

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

**Subject code: 260006**

**Date: 02/12/2011**

**Subject Name: Pharmacognosy-V (Plant Bio-technology)**

**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.

- Q.1** (a) Discuss Micro & Macronutrients requirements of plant cells in culture medium. **06**
- (b) Give application of Plant Tissue Culture for production of secondary plant metabolites with examples. **05**
- (c) Write notes on Plant Cell immobilization. **05**
- Q.2** (a) Describe the chemical constituents and traditional uses of Shatavari in detail. **06**
- (b) Differentiate different varieties of Chitrak morphologically, microscopically & Chemically. **05**
- (c) Write brief notes on Shilajit. **05**
- Q.3** (a) Name a bark drug belonging to the family Combretaceae. Give its source, constituents, pharmacological actions and uses. **06**
- (b) Illustrate the important microscopic features of Galo stem and add a note on its market formulations. **05**
- (c) Describe the chemistry of Adusi. What new uses have been found for these active constituents?. **05**
- Q.4** (a) Describe a memory enhancer drug described in traditional text & included in your syllabus. **06**
- (b) Write source, chemical constituents and formulations of Apamarga. **05**
- (c) Explain sterilizing agents used in Plant Tissues culture techniques. **05**
- Q.5** (a) Define terpenoids. Classify terpenoids citing suitable examples. **06**
- (b) Write Chemical structure, therapeutic & pharmacological activity of  
(i) Carvone (ii) Pinene (iii) Menthone **05**
- (c) Write short note on Vitamin -A. **05**
- Q.6** (a) Mention naturally occurring antioxidants. Brief their sources & pharmacological actions. **06**
- (b) Write detailed notes on PUFA (Poly Unsaturated Fatty Acids) **05**
- (c) Explain terms Prebiotics and Probiotics illustrating suitable examples. **05**
- Q.7** (a) Explain Acetate-mevalonate pathway with detailed chemistry. **06**
- (b) Write short notes on beta - amylin. **05**
- (c) Explain biogenesis & Pharmacological activity of Geraniol. **05**

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