Course Code: 1940417 **Roll No:** **MLRS- R19**

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

II B.Tech II Sem Supply End Examination, March 2022

Linear IC Applications

(ECE)

Time: 3 Hours. **Max. Marks: 70**

Note: 1. Answer any FIVEquestions.

2. Each question carries 14 marks and may have a, b as sub questions.

1	a)	Explain the Differential Amplifier circuit using Op-Amp	7M	CO1	BL5
	b)	Define Slew Rate and how it effects Op- Amp performance explain	7M	CO1	BL1
2	a)	Define CMRR, Input offset current, Gain, Bandwidth,and Input offset Voltage	7M	CO1	BL1
	b)	Write the characteristics of ideal and practical Op -Amp	7M	CO1	BL4
3	a)	Compare the difference between Differentiator and Integrator	7M	CO2	BL2
	b)	Explain Bistable multivibrator in detail using 741	7M	CO2	BL2
4	a)	Explain about the Schmitt Trigger and how it can be used as a wave form generator	7M	CO2	BL2
	b)	Explain about the RC Phase Shift Oscillator and Derive the expression for frequency of oscillator.	7M	CO3	BL2
5	a)	What is VCO and draw and explain the functional block diagram of VCO	7M	CO3	BL1
	b)	Draw the circuit diagram of first order high pass filter and its frequency response and derive the expression for output voltage	7M	CO3	BL6
6	a)	Configure a 555 timer as Astable multivibrator and Explain.	7M	CO4	BL3
	b)	Draw and Explain the basic block diagram of PLL	7M	CO4	BL2
7	a)	Derive the expression for Capture range and lock in range	7M	CO4	BL5
	b)	Explain 4-bit R -2R ladder type D/A converter in detail	7M	CO5	BL2
8	a)	With neat diagram explain about the DAC in detail	7M	CO5	BL4
	b)	Draw the block diagram of parallel Comparator type ADC and explain the operationof it.	7M	CO5	BL6

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