

Part - B & C of P.E.

- ① Explain the V-I characteristics of SCR. Also explain the concept of latching and holding current.
- ② Why thyristor protection is required? Explain various thyristor protection in details.
- ③ What do you mean by commutation? Explain class-B commutation in details with waveforms.
- ④ What is firing? Explain 'R' & 'RC' firing circuits in details.
- ⑤ What do you mean by triggering? Explain various types of triggering.
- ⑥ Explain the working principle of buck converter (step-down chopper) in details. Also give relation between duty ratio and average output voltage for both choppers.
- ⑦ Explain the operation of square wave inverter in details.
- ⑧ What are voltage source inverters? Explain 180° mode of operation of 3 phase VSI.
- ⑨ Explain the working of full bridge thyristor rectifier with RL load.
- ⑩ Explain bipolar and unipolar sinusoidal modulation in details.

08 SUNDAY