

BALASORE SCHOOL OF ENGINEERING, BALASORE

SAMPLE QUESTIONS

SUB - POWER ELECTRONICS AND PLC

Full Mark-80
Time – 3 Hours

BRANCH- ELECT/ETC
Sem- 5th

Answer any five questions including Q No. 1 & 2

Figure in the right hand margin indicates marks

- 1 Answer All the questions 2
- (a) What is rise time?
 - (b) Show the holding current of scr in static characteristics?
 - (c) What is the difference between R firing and RC firing?
 - (d) What is latching current?
 - (e) What is the difference between uncontrolled rectifier and controlled rectifier?
 - (f) What is a cycloconverter ?
 - (g) What is the difference between power diode and signal diode?
 - (h) Draw the symbol of GTO and give its applications
 - (i) Draw the forward and reverse characteristics of an ideal diode
 - (j) What is the use of UPS.?
- 2 Answer any six questions 5
- (a) Explain different modes of operation of scr with V-I characteristics.
 - (b) With neat diagram explain the working of R-C firing circuit.
 - (c) Explain 1- Φ half bridge converter?
 - (d) Explain type-c chopper.
 - (e) Explain the working of power diode and show the difference between power diode and signal diode?
 - (f) Explain single phase full wave ac regulator.
 - (g) Explain 1- Φ full CONVERTER dc drive with circuit diagram.
3. Draw the switching characteristics of scr and explain the waveform during turn on and turn off? 10
4. Explain the working of half-wave converter with R-L load with and without freewheeling diode. Show the output waveforms under the above use? 10
5. What is a cycloconverter ? Explain the circuit and waveform of step-up cycloconverter. 10
6. Explain type-E chopper. 10
7. Explain the working of voltage source series inverter with neat diagram. 10