

WORK SHEETS

UNIT-I: Power Switching Devices

1. Power electronics mainly deals with:

- A) Signal processing
- B) Power conversion and control
- C) Data communication
- D) Measurement

Answer: B

2. Which device conducts current only in one direction?

- A) SCR
- B) MOSFET
- C) Diode
- D) IGBT

Answer: C

3. SCR stands for:

- A) Silicon Controlled Rectifier
- B) Silicon Current Regulator
- C) Switching Control Relay
- D) Static Current Rectifier

Answer: A

4. Which device is a current-controlled device?

- A) MOSFET
- B) IGBT
- C) BJT
- D) Diode

Answer: C

5. Which device is a voltage-controlled device?

- A) BJT
- B) SCR
- C) MOSFET
- D) Diode

Answer: C

6. IGBT combines the features of:

- A) BJT and MOSFET
- B) SCR and Diode
- C) MOSFET and Diode
- D) BJT and SCR

Answer: A

7. The gate terminal is used to trigger:

- A) Diode

- B) SCR
- C) Resistor
- D) Capacitor

Answer: B

8. SCR has how many terminals?

- A) 2
- B) 3
- C) 4
- D) 5

Answer: B

9. Connecting SCRs in series is mainly used to:

- A) Increase current rating
- B) Increase voltage rating
- C) Reduce power
- D) Reduce voltage

Answer: B

10. Connecting SCRs in parallel is mainly used to:

- A) Increase current rating
- B) Increase voltage rating
- C) Reduce current
- D) Reduce power

Answer: A

11. UJT is mainly used as:

- A) Rectifier
- B) Trigger source
- C) Filter
- D) Amplifier

Answer: B

12. Protection of SCR is required against:

- A) Overvoltage
- B) Overcurrent
- C) Excess temperature
- D) All of these

Answer: D

13. Two-transistor analogy of SCR consists of:

- A) Two NPN transistors
- B) Two PNP transistors
- C) One NPN and one PNP transistor
- D) Three transistors

Answer: C

14. Commutation of SCR means:

- A) Triggering SCR
- B) Turning OFF SCR
- C) Increasing voltage
- D) Increasing current

Answer: B

15. Gate drive circuits are commonly used for:

A) BJT and MOSFET

B) Diode only

C) Capacitor only

D) Transformer only

Answer: A

NRCM