Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY M. PHARM. - SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 910205 Date: 11/01/20			013
Time	: 10.30	me: Biotechnology and Cultivation of Medicinal Plants ) am - 01.30 pm  Total Marks:	80
Instr	uction		
	2. Ma	tempt any five questions. ake suitable assumptions wherever necessary. gures to the right indicate full marks.	
Q.1	(a) (b)	Give role of elicitors in plant tissue culture.  Define and discuss in detail Phytomics and Metabolomics.	06 10
Q.2	(a)	Give limits of microbial contamination in herbal drugs and write methods for their detection.	06
	(b)	Write recent development in commercial cultivation of <i>Artemisia annua</i> .	05
(0	(c)	Discuss in detail cultivation and collection of Ginseng.	05
Q.3	(a)	Give brief note on WHO guide line for standardization of herbal drugs.	06
	(b) (c)	Write EMEA guidelines for herbal medicinal products. Discuss in detail lacunae of Ayurvedic pharmacopoeia.	05 05
Q.4	(a) (b)	Explain role of plant growth hormones in plant tissue culture.  Give brief note on artificial seed.	06 05
	(c)	Write brief essay on hairy root culture.	05
Q.5	(a)	What is biotransformation? Give its importance.	06
	(b) (c)	Give note on protoplast culture. Write brief account on protoplast fusion.	05 05
Q. 6	(a) (b)	List and discuss methods of detection for adulterants in herbal drugs. Enlist different nutrient media for plant tissue culture and give	06 05
	(c)	composition of any one media.  How detection of pesticides and insect infestation carried out in herbal drugs.	05
Q.7	(a) (b)	Give brief account on transgenic plants and write its importance. Discuss extrinsic and intrinsic factors affecting quality of plant drugs.	06 10

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