

- Q.23 Draw the circuit diagram of mid-point bridge type cycloconverter.
- Q.24 Explain the working of single phase full wave dc drive.
- Q.25 Explain four quadrant chopper drive.
- Q.26 Write the five effects of poor power factor.
- Q.27 Explain the synchronous condenser.
- Q.28 Write the purpose of thyristor controlled reactors and where they used.
- Q.29 Explain the working of fly back power supply.
- Q.30 Write the Five applications of SMPS.
- Q.31 Explain the working of on line UPS.
- Q.32 Write a short note on STATCOM.
- Q.33 Explain the purpose of SVC.
- Q.34 Differentiate between Ac and DC circuit breaker.
- Q.35 Explain the slip power recovery scheme of 3 phase induction motor.

### **Section-D**

- Note:** Long answer Questions. Attempt any two Questions out of three Questions. (2x10=20)
- Q.36 Explain the working of three phase to single phase cycloconverter.
- Q.37 Explain the method of V/F control of a 3 phase induction motor.
- Q.38 Explain the different method of reactive power compensation.

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**Power Eltx.**  
**Subject : Power Electronics-II**

**Time : 3 Hrs.**

**M.M. : 100**

### **SECTION-A**

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

- Q.1 In AC voltage controllers the
- Variable ac with fixed frequency is obtained
  - Variable ac with variable frequency is obtained
  - Variable dc with fixed frequency is obtained
  - Variable dc with variable frequency is obtained
- Q.2 The single phase mid-point type cycloconverter uses \_\_\_\_\_ number of SCRs'
- 4
  - 8
  - 6
  - None of the mentioned
- Q.3 Which of the following is/are components of an electric drive?
- Control unit and Power Modulator
  - Electric Motor and Control System
  - Input Command
  - Sensing Device and Electric Motor
- Q.4 Power factor of a load can be improved by using
- Static capacitors

- b) Synchronous condenser  
 c) Phase advancer  
 d) All of the above
- Q.5** FACTS devices are generally used for to compensate \_\_\_\_\_ of the transmission line  
 a) Reactive power      b) Active power  
 c) Apparent power      d) True power
- Q.6** SMPS is used for  
 a) Switch from one source to another  
 b) Storage for DC power.  
 c) Obtaining controlled DC power supply  
 d) Obtaining controlled AC power supply
- Q.7** Where uninterruptible power supplies are used?  
 a) Data centers      b) Industries  
 c) Telecommunication      d) All of the above
- Q.8** SVC and STATCOM are \_\_\_\_\_ devices.  
 a) Series      b) Series and shunt  
 c) Shunt and Series      d) Shunt
- Q.9** A four quadrant operation requires  
 a) Two full converter connected back to back  
 b) Two full converter in series  
 c) Two full converter connected in parallel.  
 d) Two semi converter connected back to back
- Q.10** Applications of cycloconverters include  
 a) Speed control of ac drives.  
 b) Induction heating
- c) Static VAR compensation  
 d) All of the above

### Section-B

- Note:** Objective types Questions. All Questions are compulsory. (10x1=10)
- Q.11** List the types of AC voltage controller circuits  
**Q.12** Draw the circuit diagram of single phase step up cycloconverter.  
**Q.13** Define Electric Drive.  
**Q.14** Write the purpose of capacitor bank.  
**Q.15** Define static switch.  
**Q.16** Write the full form of STATCOM.  
**Q.17** Write the purpose of UPS.  
**Q.18** Mention one difference between two stage and multistage sequence control of ac voltage  
**Q.19** Enlist the thyristor controlled reactors.  
**Q.20** Define SMPS.

### Section-C

- Note:** Short answer type Questions. Attempt any twelve Questions out of fifteen Questions. (12x5=60)
- Q.21** Explain the operation of single phase voltage controller with resistive load.  
**Q.22** Describe the principle of operation of single phase step down cyclo converter.