

- Q.26 Explain the principle of cycloconverters.
- Q.27 What do you mean by Phase control method?
- Q.28 Explain with the help of block diagram of an electric drive system.
- Q.29 What is UPS/ Explain the working of on line and off-line UPS.
- Q.30 What is a Chopper? Explain its different types in details.
- Q.31 Discuss the application of inverters.
- Q.32 Difference between controlled and uncontrolled rectifier.
- Q.33 Explain the working of an automatic battery charger.
- Q.34 Give the circuit of an automatic street light and explain its working.
- Q.35 Describe MOSFET.

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)

- Q.36 Explain the basic scheme for speed control of 3 phase induction motor using variable voltage and variable frequency method.
- Q.37 Discuss the different communication technique of SCR.
- Q.38 Explain the Class A Class B and Class choppers.

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5th Sem., Branch : IC, EI Subject : Power Electronics

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

- Q.1 SCR can be used as
a) Unidirectional switch b) Bidirectional Switch
c) Not used as switch d) None of these
- Q.2 An SCR is a
a) Two layer two-junction device
b) Three layer, Tree-junction device
c) Four layer, three junction drive
d) None of these
- Q.3 A single phase full wave fully controlled bridges uses _____.
a) 2SCRs b) 6SCRs
c) 3SCRs d) 4SCRs
- Q.4 An inverter convert _____.
a) AC to DC b) DC into AC
c) AC into variable AC d) DC into variable DC

- Q.5 A cycloconverter _____.
 a) AC-DC convert b) DC-AC converter
 c) DC-DC convert d) AC-AC converter
- Q.6 UPS never used in
 a) Street-lighting b) Communication link
 c) Computer d) All of these
- Q.7 SCR can be commutated by _____.
 a) Natural communication
 b) Force communication
 c) Both A & B
 d) None of these
- Q.8 The minimum gate current which can turn on SCR is called _____.
 a) Trigger current b) Holding Current
 c) Junction Current d) Break over Current
- Q.9 Cycloconverter drives are generally employed in _____.
 a) Traction
 b) Milling
 c) Generating low frequencies
 d) Generating pulses
- Q.10 Uninterruptible power supply is used in
 a) Computer b) Street light
 c) Essential instrument d) All of these

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Section-B

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

- Q.11 TRIAC stands for.
- Q.12 A UJT has _____ PN junction.
- Q.13 Turn on of time SCR is about 2 to 5 _____.
- Q.14 A dual converter operate in which quadrants.
- Q.15 Controlled Rectifier contains only diodes. (True/False)
- Q.16 The device which convert AC into DC.
- Q.17 The duty cycle of chopper is expressed as _____.
- Q.18 Expand SCR.
- Q.19 In-off line UPS the inverter is _____ all the time.
- Q.20 AN SCR is more efficient than TRIAC. (Yes/No)

Section-C

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

- Q.21 Explain the construction working principle of SCR.
- Q.22 Discuss the different method of triggering of SCR.
- Q.23 Draw the V-I characteristics of DIAC and TRIAC and also discuss the region of operation.
- Q.24 Explain the single phase half wave controlled rectifier with R-L load & draw all possible wave.
- Q.25 What is an inverter/ What are the different types of inverter?

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