

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – VI • EXAMINATION – SUMMER • 2014

Subject Code: 260006

Date: 02-06-2014

Subject Name: Pharmacognosy – V (Plant Bio Technology)

Time: 10:30 am - 01:30 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) Define plant tissue culture.
Discuss general composition of media used in plant tissue culture. | 06 |
| | (b) Write schematic diagram showing isolation, culture and regeneration of young plant from leaf protoplast. | 05 |
| | (c) Write application of plant tissue culture with suitable example. | 05 |
| Q.2 | (a) Define and classify terpenoids.
Discuss its properties and occurrence with suitable example. | 06 |
| | (b) Discuss mevalonate pathway for biosynthesis of iso pentenyl diphosphate. | 05 |
| | (c) Write schematically conversion of iso pentenyl diphosphate to terpenoids. | 05 |
| Q.3 | (a) Define nutraceutical, antioxidant and probiotic with suitable example. | 06 |
| | (b) Write brief note on dietary fibre with suitable example. | 05 |
| | (c) Describe herbs used as food or medicine with suitable example and its regulation regarding herb as food. | 05 |
| Q.4 | (a) Write biological source, geographical source, chemical constituents with chemical structure and uses of Dhamaso. | 06 |
| | (b) Write biological source, geographical source, chemical constituents with chemical structure and uses of Chakramadu. | 05 |
| | (c) Write biological source, geographical source, chemical constituents with chemical structure and uses of Shatavari. | 05 |
| Q.5 | (a) Write schematically biogenesis of β -Amyrin with chemical structure. | 06 |
| | (b) Discuss schematically biogenesis of Menthol with chemical structure. | 05 |
| | (c) Write schematically biogenesis of Vitamin A with chemical structure. | 05 |
| Q. 6 | (a) Describe briefly basic requirement for plant tissue culture laboratory. | 06 |
| | (b) Discuss briefly general procedure involved in plant tissue culture. | 05 |
| | (c) Discuss various types of culture used in plant tissue technology with suitable example | 05 |
| Q.7 | (a) Describe microscopic characteristic of Bhiringraj leaf and draw its well labeled diagram of transverse section along with its main active chemical constituents and uses. | 06 |
| | (b) Describe microscopic characteristic of Chitrak root and draw its well labeled diagram of transverse section along with its main active chemical constituents and uses. | 05 |
| | (c) Describe microscopic characteristic of Amla fruits and draw its well labeled diagram of transverse section along with its main active chemical constituents and uses. | 05 |
