


**RAN-2603001306022001**

**B.Sc. Bio-Technology (NCF-NEP) (Semester-VI) Examination March - 2026**  
**BT-MJ-602 Plant Tissue Culture Techniques**

**Time: 1 Hours ]**
**[ Total Marks: 25**

|                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| <p><b>સૂચના : / Instructions</b></p> <p>(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવર્ણી પર અવશ્ય લખવી.<br/>         Fill up strictly the above details on your answer book.</p> | <p>Seat No.:</p> <table border="1" style="width: 100%; height: 30px; border-collapse: collapse;"> <tr> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table> <div style="border: 1px solid black; height: 80px; margin-top: 10px;"></div> <p align="center">Student's Signature</p> |  |  |  |  |  |  |
|                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |  |

- Q-1. Short question/One word Answer :– (Any 5 out of 6) 05**
- Explain the term totipotency.
  - Name the most commonly used basal medium in plant tissue culture.
  - Define: Indirect organogenesis.
  - What is Synthetic seed?
  - Define: Caulogenesis.
  - Define: Cryopreservation.
- Q-2. Brief Answer (Any 2 out of 3) 10**
- How can you Justify the Principles of Micropropagation and when you applied?
  - Mention the Phases & Types of Somatic embryogenesis.
  - Describe the principle and applications of plant tissue culture in agriculture.
- Q-3. Short note :– (Any 2 out of 3) 10**
- Analyze the role of protoplast fusion in crop improvement.
  - Synthetic Seed Technology.
  - Embryo culture and its role in plant breeding.