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: 1	0.30 am - 01.30 pm Total Marks: 80	
	Instruction	ons:	
	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	05
		Ayurvedic Pharmacopeia of India.	
Q.4	(a)	Write in detail about Cultivation of Taxus baccata.	06
	(b)	Discuss the factors to be considered for cultivation of <i>Boswelia 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	06
		products.	
	(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

Enrolment No.____

Seat No.: _____
