Seat No.:	Enrolmont No
Seal No	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. – SEMESTER – I • EXAMINATION – SUMMER • 2015 Subject Code: 910205 Date: 25-05-2015 **Subject Name: Biotechnology and Cultivation of Medicinal Plants** Time: 02:30 pm - 05:30 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** Enlist factors affecting the quality of medicinal plants. Discuss any 06 (a) two exogenous factors citing suitable examples. Write in detail safe and economic method for documentation and (b) 05 preservation of plant drugs. What are the sources of toxic trace materials and explain WHO (c) 05 guide lines for it's evaluation? 0.2 Explain phenomena of Polyploidy in plant drugs citing suitable **06** examples. (b) State limitations of different microbial contaminations in herbal drug 05 and briefly explain its' method of detection. What are the possibility of adulteration of plant drugs? Explain any 05 (c) two methods illustrating suitable examples. 06 0.3 Briefly explain different methods of cultivation of plants. (a) Discuss cultivation of *Taxus baccata*. Also add note on problems 05 (b) encountering its cultivation and their remedies. Describe cultivation and therapeutic importance of Ginseng. (c) 05 0.4 (a) Explain methods protoplast fusion and its scope in quality 06 improvement of medicinal plants. Write note on Biotransformation in medicinal plants. 05 (b) (c) Discuss micro-propagation of medicinal and aromatic plants. 05 0.5 Give salient features comparing between BHP and API monographs (a) 06 Enumerate salient features of ESCOP monograph (b) 05 Discuss significance of monographs of standards of medicinal plants (c) 05 and their various components. **O.** 6 (a) Write applications of Phytomics in herbal drug analysis. 06 Write detail note on "Plant Metabolomics" 05 (b) Discuss somatic hybridization and its scope in quality improvement (c) 05 of medicinal plants. 0.7 (a) Describe plant cell immobilization. Explain different methods for **06** preparation of immobilized cell culture

\*\*\*\*\*

(b)

(c)

note on its significance.

Write short note on Transgenic plants.

What is artificial seed? Explain, how it can be produced and add a

05

05