

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM - SEMESTER- 8 EXAMINATION – WINTER -2019**

**Subject Code: 2280014****Date: 27-11-2019****Subject Name: Commerce of herbs and Phytoconstituents****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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|------------|---|-----------|
| <b>Q.1</b> | (a) Describe different methods of isolation of Curcumin and $\delta$ -tubocurarine.                 | <b>06</b> |
|            | (b) Explain isolation and evaluation of Morphine.   | <b>05</b> |
|            | (c) Discuss constraints to the development of trade of medicinal plants.                            | <b>05</b> |
| <b>Q.2</b> | (a) Discuss contribution of Boswellia, Aloe and Ipecac in world wide trade.                         | <b>06</b> |
|            | (b) Write note on production and supply of herbal drug in herbal drug industry.                     | <b>05</b> |
|            | (c) Describe patents and copyright of herbal drug.  | <b>05</b> |
| <b>Q.3</b> | (a) Describe constraints to the development of trade specially to least developed countries (LDCs). | <b>06</b> |
|            | (b) Describe modern quality control system for medicinal plants in herbal drug industry.            | <b>05</b> |
|            | (c) Write note on medicinal plant based industries in ISM.  | <b>05</b> |
| <b>Q.4</b> | (a) Explain modern methods for extraction of phytochemical from the herbal drugs.                   | <b>06</b> |
|            | (b) Discuss license and registration process required for herbal drug industry in India.            | <b>05</b> |
|            | (c) Explain the working of industrial staff members.  | <b>05</b> |
| <b>Q.5</b> | (a) How to isolate, identify and analyze the Taxol and Papain?                                      | <b>06</b> |
|            | (b) Describe in brief the import and export of herbal drugs.  | <b>05</b> |
|            | (c) Write a short note on cultivation of medicinal plants.  | <b>05</b> |
| <b>Q.6</b> | (a) Outline WHO guidelines on good agriculture and collection practices for medicinal plants.       | <b>06</b> |
|            | (b) Write a short note on herbal wealth of India.   | <b>05</b> |
|            | (c) Describe trade structure of medicinal plants in developing countries.                           | <b>05</b> |
| <b>Q.7</b> | (a) Write a short note on drug registration process for import export.                              | <b>06</b> |
|            | (b) Differentiate between wild harvesting and cultivated material.                                  | <b>05</b> |
|            | (c) Give the industrial application of vinca alkaloids and artemisin.                               | <b>05</b> |

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