Seat No.:	Enrolment No.
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

Subj	ject I e: 10 uction 1. 2.	M. Pharm. – SEMESTER – I • EXAMINATION – WINTER • 2015 Code: 910205  Name: Biotechnology and Cultivation of Medicinal Plants 0.30 am - 01.30 pm  Total Marks: 80 ns: Attempt any five questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b) (c)	Define and give the application of plant tissue culture. Give the role of elicitors in plant tissue culture. Write a note on biotransformation.	06 05 05
Q.2	(a) (b) (c)	Give the application of Transgenic plants with examples. What are the differences between callus and organ culture? Write a note on micro propagation.	06 05 05
Q.3	(a) (b) (c)	Write a brief note on Metabolomics.  Explain in detail about cell suspension culture and its applications.  Write a note on Hairy root culture and its application.	06 05 05
Q.4	<ul><li>(a)</li><li>(b)</li><li>(c)</li></ul>	Discus the techniques involved in good cultivation, collection and processing of medicinal plants.  Explain the internal & external factors involved in the cultivation of medicinal plants.  Give the Quality control evaluation of herbal formulation as per W.H.O guidelines.	06 05 05
Q.5	(a) (b) (c)	Write a note on cultivation aspects of <i>Ginseng</i> . Write a note on cultivation aspects of <i>Boswelia serrata</i> . Write a note recent development in field of medicinal plant biotechnology?	06 05 05
Q. 6	(a) (b) (c)	Write detailed note on Indian herbal pharmacopoeia guideline for Herbal drugs. Give the comparative study quality evaluation of herbal products in Chinese and Japanese herbal Pharmacopoeia.  What are the importance and detection methods for heavy metals in medicinal plant materials?	06 05 05
Q.7	(a) (b) (c)	Give brief account on economical methods for documentation and Preservation of herbs.  Write a note on genetic factors affecting plant and their constituents.  Give brief account on economical methods for documentation and Preservation of herbs.	06 05 05

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