

23346

M. Tech. 2nd Semester (Embedded System and Design)

Examination, May-2015

MIXED SIGNAL EMBEDDED SYSTEM

Paper-MT-VLES-516

Time allowed : 3 hours]

[Maximum marks : 100

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

1. (a) Discuss in detail other system considerations for system design. 10
(b) What do you understand by Sample rate and aliasing ? Briefly explain the methods when the input signal is greater than the measuring capability. 10
2. (a) What do you mean by calibration ? With the help of block diagram explain Sensor calibration method. 10
(b) How DAC module is used for LIGO ? 10
3. (a) Explain briefly High speed DAC design with the help of suitable diagram. 10
(b) Explain requirement of PLL. With the help of diagram explain Design of frequency synthesizer. 10
4. (a) Discuss working of PLL with Voltage driven oscillator. 10

- (b) Explain briefly PLL synthesizer oscillator by MC 14046B. 10
5. (a) What do you mean by sensors ? Explain importance of various types of sensors. 10
- (b) Explain working of displacement transducer in the embedded system environment. 10
6. (a) Discuss working principle of LCD panel. Also tabulate different types of LCD panels and their applications. 10
- (b) Explain LCD connection method with the help of neat diagram. 10
7. (a) What do you mean by mixing ? Explain how frequency mixer is used to increase the frequency shift with the help of suitable diagram. 10
- (b) Explain how accuracy can be extended with limited resolution ? 10
8. Write short notes on any *two* : 10×2
- (a) ETPLL
- (b) Mixed signal design for radar application
- (c) Static waveforms.