

QP CODE: 211330

Reg. No:.....

**Second Semester M. Pharm Degree Regular/Supplementary Examinations
October 2023**

M.Pharm (Pharmacognosy)

Paper I: Medicinal Plant Biotechnology (MPG 201T)

(Common for 2017 and 2019 Scheme)

Time: 3 Hours

Total Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary.*

Essays

(3x10=30)

1. Name enzymes of pharmaceutical interest. Give a detailed procedure for the production of any one enzymes by fermentation technique
2. Describe immobilization techniques required for secondary metabolite production using suitable agents
3. What is protoplast fusion. Give the procedure for the establishment of protoplast fusion. Add a note on its application in the production of secondary metabolites

Short Notes

(9x5=45)

4. Applications of fermentation technology in pharmacy
5. Hairy root culture and its applications
6. Methods of cloning of plant cells
7. Pilot scale reactors for culture of plant cells
8. Historical perspectives of plant biotechnology
9. Methods for identification, localization and sequencing of genes
10. Explain medicinal agents from biotechnological source
11. Basic requirements to establish tissue culture
12. Significance of transgenic plants
