

FACULTY OF SCIENCE

B.Sc. III – Semester (CBCS) Examination, November / December 2018

Subject : ELECTRONICS (Analog Circuits)

Paper – III (DSC)

Time : 3 hours

Max. Marks : 80

Part – A (5 X 4 = 20 Marks)
(Short Answer Type)

Note : Answer any Five of the following questions.

- 1 Explain choke input filter.
- 2 What is Regulation? Define Ripple factor.
- 3 Draw and explain the block diagram of regulated power supply.
- 4 Explain briefly about three terminal IC regulators.
- 5 Briefly discuss about the classification of amplifiers.
- 6 Explain positive and negative feedback in amplifiers.
- 7 Obtain expression for Barkhausen criterion for sustained oscillations.
- 8 Explain Astable multivibrator.

Part – B (4 X 15 = 60 Marks)
(Essay Answer Type)

Note : Answer all from the following questions.

- 9 a) Draw the circuit diagram of an L-section filter and derive equation for its ripple factor.

OR

- b) Draw the circuit diagram of bridge rectifier and explain its circuit action and derive an expression for efficiency and ripple factor.

- 10 a) Explain Series and Shunt transistor regulated power supplies.

OR

- b) Explain principle and working of Switch Mode Power Supply (SMPS).

- 11 a) Draw the circuit diagram of single stage RC coupled amplifier and explain its frequency response curve.

OR

- b) Explain the working of an Emitter follower and mention its uses.

- 12 a) Describe the working of Hartley Oscillator and obtain an expression for the frequency of oscillations.

OR

- b) Explain Monostable multivibrator and draw the circuit diagram and relevant waveforms.