

- ### SECTION-D
- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Draw and explain the V-I characteristics of a TRIAC. (CO-01)
- Q.37 Define commutation. Explain different types of commutation methods. (CO-02)
- Q.38 Differentiate between voltage source inverter and current source inverter. (CO-04)

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M.M. : 100

a) BJT b) MOSFET
c) GTO d) All of the above

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- Q.6 A single phase full wave fully controlled rectifier uses _____. (CO-02)
- a) 2 SCRs b) 3 SCRs
c) 4 SCRs d) 6 SCRs
- Q.7 Which of the following is the main advantages of SMPS over liner power supply? (CO-05)
- a) No transformer is required
b) Higher efficiency
c) No filter required
d) only one stage of conversion
- Q.8 A cycloconverter having positive half of load current is carried by _____. (CO-04)
- a) negative converter only
b) positive converter only
c) positive and negative converter
d) positive or negative converter
- Q.9 A PWM switching scheme is used in single phase inverters to: (CO-04)
- a) Reduce the higher order harmonics
b) Minimize the effect of load
c) Reduce the lower order harmonics
d) Reduce the total harmonic distortion
- Q.10 Full form of UPS is _____. (CO-05)
- a) Universal power supply
b) Uninterruptive power supply
c) Universal power system
d) None of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 UJT contains _____ PN junction. (CO-01)
- Q.12 Controlled Rectifier contains only diodes. (T/F) (CO-02)
- Q.13 What is dv/dt triggering? (CO-02)
- Q.14 The duty cycle of chopper is expressed by _____ / (Ton + Toff). (CO-03)
- Q.15 Expand MOSFET. (CO-01)
- Q.16 In a lead acid battery, active material used for positive plate is _____. (CO-03)
- Q.17 List two merits of HVDC system. (CO-05)
- Q.18 F.W.D. in controlled rectifiers, improves power factors. (T/F) (CO-02)
- Q.19 The most suitable motor for control application is _____ motor. (CO-05)
- Q.20 _____ motor is used for elevators. (CO-05)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Describe the parallel operation of SCRs. (CO-01)
- Q.22 Explain Gate triggering method of SCRs. (CO-02)
- Q.23 Explain the working of UJT as a relaxation oscillator. (CO-02)
- Q.24 Explain any four specifications of SCR. (CO-01)
- Q.25 Draw the circuit diagram fan regulator using thyristor. (CO-05)