

BE Semester- V (I. C.) Question Bank

(Electronics In Industry - IC505)

All questions carry equal marks(10 marks)

Q.1	Explain the constructional details of an SCR. Sketch its schematic diagram and symbol.
Q.2	Explain in detail the different methods of turning on of an SCR.
Q.3	Draw and explain two transistor representation of the SCR.
Q.4	Draw the V-I characteristic of an SCR and discuss the different methods of triggering the SCR into conduction.
Q.5	Short note : 1) Latching current 2) Holding current
Q.6	Draw the circuit diagram of a single phase full-wave SCR controlled rectifier circuit. Obtain the expression for the dc output voltage.
Q.7	Explain the construction & working principle of SCR.
Q.8	Explain in detail the commutation circuits of the SCR.
Q.9	Explain with the help of a diagram the principle of operation of a full-wave controlled rectifier circuit with inductive and resistive loads.
Q.10	Draw & explain the V-I characteristics of TRIAC.
Q.11	Draw & explain the V-I characteristics of DIAC.
Q.12	With the help of neat diagram and waveforms, explain the operation of IGBT.
Q.13	With the help of neat diagram and waveforms, explain the operation of Fast Recovery Diode..
Q.14	Explain the basic principle of operation of dielectric heating.
Q.15	Explain the basic principle of operation of induction heating.
Q.16	What is welding ? What is meant by resistance welding ?
Q.17	Draw and explain the basic scheme of ac resistance welding.
Q.18	State some areas of application of induction heating.
Q.19	Briefly explain the various types of resistance welding.
Q.20	Explain the construction and working principle of LEDs.
Q.21	What is an LCD ? Mention its allowable frequency range.
Q.22	How does the LASCR work ? List its merits.
Q.23	State the demerits of the semiconductor laser diode and explain how it differs from an LED.
Q.24	Explain the basic principle of optocoupler.
Q.25	Explain in detail about photoconductive cell.
Q.26	What are the advantages of phototransistor over a photodiode ?
Q.27	Explain how light is guided in an optical fibre.
Q.28	Mention some of the advantages of optical fibre.
Q.29	Short note : Photodiode.
Q.30	What are the various types of power line disturbances ?

Q.31	What is the servo system ? Explain it with the help of a blockdiagram.
Q.32	Explain the principle of buck-boost control of a servo-controlled voltage stabiliser.
Q.33	What is the power conditioner ?
Q.34	What do you mean by ON-line UPS and OFF-line UPS.
Q.35	Briefly explain with the help of a simplified block diagram the operation of an ON-line UPS.
Q.36	Briefly explain with the help of a block diagram the working principle of a servo controlled voltage stabiliser.
Q.37	Describe the working principle of the CVT.
Q.38	Describe the working principle of the UPS.
Q.39	Compare CVT with a power transformer.
Q.40	Short note : Stepper motor.