

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

**Subject Code: 2280009****Date: 27-11-2019****Subject Name: Food Analysis****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) Define chromatography. Explain HPLC. How it is useful in food analysis?                              | <b>06</b> |
|             | (b) Explain TLC method for analysis of food and additives.   | <b>05</b> |
|             | (c) Describe genetically modified foods.   | <b>05</b> |
| <b>Q.2</b>  | (a) Explain Beer- Lambert law. How the spectroscopic techniques are useful in food analysis.             | <b>06</b> |
|             | (b) Write a note on effects and control of flavours in food products.                                    | <b>05</b> |
|             | (c) Write note on SFC method.  | <b>05</b> |
| <b>Q.3</b>  | (a) Write in brief about paper electrophoresis and its importance in food analysis.                      | <b>06</b> |
|             | (b) Explain the method of determination of ash.  | <b>05</b> |
|             | (c) Describe Stability studies of food products.   | <b>05</b> |
| <b>Q.4</b>  | (a) Describe the various methods for analyzing sugar and starch products.                                | <b>06</b> |
|             | (b) Write short note on gel electrophoresis. Give its applications.                                      | <b>05</b> |
|             | (c) Explain gradient-centrifugation technique and their applications.                                    | <b>05</b> |
| <b>Q.5</b>  | (a) Explain techniques used to determine spices and herbs in food products.                              | <b>06</b> |
|             | (b) Write note on immunoassays.  | <b>05</b> |
|             | (c) Explain mass spectroscopy and its applications in food analysis.                                     | <b>05</b> |
| <b>Q. 6</b> | (a) Write short note on detection of microbial contaminants in food sample.                              | <b>06</b> |
|             | (b) Explain Legislation for food.  | <b>05</b> |
|             | (c) Describe contaminants in food material and food additives.   | <b>05</b> |
| <b>Q.7</b>  | (a) Write analysis of chemical constituents, their characterization and significance of reducing sugars. | <b>06</b> |
|             | (b) Explain detection of pesticides and insect infestation in food products.                             | <b>05</b> |
|             | (c) Describe standards for food additives.   | <b>05</b> |

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