**23EC22P1-ELECTRONIC CIRCUITS ANALYSIS LAB**

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| **CourseCategory:** | ProgramCore | **Credits:** | 1.5 |
| **CourseType:** | Practical | **Lecture-Tutorial-Practical:** | 0-0-3 |
| **Prerequisite:** | Electronic Devices and Circuits | **SessionalEvaluation:ExternalEvaluation:****TotalMarks:** | 3070100 |
| **CourseObjectives** | Students under going this course are expected to: |
| 1. PlotthecharacteristicsofDifferentialamplifiers,feedbackandpoweramplifiers.
2. Analyzetheresponseoftunedamplifiersandmultivibrators.
3. Categorizedifferentoscillatorcircuitsbasedontheapplication.
4. Designtheelectronic circuitsforthegivenspecificationsandforagivenapplication.
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| **CourseOutcomes** | Attheendof thiscoursethestudentwillbeableto: |
| CO1 | Knowabouttheusage ofequipment/components/softwaretoolsused toconductexperimentsinanalogcircuits.(L2) |
| CO2 | Conductthe experimentbasedonthe knowledgeacquiredin thetheoryaboutvarious analogcircuitsusingBJT/MOSFETstofindtheimportantparametersofthecircuitexperimentally.(L3) |
| CO3 | Analyzethegivenanalogcircuittofindrequiredimportantmetricsofittheoretically.(L4) |
| CO4 | Comparethe experimentalresultswiththatof theoretical onesand infer theconclusions.(L4) |
| CO5 | Designthecircuitforthegivenspecifications.(L6) |
| **CourseContent** | **List of Experiments:**1. Design and Analysis of Darlington pair.
2. Frequency response of CE–CC multistage Amplifier
3. Design and Analysis of Cascade Amplifier.
4. Frequency Response of Differential Amplifier
5. Design and Analysis of any two topologies of feedback amplifies and find the frequency response of it.
6. Design and Analysis of Class A power amplifier.
7. Design and Analysis of Class AB amplifier.
8. Design and Analysis of RC phase shift oscillator.
9. Design and Analysis of LC Oscillator
10. Frequency Response of Single Tuned amplifier
11. Design a Bistable Multivibrator and analyze the effect of commutating capacitors and draw the waveforms at base and collector of transistors.
12. Design an Astable Multivibrator and draw the wave forms at base and collector of transistors.
13. Design a Mono-stable Multivibrator and draw the input and output waveforms.
14. Draw the response of Schmitt trigger for gain of greaterthan and less than one.

**Note:**Atleast 12 experiments shall be performed.Faculty members who are handling the laboratory shall see that students are given design specifications for a given circuit appropriately and monitor the design and analysis aspects of the circuit. |

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| Contribution of Course Outcomes towards achievement of Program Outcomes (3-High, 2-Medium, 1-Low) |
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| CO1 | 3 | 3 | 2 | - | - | - | - | - | 2 | - | - | - | 3 | 2 |
| CO2 | 3 | 3 | 3 | 3 | - | - | - | - | 2 | - | - | - | 3 | 2 |
| CO3 | 3 | 3 | - | - | - | - | - | - | 2 | - | - | 2 | 3 | 2 |
| CO4 | 3 | 3 | 3 | - | - | - | - | - | 2 | - | - | - | 3 | 2 |
| CO5 | 3 | 3 | - | - | - | - | - | - | 2 | - | - | 3 | 3 | 2 |