

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC- SEMESTER V- • EXAMINATION – SUMMER - 2016

Subject Code: X50901**Date: 22/11/2016****Subject Name: Electrical Power Utilization****Time: 10:30 AM to 1:00 PM****Total Marks: 70****Instructions:**

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

- Q.1** (a) Give advantages of electrical heating. also mention types of heating **07**
 (b) Explain design considerations of heating element **07**
- Q.2** (a) State and Explain the laws of Illumination **07**
 (b) State Faraday's laws of electrolysis. Explain power supply for electrolytic processes **07**
- OR**
- (b) What is electroplating? Explain factors governing electroplating. Write two applications of electroplating **07**
- Q.3** (a) What are the causes of low power factor also explain disadvantages of low power factor **07**
 (b) Explain two part tariff and power factor tariff **07**
- OR**
- Q.3** (a) Explain power factor improvement methods **07**
 (b) Explain economic choice of equipment with suitable example **07**
- Q.4** (a) What is the resistance welding. Explain any one resistance welding with necessary diagram **07**
 (b) Explain sinking fund method **07**
- OR**
- Q.4** (a) Explain Ajax wyatt type vertical furnace **07**
 (b) Explain diesel power plant **07**
- Q.5** (a) Explain sodium vapour lamp **07**
 (b) Explain high frequency eddy current heating **07**
- OR**
- Q.5** (a) Discuss various factors to be considered while designing any lighting scheme **07**
 (b) Define following terms: **07**
 (1) connected load (2) maximum demand (3) load factor
 (4) diversity factor
