

Code No. 3129

FACULTY OF SCIENCE

B.Sc. IV-Semester (CBCS) Examination, May / June 2019

Subject : Electronics

Paper – IV : Linear integrated Circuits and Basics of Communication (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 Give Ideal characteristics and OP-Amplifier.
- 2 Explain how voltage regulation can be achieved using OP-Amp?
- 3 Explain different types of modulation methods.
- 4 Write about PAM & PCM.
- 5 Describe how an Op-Amp can be used as Inverting Amplifier?
- 6 Draw the circuit of Astable multi vibrator using IC-555.
- 7 Discuss the need for modulation and define Modulation Index.
- 8 Discuss the operation of FM discriminator.

PART – B (4 x 15 = 60 Marks)

(Essay Answer Type)

Note: Answer ALL the questions.

- 9 (a) Explain the working of OP-Amp as (i) Comparator, (ii) Differentiator and (iii) Integrator

OR

- (b) Draw the circuit diagram of Summing amplifier using OP-Amp and explain its working, derive an expression for its output voltage.

- 10 (a) Explain the working of Wien Bridge Oscillator with circuit diagram and obtain an expression for its frequency.

OR

- (b) Describe analog computation circuit using OP-Amp to Solve Simple Second order differential equation with an example.

- 11 (a) Define amplitude Modulation and obtain an expression for Amplitude modulated wave.

OR

- (b) What is dc modulation? Explain the working of Diode detector for AM waves.

- 12 (a) Draw the block diagram of FM receiver. How does it differ from AM receiver.

OR

- (b) Explain frequency modulation (FM) and give the analysis of FM modulated wave.
