

GUJARAT TECHNOLOGICAL UNIVERSITY
M.PHARM - SEMESTER-2 EXAMINATION – SUMMER-2019

Subject Code: MPG201T**Date: 27/05/2019****Subject Name: Medicinal Plant biotechnology****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	(a) Write a note on types of tissue culture techniques.	06
	(b) Write about importance of sterilization and methods to sterilize in tissue culture.	05
	(c) Write in detail about micro-propagation technique.	05
Q.2	(a) Write in detail about bioreactors for pilot and large scale cultures of plant cells for the production of secondary metabolites.	06
	(b) Discuss in detail elicitation in tissue culture.	05
	(c) Give various techniques of elicitation.	05
Q.3	(a) Write about different methods of cloning and its applications.	06
	(b) Give advantages and disadvantages of plant cell cloning.	05
	(c) Write a note on biotransformation in plant tissue culture.	05
Q.4	(a) Discuss historical perspectives and prospects for development of plant biotechnology as a source of medicinal agents.	06
	(b) Write a note on methods of gene transfer in tissue culture.	05
	(c) Define terms: Organogenesis, embryogenesis and synthetic seeds.	05
Q.5	(a) Write a detail note on immobilization technique and its applications.	06
	(b) Discuss use fermentation technology for the production of enzymes.	05
	(c) Write a note on application of PCR in plant genome analysis.	05
Q. 6	(a) Write in detail about production of ergot alkaloids using fermentation technology.	06
	(b) Write about method and advantages and applications of hairy root cultures.	05
	(c) Write in brief about methods to study RNA and RNA-Protein Complexes.	05
Q.7	(a) Define transgenic plants. Write in detail about methods to get transgenic plants.	06
	(b) Discuss advantages of transgenic plants.	05
	(c) Write a note on Protoplast fusion.	05
