Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (OLD) - EXAMINATION - SUMMER 2017 Subject Code: 160801 Date: 05/05/2017 **Subject Name: Integrated Circuits & Application** Time: 10:30 AM to 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. Define Op-Amp. Draw and explain block diagram representation of a typical 0.1 (a) 07 **(b)** Explain Sample and Hold Circuit in detail. **07 Q.2** Explain the operation of V-I Converter with grounded load. 07 (a) **(b)** Explain Astable Multivibrator using Op-Amp. **07** Explain Precision Full Wave Rectifier in detail. **(b)** 07 0.3 (a) Draw and explain the functional block diagram of IC555 timer. **07 (b)** List the advantages of negative feedback. Explain any one application of Op-**07** Amp in Open Loop Configuration with output waveforms. OR Explain Schmitt Trigger circuit using Op-Amp. 07 0.3 (a) Explain the Practical Integrator circuit. Also draw its frequency response. **07 (b)** Draw the Block diagram of PLL and explain its each block. **07 Q.4** (a) Draw and explain 3 input Summing, Scaling and Averaging circuit using **(b)** 07 Op-Amp. OR Explain Peaking Amplifier in detail. **07** 0.4 (a) Explain Instrumentation Amplifier with suitable example. **(b) 07 Q.5** Write a short note on Very High Input Impedance Circuit. 07 (a) Draw and explain Ideal Voltage Transfer Curve for Op-Amp. **07 (b)**

Define Error Voltage and Derive its equation for Op-Amp.

Write short note on Basic Log Amplifier using Diode.

Q.5

(a)

(b)

07

07