1) Why is SCR not preferred for inverters?
2) Differentiate current source inverter and voltage source inverter.
3) State the condition to be satisfied in the selection of L and C in a series inverter.
4) Compare AC voltage controller with cycloconverter.
5) Define Amplitude Modulation Index.
6) Why heat sink and cooling arrangements are employed for power switching devices?
7) Compare thermal failure with electrical failure.
8) What are the conditions for over current fault?
9) Mention the two types of selenium voltage limiter.
10) State the necessity of heat sink.

1. With neat sketch explain the 180 degree mode of conduction of an inverter
2. Explain the Voltage control methods of Inverters in detail.
3. Compare Multiple PWM with sinusoidal PWM.

1. Explain single phase bidirectional AC voltage controller with RL Load.
2. Explain the operation of step up bridge type cycloconverter.
3. Give the effects of harmonics present in the inverter system. Write the methods to reduce the harmonic content.

1. Explain in detail the over voltage conditions of power electronic devices.
2. Explain the various thyristor mounting techniques in detail.
3. Explain the heat transfer process in thyristor.

1. Design the snubber network for ac circuit
2. Design the snubber network for dc circuit.
3. To provide reliable dv/dt protection to an SCR used in a single phase fully controlled bridge, compute the required parameters for a snubber circuit. The SCR has maximum dv/dt capability of 50V/μs. the input line-to-line voltage has a peak value 380V and the source inductance is 0.1mH.