

Roll No.

23346

**M. E./M. Tech. 2nd Semester (Emb. Sys
& VLSI Dgn) Examination – June, 2013**

MIXED SIGNAL EMBEDDED SYSTEM

Paper : VL-516

Time : Three Hours]

[Maximum Marks : 100

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) What do you mean by Calibration ? With the help of block diagram explain Sensor Calibration method ? 10
- (b) Enumerate key factors to be kept in mind to determine Processor throughout. 10
2. (a) Explain reference voltage and resolution w. r. t. Analog to Digital Convertor. 10
- (b) Explain briefly high speed ADC design consideration with the help of diagram. 10
3. (a) How ADC module is used for LIGO ? 10

- (b) Explain requirement of PLL. With the help of diagram explain design of frequency synthesizer. 10
4. (a) Discuss working of PLL with current driven oscillator. 10
 (b) Explain briefly PLL synthesizer oscillator by μC 14046B. 10
5. (a) What do you mean by Sensors ? Explain importance of various types of Sensors. 10
 (b) Discuss interfacing of temperature sensor with the microprocessor with the help of suitable diagram. 10
6. (a) Discuss working principle of LCD panel. Also explain how response time affects its working. 10
 (b) Write briefly on Infrared detection working principle. 10
7. (a) Explain measuring period versus frequency with the help of diagram of each. 10
 (b) Explain working of voltage to frequency converters. Also enumerate its applications. 10
8. Write short notes on any *two* : 10 × 2
 (a) ETPLL,
 (b) Interfacing of pressure sensors,
 (c) Static waveforms.
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