

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. – SEMESTER III– • EXAMINATION – SUMMER -2018****Subject Code:2230002****Date: 02/05/2018****Subject Name: Pharmaceutical Engineering****Time: 02:30PM TO 05:30PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- |            |   |           |
|------------|---|-----------|
| <b>Q.1</b> | (a) Classify manometer. Discuss U-tube manometer in detail  | <b>06</b> |
|            | (b) Define tie substance, heat capacity and steady state.   | <b>05</b> |
|            | (c) Discuss importance of stoichiometry in pharmacy.  | <b>05</b> |
| <b>Q.2</b> | (a) What are applications of pharmaceutical engineering?  | <b>06</b> |
|            | (b) Write a note on analysis of fuels.  | <b>05</b> |
|            | (c) Give a brief note on types of pressures and their measurement.                                | <b>05</b> |
| <b>Q.3</b> | (a) Write a note on gas laws with their assumptions.  | <b>06</b> |
|            | (b) Write a note on belt conveyer.  | <b>05</b> |
|            | (c) Discuss different mechanisms of fluid flow.   | <b>05</b> |
| <b>Q.4</b> | (a) Classify flow meters. Describe any one with labelled diagram.                                 | <b>06</b> |
|            | (b) What are different means of interplant and intraplant transportation?                         | <b>05</b> |
|            | (c) Enlist types of joints. Write functions of fitting and joints for pipe.                       | <b>05</b> |
| <b>Q.5</b> | (a) Write a note on steam as a heating medium.  | <b>06</b> |
|            | (b) Discuss different mechanisms of heat transfer.  | <b>05</b> |
|            | (c) Discuss theories of mass transfer.  | <b>05</b> |
| <b>Q.6</b> | (a) Classify heat exchangers. Write a note on any one of it.                                      | <b>06</b> |
|            | (b) Write a brief note on physical factors affecting selection of material of plant construction. | <b>05</b> |
|            | (c) Discuss electrochemical theory of corrosion.  | <b>05</b> |
| <b>Q.7</b> | (a) Classify pumps and discuss reciprocating positive displacement pumps.                         | <b>06</b> |
|            | (b) Enlist factors affecting storage conditions and techniques used for storage of material.      | <b>05</b> |
|            | (c) Write a note on energy losses in fluid flow.  | <b>05</b> |

\*\*\*\*\*