

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.

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|------------|-----|---|-----------|
| 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) | Decscribe 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) | | 06 |
| | | Explain Acetate-mevalonate pathway with detailed chemistry. | |
| | (b) | Write short notes on beta – amyrin. | 05 |
| | (c) | | 05 |
| | | Explain biogenesis & Pharmacological activity of Geraniol. | |
