Important Questions

BEE

UNIT-I

1) Explain different types of circuit elements in detail?
2) State and Explain Kirchoff's voltage law & Kirchoff's current law?
3) Explain energy sources in detail?
4) Explain the concept of source Transformation Technique?
5) Explain Mesh & Nodal Analysis with an Example?
6) Derive Expression for STAR to DELTA & DELTA to STAR Transformation.
7) Define the following terms
   i) MMF
   ii) Magnetic flux
   iii) Magnetic flux density
   iv) Magnetic flux intensity
   v) Reluctance
   vi) permiability
8) Derive the Expression for self inductance
9) Derive the Expression for Mutual inductance & co-efficient of coupling?

Sl. No. | Roll (H.T.) Number

UNIT-II

1) Define the following terms
   i) Instantaneous value
   ii) Waveform
   iii) cycle
   iv) Time period
   v) Frequency
   vi) Amplitude
   vii) Angular frequency
   viii) Peak to peak value

2) Explain the concept of Rms value by Graphical method & Analytical method?

3) Explain the concept of Average value by Graphical ~~method~~ Method & Analytical method?

4) Explain the phase difference in detail?

5) Derive the current, voltage, power eqn by A.C through pure R, L, C ckts.

6) Draw ~~& Explain~~ & Explain voltage triangle, Impedance triangle & power triangle by A.C through R-C, R-L, R-L-C ckt

UNIT-III

1) State & Explain Superposition Theorem with an Example?
2) " & " Reciprocity
3) State & Derive maximum power Transfer ~~Theorem~~ by using Maximum power Transfer Theorem.
4) State & Explain Thevenins & Norton's Theorem.
5) State & Explain Tellegen's Theorem
6) State & Explain millman's Theorem

UNIT-IV

1) Explain constructional details of Dc machine in details
2) Derive Emf eqn of a Dc Generator
3) Explain principle of operation of a Dc Generator.
4) " " " " " Dc motor.
5) Explain Significance of Back Emf of a Dc motor
6) Derive ~~torque~~ eqn of a Dc motor.
7) Explain The working principle of a Transformer.
8) Explain The constructional details of a Transformer

9) Derive Emf Eqn of a Transformer.

10) Discuss about practical Transformer at load condition with phasor diagram

11) Draw the Equivalent ckt of a Transformer & Explain in detail, ~~Explain the phasor diagram~~
   i) referred to primary
   ii) referred to Secondary.

12) Explain different types losses in transformer in detail

13) Explain ~~the~~ in detail about Auto Transformer.

UNIT-V

1) Explain different types of wires / cables

2) Explain the concept of Earthing in detail.

3) List the different types MCB & Explain in detail.

4) Explain the concept of power factor improvement. in detail?

5) Discuss the types of batteries & list the characteristics of batteries

6) Explain about battery backup