Q.34 Write short note on Dual converter. (CO3)

Q.35 What is HVDC? (CO5)

SECTION-D

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

Q.36 Explain triggering methods of SCR. (CO1)

Q.37 Explain working of UPS. (CO5)

Q.38 Explain working of Cycloconverter. (CO3)

(**Note:** Course outcome/CO is for office use only)

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202451

5th Sem / Branch : Mechatronics

Subject:- Power Electronics

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 SCR is a _____ layer device. (CO1)

a) 12 b) 3

c) 4 d) 1

Q.2 Which of the following is a unidirection device? (CO1)

a) SCR b) DIAC

c) TRIAC d) None

Q.3 SCR has _____ number of terminals. (CO1)

a) 12 b) 3

c) 4 d) 5

Q.4 A SCR is a _____ device. (CO1)

a) P-N-P b) P-N-P-N

c) N-P-N d) P-N

Q.5 Latching current is ____ than holding current. (CO1)

a) Equal b) more

c) less d) zero

Q.6 Inverter converts (CO3)

a) AC into DC b) DC into AC

c) AC into AC d) None

Q.7 Rectifier converts (CO2)

a) AC into DC b) DC into AC

c) AC into AC d) None

Q.8 Which is used to design Relaxation oscillator? (CO1)

a) SCR b) DIAC

c) UJT d) None

Q.9 UPS has (CO5)

a) Communication link

b) Battery

c) Control circuit

d) All of above

Q.10 Cycloconverter is used to change (CO3)

a) Voltage b) Current

c) Frequency d) Power

SECTION-B

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

Q.11 Expand SCR. (CO1)

Q.12 Draw the symbol of DIAC. (CO1)

Q.13 Define latching current. (CO1)

Q.14 Define commutation. (CO1)

Q.15 UPS stands for _____. (CO5)

Q.16 Draw the symbol of UJT. (CO1)

Q.17 Define controlled Rectifier. (CO2)

Q.18 Define Dual Converter (CO3)

Q.19 Define Drive. (CO4)

Q.20 SMPS stands for _____. (CO5)

SECTION-C

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

Q.21 Explain two transistor analogy of SCR. (CO1)

Q.22 Explain the need of Heat sink. (CO1)

Q.23 Draw the characteristics of DIAC. (CO1)

Q.24 Explain working of TRIAC in brief. (CO1)

Q.25 Explain speed control of universal motor. (CO1)

Q.26 Explain working of Half wave controlled rectifier. (CO2)

Q.27 Draw the circuit Single Phase Full Wave controlled rectifier. (CO2)

Q.28 Explain the concept of SMPS. (CO5)

Q.29 Explain working of smart UPS. (CO5)

Q.30 Explain Half wave DC Drive. (CO4)

Q.31 Explain working V-F-Drive. (CO4)

Q.32 Explain working of class A chopper. (CO3)

Q.33 Explain working of series inverter. (CO3)