

Bharati Vidyapeeth's College of Engg. For Women, Pune-43

Dept of E&TC

Unit Test I

Subject: - PDM

Class – SE (E&TC)

Class: - I

Marks: - 30

Date:- 2009

Q- 1. Draw the construction diagram of SCR & explain its working with its characteristics... (8)

Q- 2. Draw the characteristics of Power Diode & explain its working... (8)

Q- 3. Define following terms,

- i) Holding Current ... (2)
- ii) Latching Current ... (2)
- iii) Safe Operating Area... (2)
- iv) Forward Break over Voltage... (2)

Q- 4. What are the advantages of IGBT over MOSFET & Power BJT... (6)

OR

Q- 4. Write short note methods of isolating control & power circuits in power converters ... (6)

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Date:- 2010

Q- 1. Draw the construction diagram of TRIAC & explain its working with its characteristics... (8)

Q- 2. Draw the characteristics of Power BJT & explain its working... (8)

Q- 3. Define following terms,

- i) Holding Current ... (2)
- ii) Latching Current ... (2)
- iii) Safe Operating Area... (2)
- iv) Forward Break over Voltage... (2)

Q- 4. Draw the diagram of UJT Triggering circuit for SCR & explain it's working... (6)

OR

Q- 4. Explain the operation of SCR with the help of two transistor analogy... (6)

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Date:- 2011

Q- 1. Draw the construction diagram of DIAC & explain its working with its characteristics... (8)

Q- 2. Draw the characteristics of Power MOSFET & explain its working... (8)

Q- 3. Define following terms, (8)

i) Holding Current ... (2)

ii) Latching Current ... (2)

iii) Safe Operating Area... (2)

iv) Forward Break over Voltage... (2)

Q- 4. Draw the diagram of single Φ semi converter & explain it's working with waveforms... (6)

OR

Q- 4. What is inverting & rectifying mode of single phase full converter with RL load... (6)

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Unit Test II

Subject: - PDM

Class – SE (E&TC)

Class: - I

Marks: - 30

Date:- 2010

Q- 1. Draw the circuit diagram & explain different connections of three phase transformer & explain its working with its characteristics... (8)

Q- 2. Draw the neat circuit diagram & waveform of single phase bridge inverter for R load & explain its operation ... (8)

Q- 3. The single phase bridge inverter has resistive load of $R = 2.4 \Omega$ & the d.c. input voltage is $V_s = 48 \text{ V}$, determine (each for 2 marks) (8)

- i) The rms o/p voltage
- ii) The o/p power
- iii) The avg. & peak current of each transistor
- iv) The peak reverse blocking voltage of each transistor

Q- 4. Explain the step up operation of energy transfer... (6)

OR

Q- 4. Why induced e.m.f. in a dc motor is called the back e.m.f.... (6)

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Unit Test II

Subject: - PDM

Class – SE (E&TC)

Class: - I

Marks: - 50

Date:- 2011

Q- 1 Draw the block diagram of Offline UPS & explain its working... (8)

Q- 2. Explain the construction of dc motor ... (8)

Q- 3. The single phase is operated from 120V, 50 Hz & the load resistance is 10. If the avg voltage is 25 % of the max. Possible avg o/p voltage, calculate (8)

- i) Delay Angle
- ii) Rms & avg o/p current.

Q- 4. Draw the circuit diagram of single phase semi converter for R load & explain operation with the help of voltage & current waveforms for $\alpha = 60^\circ$ (8)

Q- 5. Draw the circuit diagram of step down chopper & explain it's working (8)

Q- 6. Explain the various control strategies for dc choppers ... (5)

Q- 7. What is stepper motor? Explain the basic concept of stepper motor.... (5)

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Dept of E&TC

Unit Test II

Subject: - PDM

Class – SE (E&TC)

Class: - I

Marks: - 30

Date:- 2009

Q- 1. Draw the block diagram of Online UPS & explain its working... (8)

Q- 2. Draw the circuit of step down chopper & explain its working with waveforms... (8)

Q- 3. Explain the various methods of speed control of a DC series motor operation of SCR with the help of two transistor analogy... (8)

Q- 4. Draw the diagram stepper motor & explain it's working... (6)

OR

Q- 4. Write short note on Universal Motor... (6)