

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – SUMMER • 2014****Subject Code: 172403****Date: 05-06-2014****Subject Name: Power Processing Circuits-II****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 the working of cascade H-Bridge Inverter. **07**
(b) Explain AC Voltage control by Integral Cycle Control Method. **07**
- Q.2** (a) Enlist the disadvantage of controlled rectifier. Discuss on active front – end rectifier. Enumerate the advantages and applications of active front-end rectifier also. **07**
(b) Differentiate between a static switch and an electro-mechanical switch. Explain working of three phase static switch with neat diagram. **07**
- OR**
- (b) Write a detailed technical note on Electronic Tap Changer. **07**
- Q.3** (a) Describe three phase inverter with circuit diagram having 120 ° conduction modes and draw various waveforms. **07**
(b) Explain ZCS. **07**
- OR**
- Q.3** (a) Write a comprehensive note on parallel resonant pulse inverter. **07**
(b) Explain ZVS. **07**
- Q.4** (a) Explain load commutated Inverter. **07**
(b) Classify multilevel Inverter. Explain the concept and principle of multilevel inverter specifying its applications. **07**
- OR**
- Q.4** (a) Explain Full-bridge Inverter. **07**
(b) Distinguish between VSI and CSI. **07**
- Q.5** (a) Explain the voltage control technique of inverter by PWM. **07**
(b) Explain the voltage control technique of inverter by output side control method. **07**
- OR**
- Q.5** (a) Explain battery charging process and Ampere-Hour calculation for battery. **07**
(b) Why battery is used? Explain constant current and trickle charging methods for battery. **07**
