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.**

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 neutraceutical, 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 Bhringraj 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**

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