

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER- 5 EXAMINATION – WINTER -2019**

**Subject Code: 2250006**
**Date: 28-11-2019**
**Subject Name: Pharmacognosy-III**
**Time: 02:30 PM TO 05:30 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 and classify the glycosides on basis of aglycone portion along with appropriate examples.   | 06 |
|      | (b) | Explain the chemistry, chemical test properties & uses of anthraquinone glycoside.   | 05 |
|      | (c) | Differentiate between <i>cardenolide</i> and <i>bufadienolide</i> with identification test example.  | 05 |
| Q.2  | (a) | Explain the properties of glycoside, write Extraction and isolation method of glycoside by stas otto method.   | 06 |
|      | (b) | Interpret interrelation between hydrolysis of primary & secondary glycosides found in <i>Digitalis purpurea</i> & <i>Digitalis Lanata</i> with Mechanism of action of digitalis.                                   | 05 |
|      | (c) | Elaborate the detail pharmacognosy of squill and Satmuli.  | 05 |
| Q.3  | (a) | Explain the chemistry, chemical test and Properties and uses of tetra & pentacyclic with example.  | 06 |
|      | (b) | Elaborate the detail pharmacognosy of drug known as Mulethi & Manroot.   | 05 |
|      | (c) | Define following term (i) Explants (ii) Totipotency (iii) Callus tissue (iv) Organogenesis (V) Cloning and clone.  | 05 |
| Q.4  | (a) | Define PTC, Write growth principle, Various steps and objective of plant tissue culture.   | 06 |
|      | (b) | Explain different type of cell & organ cultures used in PTC along with objective & applications and example.   | 05 |
|      | (c) | What is coumarine glycoside? Write Pharmacognosy of Psoralea & Bhangro.  | 05 |
| Q.5  | (a) | Comment on the following statements (1) Bitter compound taken before meal (2) <i>Cascarabark</i> is used after one year of its storage (3) Aloe give Borntragers test while seen a modified Borntrager's test give | 06 |
|      | (b) | Write on Cyanogenic glycosides & Elaborate the detail Pharmacognosy of Linum seed  | 05 |
|      | (c) | Draw the structure of the following. (i) Sennoside A & B (ii) Furanocoumarin (iii) Diosgenin (iv) Digitoxigenin (v) Glycyrrhithinic acid   | 05 |
| Q. 6 | (a) | Intricate ideal Design of PTC Laboratory with basic requirements & techniques used in PTC laboratory.  | 06 |
|      | (b) | Write the difference between (i) Black & White mustard (ii) Alexandrian Senna and Indian Senna   | 05 |
|      | (c) | Write the Pharmacognosy of any two antidiabetic drug included in your Syllabus   | 05 |

- Q.7**
- (a) Enlist type of Nutrients medias used in PTC with ideal properties. Discuss importance of Micro & Macronutrients & trace elemental requirements in nutrients media. **06**
  - (b) Explain the properties & uses of bitter glycoside with detail pharamcognosy of chirata & kalmegh. **05**
  - (c) **Explain following chemical test with one name of crude which gives test positives:** **05**  
(i) Sodium hydroxide filter paper (ii) Grignard's test (iii) Libermann's & Buchard test. (iv) Keller–killian test (v) Shinoda test

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