

Code: 17D06201

M.Tech I Semester Regular & Supplementary Examinations January/February 2019

EMBEDDED SYSTEM DESIGN

(Common to ES, VLSI&ES, ES&VLSI and VLSI&ESD)

(For students admitted in 2017 & 2018 only)

Time: 3 hours

Max. Marks: 60

Answer all the questions

- 1 List the features of ISA models and describe the various types of ISA models.

OR

- 2 (a) Describe the various approaches to embedded systems.
(b) Explain the anatomy of a typical small microcontroller.

- 3 Describe the instruction set of MSP430.

OR

- 4 Discuss the use of interrupts and explain the framework of interrupt service routine.

- 5 Describe the hardware and software approaches to switch debouncing.

OR

- 6 (a) Explain the features of Timer-B with block diagram.
(b) Explain the construction and working of liquid crystal displays.

- 7 Describe the operation of a thermometer using SPI in various modes.

OR

- 8 Discuss the formats and standards for asynchronous serial communication.

- 9 (a) Discuss the salient features of code composer studio.
(b) Explain about I²C protocol.

OR

- 10 (a) Write the program for MSP430 to demonstrate blinking LED.
(b) Describe UART communication through software.
