

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – I • EXAMINATION – WINTER • 2014

Subject Code: 910205

Date: 09-01-2015

Subject Name: Biotechnology and Cultivation of Medicinal Plants

Time: 10.30 am - 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 in detail about protoplast culture.	06
	(b)	Write a note on medium used for tissue culture.	05
	(c)	Write a note on hairy root culture.	05
Q.2	(a)	Give Differences between Static culture/ Suspension culture.	06
	(b)	Write a note on electroporation and shotgun methods.	05
	(c)	Write a note on history of Plant tissue culture.	05
Q.3	(a)	Discuss in detail the factors affecting quality and safety of plant drugs.	06
	(b)	Write a note on importance of monographs of standards of medicinal plants.	05
	(c)	Write a comparative note on monographs of Indian Herbal Pharmacopeia and Ayurvedic Pharmacopeia of India.	05
Q.4	(a)	Write in detail about Cultivation of <i>Taxus baccata</i> .	06
	(b)	Discuss the factors to be considered for cultivation of <i>Boswellia serrata</i> .	05
	(c)	Write a note on cultivation of <i>Curcuma longa</i> .	05
Q.5	(a)	Write a note on WHO guidelines for standardization of herbal medicinal products.	06
	(b)	Write a note on transgenic plants.	05
	(c)	Write in detail about phytomics and metabolomics.	05
Q. 6	(a)	Discuss the methods of documentation and preservation of herbs.	06
	(b)	Write a note on adulteration and substitution.	05
	(c)	Write a note on cryopreservation.	05
Q.7	(a)	Write a note on bioreactors used in tissue culture techniques.	06
	(b)	Discuss immobilization.	05
	(c)	Give differences between Biotic Elicitors -Vs-Abiotic Elicitors.	05
