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

# Question Paper Code : Q 2285

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Sixth Semester

Computer Science and Engineering

IT 1353 — EMBEDDED SYSTEMS

(Common to Information Technology)

(Common to Eighth Semester Electronics and Communication Engineering)

(Regulation 2004)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Give the classification of an embedded system.
2. What are the different models employed for embedded software design?
3. Differentiate parallel port and serial port.
4. What is system clock?
5. What are the advantages of high-level language over assembly language?
6. Give suitable example for infinite loop.
7. Why does an RTOS functions provide two modes, user mode and supervisory mode?
8. List three ways in which an RTOS handle the ISRs in a multitasking environment.
9. How the task is Scheduled in Wind?
10. When will the Synchronous context switches occur?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss the contents of ROM image. (8)

(ii) What are the different types of display systems used in embedded systems? (8)

Or

(b) (i) What is SOC and explain it with an examples? (8)

(ii) How are softwares embedded into the system? Explain with an example. (8)

12. (a) Discuss in detail synchronous and asynchronous serial devices with examples and give its characteristics. (16)

Or

(b) (i) Explain the ISA bus. (8)

(ii) Explain the PCI bus. (8)

13. (a) Explain in detail the implementation and functions of QUEUE in embedded C language. (16)

Or

(b) Explain LISTS in embedded C language in detail. (16)

14. (a) Explain in detail critical section service by a preemptive scheduler. (16)

Or

(b) Write detailed notes on Inter Process Communication. (16)

15. (a) Explain Mailbox related functions in MUCOS. (16)

Or

(b) Explain Queue related functions in MUCOS. (16)

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