.
 - What are artificial seeds? Describe in detail the methods used for the production of synthetic seeds.