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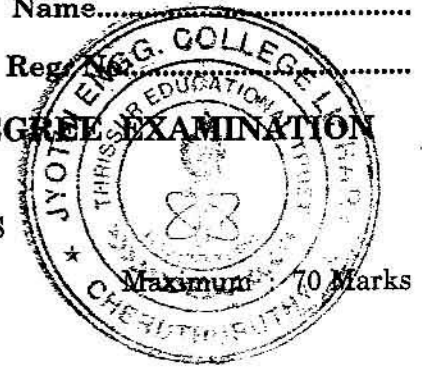
Name.....

Reg. No.....

**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
NOVEMBER 2013**

IT 09 503—EMBEDDED SYSTEMS

Time : Three Hours



Part A

Answer all the questions.

1. What are the advantages of embedded system ?
2. Define device driver.
3. What are the classifications of I/O devices ?
4. Define In-line assembly.
5. Define Task and Task state.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

6. Explain Embedded micro-controller.
7. Explain software tools in designing of an Embedded system.
8. Explain the following parallel communication device PCI and PCI/X.
9. Write about semaphores with types in detail.
10. Explain the critical section service by a pre-emptive scheduler.
11. Explain the case study of an embedded system for a smart card.

(4 × 5 = 20 marks)

Part C

Answer all the questions.

12. (a) Explain the components of exemplary embedded system.

Or

- (b) Explain how software is embedded into a system.

13. (a) Explain the various bus structures used in embedded systems.

Or

- (b) Explain the working of timers and counters in detail.

Turn over

14. (a) Explain the optimization of memory codes.

Or

(b) Explain cyclic scheduling with time slicing.

15. (a) Explain the three alternative systems in three RTOS for responding hardware source call with the diagram.

Or

(b) Explain remote procedure call with an example.

(4 × 10 = 40 marks)