

COURSE TITLE : ELECTRICAL ENGINEERING DRAWING
COURSE CODE : 4037
COURSE CATEGORY : B
PERIOD / WEEK :3
PERIOD/SEMESTER :42
CREDIT :2

TIME SHEDULE

MODULE	TOPIC	PERIODS
1	ELECTRICAL SYMBOLS AND LAYOUTS	6
2	DC MACHINES AND ALTERNATORS	12
3	THREE PHASE INDUCTION MOTORS	12
4	SINGLE PHASE TRANSFORMERS	12
TOTAL		42

COURSE OUTCOME

SL NO	On the completion of this course the student will be able:
1	To understand standard drawing practices.
2	To understand the layout of substations and earthing.
3	To understand the internal structure of DC machine.
4	To understand the internal structure of an Alternator.
5	To understand the internal structure of an Induction Motor.
6	To understand the internal structure of a single phase transformer.

SPECIFIC COURSE OUTCOME

MODULE I

ELECTRICAL SYMBOLS AND LAYOUTS

1. Standard electrical symbols used in electrical practices.
2. Substation layouts – 400KV – 220KV – 66 KV – 11 KV, identify each components.
3. Earthing – plate earthing – pipe earthing.

MODULE II

DC MACHINES AND ALTERNATORS

1. DC machines :constructional details – field system- yoke – pole core – pole shoe – field winding Armature- core - types of winding (no need of detailed exercise)– commutator – brush and brush holder.
2. Alternators : field system – salient pole and non salient pole construction, armature core – windings(no need of detailed exercise).

MODULE III

THREE PHASE INDUCTION MOTORS

1. Squirrel cage induction motors : Stator - core construction – types of stator enclosures – types of windings (no need of detailed exercise), Rotor - construction .
2. Slip ring induction motors : Stator - core construction – types of stator enclosures – types of windings (no need of detailed exercise), Rotor - construction .

MODULE IV

SINGLE PHASE TRANSFORMERS

Transformer – types – core type – shell type - construction – magnetic portion – core – limb construction – cross section of limb – stepped core – two step – three step - four step (from the diameter of the circum circle of diameter `d`) - assembly of core – magnetic yoke , winding – types of coils - helical – disc – cross over.

GENERAL INFORMATION

Note - Guidance for setting question paper

1. Equal weightage must be given to each Module.
2. Part A contains FIVE questions , 2 marks each.
3. Part B contains SEVEN questions carries 6 marks each , out of SEVEN, FIVE must be answered.
4. Part C contains 30 marks questions from each module and answer any TWO questions,(attempt any ONE from Module I&II, and any ONE from Module III &IV.)
