

GUJARAT TECHNOLOGICAL UNIVERSITY**ME - SEMESTER– II (Old course)• REMEDIAL EXAMINATION – SUMMER 2015****Subject Code: 1720711****Date:16/05/2015****Subject Name: Electrical Power Utilization****Time: 02:30 pm to 5:00 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) What is resistance welding? Explain any one resistance welding with necessary diagrams **07**
- (b) Explain Ajax wyatt type vertical furnace. Give some applications of induction heating **07**
- Q.2** (a) Give advantages & disadvantages of electrical welding. **07**
- (b) Explain dielectric heating with its applications. **07**
- OR**
- (b) Explain design consideration of heating element. **07**
- Q.3** (a) Explain following terms. **07**
1) Crest Speed 2) Average Speed 3) Scheduled Speed 4) Acceleration **07**
- (b) Explain various types of braking used in traction system. **07**
- OR**
- Q.3** (a) Explain various speed time curve for traction system. **07**
Derive the relevant formulas of Quadrilateral speed-time curve of a traction. **07**
- (b) Explain typical speed time curve for sub urban area. **07**
- Q.4** (a) Explain following terms. **07**
1) Light 2) Candle Power 3) Luminous Flux 4) M.H.C.P
- (b) What is flood lighting? Explain how it is provided and its design consideration. **07**
- OR**
- Q.4** (a) State and explain the laws of illumination. **07**
- (b) Explain the terms **07**
(1) Illumination (2) Luminous intensity (3) Lumen (4) Brightness
- Q.5** (a) Explain air-conditioner with suitable circuit diagram. **07**
- (b) Explain electro deposition processes and discuss various factors governing the electro deposition processes **07**
- OR**
- Q.5** (a) Explain sodium vapour lamp with circuit diagram. **07**
- (b) Explain electric circuit of refrigerator. **07**