

Total No. of Questions : 6]

SEAT No. :

P133

[Total No. of Pages : 2

Oct/BE/Insem - 58
B.E. (Electronics)
Advanced Power Electronics
(2012 Pattern) (Semester - I)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Answer three questions - Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) *Figures to the right indicate full marks.*
- 3) *Use of pocket calculator is allowed.*
- 4) *Assume Suitable data if necessary.*

Q1) a) What is dual converter? Explain the need of dual converter. Explain block diagram of dual converter? [6]

b) What is power factor? Explain the need of power factor. In which circuit required to improve power factor? [4]

OR

Q2) a) Explain the EAC method of power factor improvement with the help of circuit diagram, waveform & mathematical analysis. [6]

b) Compare EAC, SAC, PAC, PWM [4]

Q3) a) Explain power factor conditioning of diode rectifier. [4]

b) What is converter? Explain with diagram & waveforms working of 12 pulse converter. Comment on Power Factor. [6]

OR

Q4) a) Explain EMI and Line power quality problems of thyristor converters. [4]

b) Explain 3 Φ IGBT based PWM rectifier with the help of circuit diagram and waveform. [6]

P.T.O.

- Q5) a)** Explain features, advantages, disadvantages of diode clamped inverter. **[4]**
- b)** Explain 1 Φ to 1 Φ step up cycloconverter with the help of circuit diagram and waveforms. **[6]**

OR

- Q6) a)** Explain any two modulation technique with the help of waveform. **[4]**
- b)** Explain with the help of circuit diagram and waveform 1 Φ to 1 Φ mid-point converter. **[6]**

