

Reg. No. : .....

Name : .....

Third Semester B.Tech. Degree Examination, September 2014

(2008 Scheme)

(Special Supplementary)

08.304 : ELECTRONIC CIRCUITS (R, F)

Time : 3 Hours

Max. Marks : 100

PART - A

Answer **all** questions.

1. Define Peak Inverse Voltage. How PIV for a full wave rectifier comes to  $2 V_m$  ?
2. Draw the circuit diagram and output waveform of a double side clipper.
3. Differentiate between online and offline UPS.
4. Explain how Barkhausen Criterion is satisfied in RC phase shift oscillator.
5. Write a note on feedback in amplifiers.
6. The trigger pulse given for a bistable MV is 4 KHz. What will be the output frequency of the multivibrator ?
7. Why 555 is called a timer IC ?
8. Define CMRR.
9. Differentiate between active and passive filters.
10. Write a note on band rejection filters. (4×10=40 Marks)



## PART - B

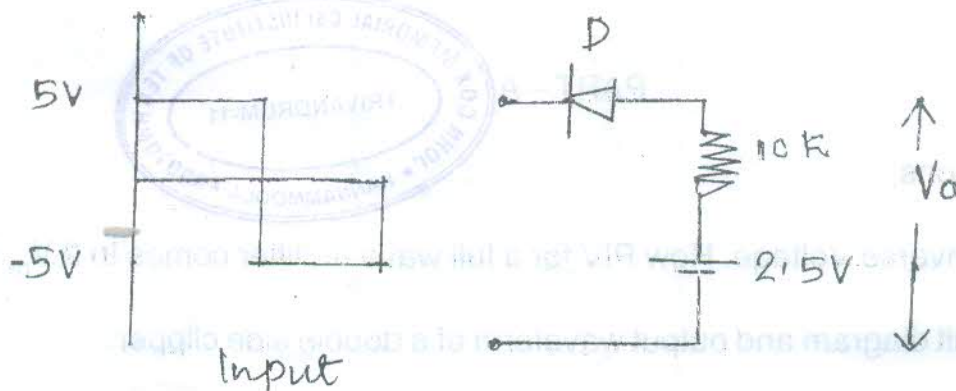
Answer **any one** question from **each** Module.

## Module - I

11. A pure DC voltage of 6 V needed. Design and draw the detailed circuit diagram showing all the component values. The input voltage is 230 V, 50 Hz supply mains. 20

OR

12. a) Draw the output waveform, for given input waveform. 12



- b) Write a note on inverters. 8

## Module - II

13. a) Explain the frequency response of RC coupled amplifier, with the help of schematics. 14

- b) What are the advantages of voltage divider bias ? 6

OR

14. a) Describe the working of a Monostable multivibrator with help of waveforms. 14

- b) Write down the expression of frequency for a Wein bridge oscillator. Specify each terms. 6

## Module - III

15. a) Design a summing amplifier to obtain the output  $V_0 = 2V_1 + 3V_2 + 4V_3$ .  $V_1, V_2, V_3$  - Inputs. 14

- b) Discuss about ideal OP AMP. 6

OR

16. Design and draw the circuit of a high pass Butterworth filter for a cut off freq. of 4 kHz. 20