

C.U.SHAH UNIVERSITY

Summer Examination-2016

Subject Name: Linear Integrated Circuits

Subject Code: 4TE04LIC1

Branch: B.Tech (EC)

Semester: 4

Date: 18/05/2016

Time: 2:30 To 5:30

Marks :70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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- Q-1 Define the following terms: (14)**
- a) Input Bias Current.
 - b) Output Offset Voltage.
 - c) Slew Rate.
 - d) Supply Voltage Rejection Ratio.
 - e) Input Offset Voltage.
 - f) Common Mode Rejection Ratio.
 - g) Unity Gain Bandwidth.
 - h) Input Offset Current.
 - i) Thermal Drift.
 - j) Linear ICs.
 - k) Digital ICs.
 - l) Window Detector.
 - m) Zero Crossing Detector.
 - n) Open Loop Comparator.

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
- (a) Draw the block schematic of an op-amp and explain the function of each stage.
 - (b) Explain AC analysis of the Dual Input Balanced Output Differential Amplifier in detail.
- Q-3 Attempt all questions (14)**
- (a) Explain in detail the Differential Amplifier with Constant Current Bias circuit.
 - (b) Write a note on Current Mirror circuit used in differential amplifier.
- Q-4 Attempt all questions (14)**
- (a) Draw schematic of AC inverting amplifier single supply based op-amp. Explain



