

- Q.24 Write advantages of Cycloconverter.
 Q.25 What is closed loop electric driver?
 Q.26 What are the applications of uninterruptible power supplies?
 Q.27 How a capacitor bank is able to improve power factor?
 Q.28 Write working of SVC and STATCOM.
 Q.29 What are the methods of reactive power compensation.
 Q.30 What is cycloconverter. Explain 3 phase to single phase cycloconverter.
 Q.31 What are merits and demerits of on line UPS?
 Q.32 How capacitor banks are used in improvement of power factor.
 Q.33 Write a short note on V/F control.
 Q.34 Explain working of speed control of 3 phase induction motor.
 Q.35 Write two disadvantages of SMPS over conventional linear power supplies.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 What is the need fo SMPS. Explain with block diagram, the working of SMPS.
 Q.37 Explain in detail the operation of four-quadrant DC chopper drive.
 Q.38 Explain the slip power recovery control scheme for a 3 phase induction motor.

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6th Sem / Branch : Power Eltx.

Sub. : Power electronics - II

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 The principle of three phase cycloconverter is to _____
 a) Add and remove number of SCRs
 b) Changing the firing angle of the devices
 c) Keep the firing angle of 0° for all the devices
 d) None of the above
- Q.2 A step down cyclo converter is a device that converts
 a) DC to AC
 b) Higher input into lower input frequency
 c) Lower input to higher input frequency
 d) AC to DC
- Q.3 Which of the following is used to build a electric drive?
 a) Source b) Motor
 c) Control unit d) All of these
- Q.4 What is the abbreviation of FACTS?
 a) Flexible alternating current transmission system
 b) Full wave alternating current transmission system

- c) Flexible alternating circuit transmission system
d) Full wave alternating circuit transmission system

Q.5 For which of the following is the frequency is constant from input to output

 - Ac voltage controller
 - Chopper circuit
 - Inverter
 - Cycloconverter

Q.6 Which among the following happens in a low power factor?

 - Large KVA rating of the equipment
 - Greater conductor size
 - Reduced handling capacity of the systems
 - All of the above

Q.7 The integral cycle control method is used in heating loads and motor control drives because of _____

 - Zero voltage crossing
 - The supply voltage control
 - Less harmonics
 - The average load power control

Q.8 The chopper circuit is a device that converts _____

 - AC to AC signal
 - DC to DC signal
 - AC to DC signal
 - DC to AC signal

Q.9 The single phase bridge type cycloconverter uses _____ number of SCRs.

 - 2
 - 4
 - 6
 - 8

- Q.10 A dual converter provides _____

 - a) Two quadrant operation
 - b) Three quadrant operation
 - c) Four quadrant operation
 - d) None of the above

SECTION-B

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

- Q.11 Draw the circuit diagram of single phase voltage controller with RL load.
 - Q.12 Define ON line UPS.
 - Q.13 Define cycloconverter.
 - Q.14 Define static switches.
 - Q.15 In three phase cycloconverter, how many pulses are generated?
 - Q.16 Expand SMPS.
 - Q.17 Define half wave control drive
 - Q.18 What do you mean by duty cycle?
 - Q.19 Define the term chopper drive.
 - Q.20 What is solid state relay.

SECTION-C

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

- Q.21 Explain the working of speed control of 3 phase induction motor using stator voltage control.

Q.22 Why OFF LINE UPS is called as short break UPS?

Q.23 Discuss the principal of integral cycle control as used in AC voltage controllers.