

(CS 424 (E)/IT 424 (C))

IV/IV B.Tech. DEGREE EXAMINATION, APRIL 2005.

(Examination at the end of Fourth Year of
4 Year Course)

Second Semester

EMBEDDED SYSTEMS

Time : Three hours Maximum : 70 marks

All questions carry equal marks.

Answer Question No. 1 compulsorily.

(1 × 14 = 14)

Answer ONE question from each Unit.

(4 × 14 = 56)

1.
 - (a) Mention various types of chip packages.
 - (b) What are the different power-saving modes of embedded system microprocessor?
 - (c) Define cross assembler.
 - (d) What are locators?
 - (e) Explain about RISC technology.
 - (f) Define emulator.
 - (g) What are hard and soft real-time systems?
 - (h) Define cross compiler.

- (i) What is a non reentrant function?
- (j) What is the function of a scheduler?
- (k) List few processors used in embedded systems.
- (l) Write truth table for a three-input AND gate.
- (m) Discuss about an address space.
- (n) Explain Bus handshaking.

UNIT I

2. (a) Explain about UART. (6)
- (b) Explain the working of DMA. (8)

Or

- (c) Explain in detail about Read-Only-Memory and ROM variants. (14)

UNIT II

3. (a) Explain Read-Time-Operating-System architecture. (6)
- (b) Mention the characteristics of various software architectures. (8)

Or

- (c) Explain the usage of semaphores to solve the shared-data problem. (14)

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UNIT III

4. (a) Explain about interrupt routines in an RTOS environment. (8)
- (b) Explain encapsulating queues with an example. (6)

Or

- (c) Discuss the design principles of embedded systems. (14)

UNIT IV

5. (a) Explain different ways of getting embedded software into the target system. (8)
- (b) Write short notes on monitors. (6)

Or

- (c) Discuss the goals of the testing process. (8)
- (d) Discuss about logic analyzers. (6)

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