

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) – EXAMINATION – SUMMER 2019****Subject Code:2162407****Date:14/05/2019****Subject Name:Electrical Power Utilization & Traction****Time:10:30 AM TO 01:00 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) Classify electric drives. **03**
(b) Draw & discuss block diagram of electric drive. **04**
(c) Write a brief note on Selection of drive for applications of Textile mill, paper mill, steel mill, printing press, crane, lift. **07**
- Q.2** (a) State Specifications of squirrel cage and slip ring induction motors. **03**
(b) Write a short note on visibility spectrum curve of relative sensitivity of human eye. **04**
(c) Explain construction and working of incandescent lamps their characteristics. **07**
- OR
- (c) Explain construction and working of discharge lamps and their characteristics. **07**
- Q.3** (a) State advantages of electrical heating. **03**
(b) Give classification of electrical heating. **04**
(c) Discuss dielectric heating and its applications, **07**
- OR
- Q.3** (a) State advantages of electric welding. **03**
(b) Give comparison between AC and DC arc welding. **04**
(c) Explain in detail projection seam and butt, welding. **07**
- Q.4** (a) Explain principle of arc production. **03**
(b) Describe principle of galvanizing and its application. **04**
(c) Explain process of electroplating. **07**
- OR
- Q.4** (a) Define: Illumination & Luminous flux. **03**
(b) Discuss the role of Air Conditioning in our day to day life. **04**
(c) Explain process of electro-deposition - clearing **07**
- Q.5** (a) Describe working of AC series motors. **03**
(b) Description of Electrical circuit used in refrigerator. **04**
(c) Discuss various types of motors used in traction. **07**
- OR
- Q.5** (a) Write a short note on third rail system of current collection. **03**
(b) Write a short note on : Metro railways **04**
(c) Explain clearly speed time curves for different services. **07**
