Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY PDDC-SEMESTER IV-• EXAMINATION - SUMMER - 2016

Subject Code:X41103	Date:21/11/2016

Subject Name: Integrated Circuits and Application

Time:02:30 PM to 5:00 PM Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1	(a) (b)	The state of the s	07 07
Q.2	(a)	100 100 100 100 100 100 100 100 100 100	07
	(b)		07
	(b)	77.77	07
Q.3	(a) (b)	Explain Differential Amplifier in detail. Derive for R _{if} , R _{of} and Gain. What are the differences between AC amplifier and DC Amplifier? Explain Peaking Amplifier in detail with required equation. OR	07 07
Q.3	(a) (b)	Explain Summing, Scaling and Averaging Amplifier in detail.	07 07
Q.4	(a)	Explain Voltage to current converter with floating Load. Explain any one application of it.	07
	(b)	Explain Schmitt Trigger circuit in detail with required waveforms. OR	07
Q.4	(a) (b)	Explain Sample and Hold circuit in detail with required diagram. Explain Trans-conductance amplifier in brief	07 07
Q.5	(a) (b)	Explain block diagram of 555 Timer. Explain any one application of it. Explain 78XX and 79XX voltage Regulator in detail with required diagram. OR	07 07
Q.5	(a)	What is Magnitude Scaling? Why it requires? Explain Sallen & Key circuit in brief.	07
	(b)	What is Frequency Scaling? Why it requires? Explain Chebyshev filter characteristic in brief.	07