CBCS SCHEME

USN | | | | | | | | | | |

18EE46

Fourth Semester B.E. Degree Examination, July/August 2021
Operational Amplifiers and Linear IC's

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions.***

1	a.	Explain block diagram representation of a typical op-amp.	(08 Marks)
	b.	Explain open loop op-amp configurations.	(12 Marks)
2	a.	Explain electrical characteristics of an ideal op-amp.	(08 Marks)
	b.	Explain summing, scaling and averaging of an inverting amplifier.	(12 Marks)
3	a.	With neat diagram, explain first order low pass Butterworth filter.	(10 Marks)
	b.	Design a wide band pass filter with f_L = 200Hz, f_H = 1KHz and a pass band gain = 4. Draw the frequency response of the filter and calculate the Q for the filter.	(10 Marks)
4	a.	Explain voltage follower regulator.	(10 Marks)
	b.	Explain integrated circuits regulator.	(10 Marks)
5	a.	Explain triangulation /rectangular wave generation.	(12 Marks)
	b.	Explain RC phase shift oscillators.	(08 Marks)
6	a.	With neat diagram, explain inverting Schmitt trigger circuit.	(10 Marks)
	b.	Explain voltage-frequency converter.	(10 Marks)
7	a.	Explain R-2R D/A converter.	(10 Marks)
	b.	Explain full wave precition rectifier.	(10 Marks)
8	a.	Explain successive approximation ADC.	(10 Marks)
	b.	Explain integrated circuit 8 bit D/A converter.	(10 Marks)
9	a.	Explain phase locked loop.	(10 Marks)
	b.	Briefly explain performance factors of PLL.	(10 Marks)
10	a.	Explain internal architecture of 555 timer.	(10 Marks)
	b.	Explain Monostable multivibration.	(10 Marks)

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