R-16

Code:4305/R/BL

Faculty of Science

B.Sc (Electronics) II-Year, CBCS-IV Semester Regular/Backlog Examinations -January, 2021

PAPER: LINEAR INTEGRATED CIRCUITS AND BASICS OF COMMUNICATION

Time: 2 Hours

Max Marks: 80

I. Answer any **FOUR** of the following questions (4x20=80 Marks)

1. Draw the Block diagram of Op-Amp and explain in detail. Describe the parameters of op-amp.
2. Draw the circuit diagram of Op-Amp in inverting and non-mode. Derive the equation for its voltage gain in both modes.
3. Solve the differential equation $\frac{d^2x(t)}{dx^2} + 2\frac{dx(t)}{dx} + 3\,x(t) = 4$ using electronic analogue computation.
4. Draw the circuit diagram of an Astable multivibrator using op-amp and describe its working with the help of waveforms. Derive an expression for its frequency of oscillations.
5. Define amplitude Modulation and obtain an expression for amplitude modulated wave.
6. What is modulation? Explain the working of diode detector for AM waves.
7. Describe working of ratio detection of FM wave. What are its advantages?
8. Describe the following (i) PAM, (ii)PCM (iii)PWM.

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