Code No. 8081

FACULTY OF SCIENCE

B.Sc. (CBCS) III – Semester Examination, November / December 2019

SUBJECT : ELECTRONICS
(DSC) Paper - III
(Analog Circuits)

Time : 3 Hours Max Marks : 80

PART – A (5x4 = 20 Marks)
(Short Answer Type)

Note : All the following FIVE question. Each question carries 4 marks.

1 Explain about choke input filter.

2 A full wave rectifier uses two diodes with load resistance of 100Ω Each diode is having negligible forward resistance. Find efficiency of this full-wave rectifier.

3 Explain working of switch mode power supply (SMPS)

4 Explain about three terminal 78XX IC regulator.

5 Explain the mechanism of current flow in a NPN transistor.

6 Calculate the gain of a negative feedback amplifier with an internal gain of A = 100 and feedback factor β =1/1000.

7 Write a note on RC Phase Shift Oscillator.

8 Write about Astable multivibrator.

PART – B (4x15 = 60 Marks)
(Essay Answer Type)

Note : All the following three question. Each question carries 15 marks.

9 a. Explain the working of a Half-wave rectifier with a neat diagram and compare with full-wave rectifier.

OR

b. Draw the circuit diagram of L-section filter and derive equation for its ripple factor.

10. a. Explain Series and shunt transistor regulated power supplies.

OR

b. Explain principle and working of Uninterruptible Power Supply (UPS).

11. a. What is feedback? Discuss the effect of negative feedback on gain, bandwidth, noise, input and output impedances

OR

b. Explain the working of Emitter follower and mention its advantages.

12. a. Describe the working of Hartley Oscillator and derive an expression for the frequency of oscillations.

OR

b. Explain the Monostable multivibrator and draw relevant wave forms.

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