

Kadi Sarva Vishvavidyalaya, Gandhinagar
Bachelor of Engineering (Electrical Engineering Syllabus)

ELECTRICAL & ELECTRONICS WORKSHOP

B.E. SEM – III SUB. CODE: EE- 306

A. Objectives of the Course:

- The educational objectives of this course are
- To focus on Electrical safety & equipment earthing
- To address the underlying concepts of wiring of various electrical installations.
- To study control & power circuit of different starters

B. Teaching / Examination Scheme

SUBJECT		Teaching Scheme				Total Credit	Examination Scheme					Total Marks
		L	T	P	Total		THEORY		IE	CIA	PR. / VIVO	
CODE	NAME	Hrs	Hrs	Hrs	Hrs	1	Hrs	Marks	Marks	Marks	Marks	50
EE-306	Electrical & Electronics Workshop	0	0	2	2			0	0	0	20	

Sr.No	Course content
1	Introduction of tools, electrical materials, symbols and abbreviations.
2	Familiarization of various types of service mains - wiring installations - accessories and household electrical appliances.
3	Importance of Neutral and structure Grounding and exposure to various earthing schemes
4	Realization of different types of wiring systems like tube light wiring, staircase wiring along with the protection elements like fuse, MCB, ELCB etc.
5	Assembling and disassembling of D. C. Machine, single phase motor and its meggering.
6	Assembling and disassembling of single phase transformer and its meggering
7	Different faults in domestic appliances like automatic iron, mixture, Oven, washing machine and repairing of the same. Application of Tester and Test Lamp for fault finding in Electrical Systems
8	Introduction to DOL and STAR-DELTA starter with power circuit and its control circuit
9	Calibration of Energy meter

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10	Measure the frequency, voltage, current with the help of CRO
11	Verify the truth table of AND, OR, NOT, NOR and NAND gates.
12	Identification, testing and application of Resistors, Inductors, Capacitors, PN-Diode. ZenerDiode, LED, LCD, BJT, Photo Diode, Photo Transistor, Analog/Digital Multi- Metres and Function/Signal Generator.
13	Study the BJT amplifier in common emitter configuration. Measure voltage gain plot gain frequency response and calculate its bandwidth.

INSTRUCTIONAL METHOD AND PEDAGOGY (Continuous Internal Assessment (CIA) Scheme)

- At the start of course, the course delivery pattern, prerequisite of the subject will be discussed.
- Laboratory Sessions will be conducted with the aid of multi-media projector, black board, OHP etc.
- Attendance is compulsory in laboratory which carries a 5% component of the overall evaluation.
- Assignments based on course content will be given to the students for each unit/topic and will be evaluated at regular interval. It carries a weightage of 5% in the overall evaluation.
- Surprise tests/Seminar/Tutorials will be conducted having a share of 5% in the overall evaluation.

STUDENTS LEARNING OUTCOME:

On successful completion of the course, a student can acquire the basic knowledge of electrical wiring, troubleshooting and maintenance of different electrical appliances and equipments and basic idea about the control circuits.