

- Q.26 What are the basic differences between Three phase and single-phase supply?
 Q.27 What are the applications of stepper motors in process control?
 Q.28 What are the different types of semi conductors?
 Q.29 What is the process for changing direction of rotation of a 3 phase induction motors?
 Q.30 How is cooling transformers done? What is its importance?
 Q.31 What are the advantages of electrical energy over other types of energy?
 Q.32 Eries circuit has $R=10\Omega$, $L=50mH$, and $C=100\mu F$ and is supplied with 200V, 50Hz. Find (i) Impedance (ii) Current (iii) Power (iv) Power factor
 Q.33 How does D.C. motor differ from D.C. generator in construction?
 Q.34 What are Zener diodes? What are their applications?
 Q.35 What are the Fleming's rules?

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
 Q.36 A transformer with 40 turns on the high voltage winding is used to step down the voltage from 240V to 120V. Find the number of turns in the low voltage winding.
 Q.37 Describe the working of a PN junction diode with neat diagrams. Also explain its V-I characteristics.
 Q.38 Define i) Charge ii) Electric Current iii) Power iv) Network & v) Circuit

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SECTION-A

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

- Q.1 What is the current found by finding the current in an equidistant region and dividing by n?
 a) RMS current
 b) Average Current
 c) Instantaneous current
 d) Total current
 Q.2 While designing the distribution to locality of one lac population with medium dense load requirement, we can employ _____
 a) Radial System
 b) Parallel System
 c) Ring Main System
 d) Any of the mentioned
 Q.3 What is the reserve capacity of battery?
 a) Time for which the battery can supply 25 A at 80 with minimum cell voltage 1.75 V
 b) The current which the battery can supply continuously for 30 seconds with minimum cell voltage 1.2 V
 c) Lasting power of a battery on a small load

- d) Rate of current for 20 minutes with a minimum cell voltage of 1.5V
- Q.4 The opposing capacity of materials against the current flow is
 a) Conductance b) Inductance
 c) Susceptance d) Resistance
- Q.5 What is a maintenance -free battery?
 a) A battery having lead-antimony plate grid
 b) A battery having lead-calcium plate grid
 c) A battery does not contain acid
 d) A battery does not contain water
- Q.6 While designing the distribution sub stations by the designer, it is required to use the _____ for the discrete power tapping.
 a) Distributor
 b) Power Transformer
 c) Distribution Transformer
 d) Feeder
- Q.7 What is the effective value of current?
 a) RMS Current
 b) Average Current
 c) Instantaneous Current
 d) Total Current
- Q.8 Which of the following can be used for braking purposes in electric trains?
 a) Induction generator
 b) Induction motor
 c) Dc Series Motor
 d) Dc differentially compounded generator
- Q.9 The most widely used application of ac series motor is _____

- a) Electric Traction upto 1600KW
 b) Paper Mills
 c) Welding
 d) None of the mentioned
- Q.10 Relation between power, voltage and conductance
 a) $V=P^2G$ b) $V=P^2/G$
 c) $P=v^2/G$ d) $P=V^2G$
- SECTION-B**
- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 What is the instrument used for measuring Current?
 Q.12 What is the use of flame proof motors?
 Q.13 What is the motor use for driving pumps?
 Q.14 Where are servo motors used?
 Q.15 Where are single phase motors used?
 Q.16 Where are delta connections used?
 Q.17 What do you mean by CVT?
 Q.18 Where are batteries used in an aircraft?
 Q.19 Mention one application of MCB.
 Q.20 What is the motor used for driving compressors?

- SECTION-C**
- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 What is balanced voltage? How is it used?
 Q.22 How is the connection of various measuring instruments in an electrical circuit done?
 Q.23 What is Power factor? How can it be improved used capacitors?
 Q.24 Write in brief about Wiring System.
 Q.25 What are various parts of a domestic electrical installation?