Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC SEMESTER V- EXAMINATION - SUMMER 2017

Date: 29/4/2017

Subject Name: Electrical Power Utilization

Time: 02.30PM to 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 (a) (b)	Discuss advantages of electric heating over other methods of heating. Classify electric heating methods and explain resistance heating.	07 07
Q.	2 (a) (b)	Explain dielectric heating. Also write its advantages and applications. Explain different causes of failure of heating elements. OR	07 07
	(b)	A distribution transformer costs Rs. 65,000 and has a useful life of 15 years. If the salvage value is Rs. 5000 and rate of annual compound interest is 15 %. Calculate the amount to be saved annually for replacement of the transformer after the end of 15 years by sinking fund method.	07
Q.3	_(b)	State the types of welding and Explain principle of arc welding with diagram. Compare resistance welding and arc welding. OR	07 07
Q.3	(a)	Explain following with respect to illumination: (I) Lux. (II) Candle power. (III) Solid angle.	07
	(b)	A 250 volt lamp has a total flux of 3000 lumens and takes a current of 0.8 amp. Calculate: (I) Lumens / watt (II) (II) M.S.C.P. / watt.	07
Q.4	(a) · (b)	(2) Load factor (3) Demand factor Explain two part tariff and power factor tariff	07
Q.4	(a) (b)	Write down a note on "Extraction and refining of metals" by electrolysis. What is electro deposition? Which are the first	07 07 07
Q.5	(a) (b)	Explain methods to improve power factor. Explain the laws of illumination.	07 07 07
Q.5	(a) (b)	WILLE Short note on eddy current and bustoned in the	07 07
