Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy - SEMESTER– II• EXAMINATION – SUMMER -2018

Subject Code: MPG201T **Date: 14/05/2018**

Subject Name: Medicinal Plant Biotechnology

Time: 10:30AM TO 01:30PM **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 hairy root culture & Multiple shoot culture.	06
	(b)	Explain in brief organogenesis and embryogenesis.	05
	(c)	Explain in detail protoplast fusion.	05
Q.2	(a)	Explain well sterilization methods involved in plant tissue culture.	06
	(b)	What is micro propagation. Write a note on micro propagation of medicinal and aromatic plants.	05
	(c)	Explain in detail applications of plant tissue culture.	05
Q.3	(a)	What id genetic code? Explain its importance in plant biotechnology and explain its process.	06
	(b)	Explain in brief about structure and complicity of genome.	05
	(c)	Explain in detail DNA recombinant technology.	05
Q.4	(a)	What is plant biotechnology? Give its historical perspectives and prospects for development of plant biotechnology as a source of medicinal agents.	06
	(b)	Write a note on immobilization techniques of plant cells.	05
	(c)	Give applications of plant cell immobilization on metabolite production.	05
Q.5	(a)	Write down the advantages and disadvantages of plant cell cloning.	06
	(b)	What is cloning of plant cells? Describe well different methods of cloning with its applications.	05
	(c)	Explain well about secondary metabolism in tissue culture with emphasis on production of medicinal agents.	05
Q. 6	(a)	Write a note on transgenic plants.	06
	(b)	Write a note on biotransformation.	05
	(c)	Write a note on applications of PCR in plant genome analysis.	05
Q.7	(a)	Write in detail methods used in gene identification.	06
	(b)	Give in detail applications of fermentation technology.	05
	(c)	Explain well about production of ergot alkaloids.	05

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