Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-I Regular / Remedial Examination January/February 2011

Subject code: 910205

Subject Name: Biotechnology and Cultivation of Medicinal Plants

Date: 03 /02 /2011 **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)**	Give the application of plant tissue culture for the production of secondary metabolite including examples.	**06**
	(b)	Write short notes on plant growth hormones in plant tissue culture.	**05**
	(c)	Write a short note on artificial seed.	**05**
Q.2	**(a)**	Give the composition of culture media used for plant tissue culture. Explain role of macro and micronutrients for the growth of plant.	**06**
	(b)	Describe the different methods for cultivation of plants.	**05**
	(c)	Explain the method of cultivation and recent development in cultivation of Taxol.	**05**
Q.3	**(a)**	Explain the method of cultivation and uses of Ginseng.	**06**
	(b)	Give the application of phytomics in herbal drug analysis.	**05**
	(c)	Write short notes on hairy root culture.	**05**
Q.4	**(a)**	Write a short note on transgenic plants.	**06**
	(b)	Explain role of elicitor in plant tissue culture.	**05**
	(c)	Enumerate factors affecting quality of plant drugs and explain effects of Allelopathy.	**05**
Q.5	**(a)**	Explain the WHO guide line for evaluation of toxic trace metals in whole or powdered drugs.	**06**
	(b)	Explain the importance of monograph and explain the comparison between BHP and API monograph.	**05**
	(c)	Describe ESCOP guideline for herbal medicine.	**05**
Q. 6	**(a)**	Define hyphenated techniques and explain its application in herbal drug analysis.	**06**
	(b)	Write a short note on polyploidy.	**05**
	(c)	Explain the methods for detection of microbial contamination in crude drugs.	**05**
Q.7	**(a)**	Explain the method of cultivation and pharmacological uses of *curcuma longa.*	**6**
	(b)	Write a short note on somatic hybridization.	**05**
	(c)	Explain the different methods of drying of crude drugs.	**05**

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