Unit wise important big questions for university examination.

Unit 1

1. Numerical problem on Mesh analysis.
2. Numerical problem on Nodal analysis.
3. Numerical problem on Thevenin's theorem.
4. Numerical problem on Superposition theorem.
5. Numerical problem on Maximum power transfer theorem.
6. Numerical problem on R-L,R-C and R-L-C circuits. (Finding resistance (R), inductance (L)inductive reactance (X_L), capacitive reactance (X_C), impedance (Z) , power factor (pf), real power (P), reactive power (Q),
7. Deriving the equation for RMS value, average values of AC waveforms (sine wave, half rectified sine wave, full rectified sine wave)

Unit 2

1. Describe the construction and operation of JFET. Also draw its characteristics.
2. Describe the construction and operation of MOSFET. Also draw its characteristics
3. Describe the construction and operation of BJT. Also draw its characteristics
4. Describe the construction and operation of SCR. Also draw its characteristics.
5. Simplification of Boolean expression using Boolean Laws and theorems.
6. Simplification of Boolean expression using K map.

Unit 3

1. Describe the construction and working of DC generator with neat diagram.
2. Describe the construction and working of DC motor with neat diagram.
3. Describe the construction and operation of single-phase transformer with neat diagram.
4. Describe the construction and working of three phase induction motor with neat diagram.
5. Describe the construction and working of BLDC motor with neat diagram.
6. Describe the construction and working of stepper motor with neat diagram.
7. Describe the construction and working of servo motor with neat diagram.

Unit 4

1. Describe the construction and working of Permanent magnet moving coil (PMMC) instrument with a neat diagram. Also give the torque equation.
2. Describe the construction and working of Moving iron (MI) instrument with a neat diagram. (Both attraction type and repulsion type)
3. Describe the construction and working of Dynamometer type of instrument with a neat diagram.
4. Describe the construction and working of Linear variable differential transformer (LVDT)/ Inductive transducer / with neat diagram. Also draw the graph between displacement and output voltage.
5. Describe he construction and working of capacitive transducer with a neat diagram.
6. Describe the block diagram and working of liquid crystal display (LCD).

Unit 5

1. Draw and explain the layout of generation, transmission and distribution of power.
2. List and explain all the substation equipment.

3. Draw and explain the key diagram of 11kV/440 V indoor substation with neat diagram.
4. Explain different types of earthing schemes and list the importance of earthing.
5. Explain different types of Electric vehicles with its advantages and disadvantages.