Reg. No. : | | | | | | | | | | |

Question Paper Code: 31563

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Sixth Semester

Electronics and Instrumentation Engineering

01UEI603 - REAL TIME EMBEDDED SYSTEMS ARCHITECTURE

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the addressing modes of 8051.
2. List the features of 8051 microcontroller.
3. What is assembly language program?
4. Define debugging.
5. Distinguish between CISC and RISC.
6. Define DMA.
7. Differentiate between RS232 and RS485.
8. Define CAN bus.
9. What is meant by context switch?
10. Define non maskable interrupts.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the different serial communication modes in 8051. (16)

Or

(b) Explain the interrupt structure of 8051 microcontroller, explain how interrupts are prioritized. (16)

12. (a) With a neat circuit diagram explain how a 4 X 4 keypad is interfaced with 8051 microcontroller and write 8051 ALP for keypad scanning. (16)

Or

(b) Illustrate the interfacing of stepper motor control with 8051 and explain in detail. (16)

13. (a) Discuss the methods in memory management. (16)

Or

(b) Explain in detail about the build process for embedded systems. (16)

14. (a) Explain memory and IO devices interfacing (Memory Mapped I/O). (16)

Or

(b) List the parallel communication bus and explain PCI / PCI/X bus and ISA bus. (16)

15. (a) Explain how thread and process are used in embedded system . (16)

Or

(b) Summarize the any two concept of semaphore. (16)