

COURSE TITLE	: ELECTRONIC CIRCUITS LAB
COURSE CODE	: 3047
COURSE CATEGORY	: B
PERIODS/WEEK	: 5
PERIODS/SEMESTER	: 75
CREDITS	: 3

LIST OF EXPERIMENTS

On completion of the course the student will be able:

- 1.0 To construct and test various electronics circuits using discrete components
- 1.1 To design and construct (i) RC differentiator circuit (ii) RC integrator circuit and study its pulse response (for 3 sets of RC values)
- 1.2 To setup a transistor as switch and observe its performance
- 1.3 To setup a single stage RC coupled CE amplifier with potential divider bias and
 - (i) observe the phase difference between input and output wave forms
 - (ii) Measure mid band gain
 - (iii) Plot its frequency response and determine the band width
- 1.4 To construct an emitter follower circuit and
 - (i) Measure the gain
 - (ii) Plot its input / output waveforms
- 1.5 To construct a single stage tuned amplifier circuit and
 - (i) Plot its frequency response
 - (ii) Measure its peak gain and bandwidth
- 1.6 To setup a RC phase shift oscillator and
 - (i) Plot the output waveform
 - (ii) Measure the frequency of oscillation
- 1.7 To construct a Wien bridge oscillator and
 - (i) Plot the output waveform
 - (ii) Measure the frequency of oscillation
- 1.8 To setup a Hartley oscillator and
 - (i) Plot the output waveform
 - (ii) Measure the frequency of oscillation
- 1.9 To setup a Colpitts oscillator and
 - (i) Plot the output waveform
 - (ii) Measure the frequency of oscillation
- 1.10 To construct a transistor astable multivibrator circuit and
 - (i) Plot the collector and base waveforms
 - (ii) Measure the frequency of oscillation
- 1.11 To setup a transistor monostable multivibrator circuit
 - (i) Plot the collector and base waveforms
 - (ii) Measure the time period (delay)
- 1.12 To setup a Schmitt trigger circuit using BJT and
 - (i) Plot the input output waveforms
 - (ii) Measure the UTP and LTP voltages

- 1.13 To setup a UJT relaxation oscillator and plot the waveforms at emitter, base1 and base2
- 1.14 To construct a two stage RC coupled Amplifier
 - (i) Plot the frequency response curve
 - (ii) Measure the mid band gain
 - (iii) Find the 3dB bandwidth
- 1.15 To setup a two stage direct coupled amplifier
 - (i) Plot the frequency response curve
 - (ii) Find the gain and bandwidth