

GUJARAT TECHNOLOGICAL UNIVERSITY**M. Pharm. – SEMESTER– I • EXAMINATION – SUMMER-2016****Subject Code: 910205****Date: 30/05/2016****Subject Name: Biotechnology and cultivation Of Medicinal Plants****Time: 10:30 AM to 1:30 PM****Total Marks: 80****Instructions:**

- 1. Attempt any five questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

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| Q.1 | (a) Enumerate various factors affecting the quality of plant drugs. Discuss any one extrinsic factor illustrating suitable examples. 06 |
| | (b) Explain safe and economic method for documentation and preservation of plant drugs. 05 |
| | (c) Enumerate sources of toxic trace materials and explain the WHO guide lines for it's evaluation 05 |
| Q.2 | (a) Enumerate possible methods for adulteration of plant drugs. Explain any two methods illustrating suitable examples. 06 |
| | (b) What are the limitations of different microbial contaminations in herbal drugs and discuss methods of their detection in brief. 05 |
| | (c) Write short note on "Polyploidy". 05 |
| Q.3 | (a) Describe cultivation and therapeutic significance of Ginseng. 06 |
| | (b) Explain cultivation of Taxus baccata and add note on problems encounter in its cultivation and their remedies 05 |
| | (c) Describe different methods for cultivation. 05 |
| Q.4 | (a) Briefly discuss the protoplast fusion and its scope in quality improvement of medicinal plants. 06 |
| | (b) Explain micro-propagation of medicinal and aromatic plants 05 |
| | (c) Write short note of Biotransformation pertaining to plant drugs. 05 |
| Q.5 | (a) Describe various methods for preparation of immobilized cell culture. 06 |
| | (b) What is artificial seed ? Explain, how artificial seeds can be produced. What is the importance of artificial seeds.? 05 |
| | (c) Write short note on 'transgenic plants'. 05 |
| Q. 6 | (a) Discuss significance of monographs of standards of medicinal plants and their parts 06 |
| | (b) Give the salient features of ESCOP and its importance. 05 |
| | (c) Write comparison between BHP & API monographs. 05 |
| Q.7 | (a) Write applications of Phytomics in herbal drug analysis. 06 |
| | (b) Write short note on 'Metabolomics' 05 |
| | (c) Discuss somatic hybridization and its scope in the quality improvement of medicinal plants. 05 |
