

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE – SEMESTER – VI (NEW).EXAMINATION – WINTER 2016**

**Subject Code: 2162409****Date: 25/10/2016****Subject Name: Power Electronic Circuits – II****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) Write advantages and applications of an active front-end (AFE) rectifiers. **07**  
(b) Explain AC Voltage Regulators. **07**
- Q.2** (a) Explain single phase voltage controllers with RL load. **07**  
(b) Explain working of single phase voltage controllers with RL load. **07**
- OR**
- (b) Write & explain about the principle operation of quasi-square wave inverter. **07**
- Q.3** (a) Write different methods of inverter control and explain any one in detail. **07**  
(b) Write about modulation techniques and Explain sinusoidal PWM. **07**
- OR**
- Q.3** (a) Explain working of single phase full bridge inverter with R load. **07**  
(b) Write a short note on three phase inverter with 120° conduction mode. **07**
- Q.4** (a) Explain the principle of operation of resonant converters. **07**  
(b) Write a short note on ZVS resonant inverter. **07**
- OR**
- Q.4** (a) Explain working of Current Source Inverter. **07**  
(b) Write a short note on ZCS resonant inverter. **07**
- Q.5** (a) Explain working of McMurray inverter. **07**  
(b) Write merits and demerits of a multilevel inverter. **07**
- OR**
- Q.5** (a) Explain principal of McMurray Bedford Inverter in detail. **07**  
(b) Explain working of diode clamped multilevel inverter. **07**

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