Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**ME - SEMESTER IV (NEW) – EXAMINATION – SUMMER - 2017**

**Subject Code: 2740304** **Date: 03/05/2017**

**Subject Name: Process control and Optimization**

**Time:02:30PM-05:00PM** **Total Marks: 70**

**Instructions:**

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

| | | | |
|---|---|---|---|
| **Q.1** | | Explain the burner management system in detail. | **14** |
| **Q.2** | **(a)** | Discuss about batch history management | **07** |
| | **(b)** | Discuss about batch control standards | **07** |
| | | **or** | |
| | **(b)** | Discuss about control system selection for batch automation | **07** |
| **Q.3** | | Discuss about boiler pressure and firing rate control in detail. | **14** |
| | | **or** | |
| **Q.3** | | Discuss about feed forward control scheme for load demand and stability for boiler | **14** |
| **Q.4** | | Discuss about Unit operations controller with example of reactor | |
| | | or | |
| **Q.4** | | Explore Constraint Optimization for Maximized Production in chemical reactor in detail. | **14** |
| **Q.5** | | Discuss about Feed Controllers of Distillation Column. | **14** |
| | | **or** | |
| **Q.5** | | Discuss about Pressure Control of Distillation Column | **14** |

**********