

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 150203****Date: 17-01-2013****Subject Name: Power electronics and control engineering****Time: 02:30 pm to 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 successive approximation type A/D Converter with neat diagram. **07**
(b) Explain unijunction transistor with application. **07**

- Q.2** (a) Explain the operation of dielectric heating and list the advantages of dielectric heating. **07**
(b) Explain magnetic energy storage welder and capacitor energy storage welder. **07**

OR

- (b) Explain ignitron contactor and also state merits and limitation of ignitron. **07**

- Q.3** (a) Explain memory organization in detail. **07**
(b) Explain instruction classification in 8085. **07**

OR

- Q.3** (a) Explain programmable logic controller in detail. **07**
(b) Explain thermocouple and strain gauge in brief. **07**

- Q.4** (a) Explain Silicon controlled rectifier with two transistor model. **07**
(b) Write a program to arrange an array of data in ascending order in 8085. **07**

OR

- Q.4** (a) Explain pin diagram of 8085 microprocessor. **07**
Q.4 (b) Write a program to find the largest number in array of data using 8085 instructions. **07**

- Q.5** (a) Explain DIAC and TRIAC. **07**
(b) Explain input and output interfacing in 8085. **07**

OR

- Q.5** (a) Explain leading and traveling wave tube briefly. **07**
(b) Explain high frequency power source for induction heating. **07**
