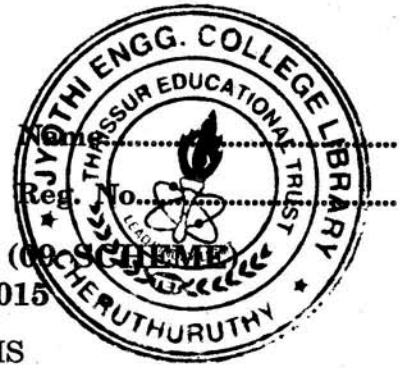C 80816

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**SIXTH SEMESTER B.TECH. (ENGINEERING) (09 SCHEME)
DEGREE EXAMINATION, APRIL 2015**

CS/PTCS 09 601—EMBEDDED SYSTEMS

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. Mention the design metrics of an embedded system.

2. Enumerate the benefits of pipelining.

3. What do you mean by storage permanence ?

4. What is the need for text and graphics in process modeling ?

5. Mention any two new challenges posed by cores to processor providers and users.

$(5 \times 2 = 10$ marks)

Part B

Answer any four questions.

6. Write a short note on VLIW architecture.

7. Explain in detail about working of timers and counters.

8. Explain in detail about memory management unit.

9. Write about the informal functional and non-functional specifications of a simple digital camera.

10. Write about the synchronization methods of concurrent process model.

11. Explain in detail about multilevel logic minimization.

$(4 \times 5 = 20$ marks)

Part C

Answer all questions.

12. (a) Discuss in detail about optimizing design metric and common design metrics in designing an embedded system.
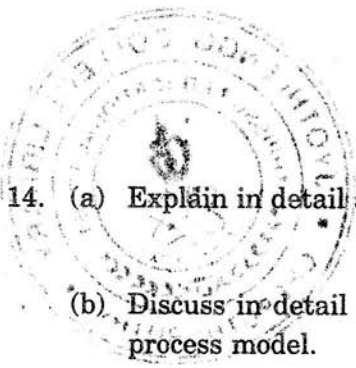
Or

(b) Explain in detail about the working of basic combinational and sequential logic design.

13. (a) Discuss in detail about cache mapping techniques.

Or

(b) Explain about microprocessor interfacing in detail.

Turn over

14. (a) Explain in detail about program state machine model.

Or

(b) Discuss in detail about create, terminate, suspend and resume operations of a concurrent process model.

15. (a) Explain in detail about the parallel evolution of compilation and synthesis.

Or

(b) Explain in detail about intellectual property cores.

(4 × 10 = 40 marks)