Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER-III • EXAMINATION – WINTER 2013

Subject Code: X 30902 Date: 20-12-2013

Subject Name: Analog and Digital Electronics

Time: 10.30 am - 01.00 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)	Derive equation for OPAMP as a non-inverting amplifier. Explain block diagram of OPAMP.	07 07
Q.2	(a) (b)	Explain OPAMP as an integrator with necessary waveforms. Write a short note on zero crossing detector using OPAMP. OR	07 07
	(b)	Write a short note on Adder circuit using OPAMP.	07
Q.3	(a) (b)	Explain block diagram of 555 timer. Explain pin diagram of 78XX and 79XX series.	07 07
0.2	(-)	OR	07
Q.3	(a) (b)	Explain pin diagram of 555 timer. Write short note on LM 317 voltage regulator IC.	07 07
Q.4	(a)	What is number system? Explain how to convert hexadecimal number into binary number with suitable example.	07
	(b)	Explain De-Morgan's laws. OR	07
Q.4	(a)	What is a universal gate? Explain with suitable example.	07
C	(b)	Write a short note on K map with example.	07
Q.5	(a)	Explain TTL logic with suitable example.	07
	(b)	Write a short note on half adder circuit with truth table.	07
		OR	
Q.5	(a)	Write a short note on R-S flip flop with truth table.	07
	(b)	Enlist different types of shift register. Explain any one.	07
