

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC - SEMESTER – V • EXAMINATION – WINTER 2012

Subject code: X 50901**Date: 11/01/2013****Subject Name: Electrical Power Utilization****Time: 02.30 pm - 05.00 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) Explain design considerations of heating element. **07**
(b) Explain principle of arc welding with diagram. **07**
- Q.2** (a) Explain spot welding with diagram. **07**
(b) Compare D.C. welding with A.C. welding. **07**
- OR**
- (b) Explain dielectric heating with its principle. **07**
- Q.3** (a) State and explain law's of illumination. **07**
(b) Explain Indirect core type Induction furnace. **07**
- OR**
- Q.3** (a) Explain polar curve. Draw the polar curve for different type of light Fixture. **07**
(b) Explain the working of Mercury vapour lamp with circuit diagram. **07**
- Q.4** (a) What is depreciation? Explain the method to find out the depreciation by sinking fund method. **07**
(b) Explain methods to improve power factor. **07**
- OR**
- Q.4** (a) Explain following terms : **07**
1) Diversity factor 2) Load factor 3) Demand factor 4) Plant Utilization factor.
- Q.4** (b) Explain two part tariff and power factor tariff. **07**
- Q.5** (a) Explain use of off peak loads. **07**
(b) Explain economic choice of equipment with suitable example. **07**
- OR**
- Q.5** (a) Explain eddy current heating with diagram. **07**
(b) Explain Reflection and Refraction . **07**
