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Question Paper Code : 57241

B.E/B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Sixth Semester

Electronics and Communication Engineering

CS 6303 – COMPUTER ARCHITECTURE

(Common to Information Technology)

(And also common to Fifth Semester Elective – Electronics and Instrumentation Engineering, Instrumentation and Control Engineering, Fifth Semester – Robotics and Automation Engineering and Third Semester Computer Science and Engineering)

(Regulations 2013)

Time : Three Hours **Maximum : 100 Marks**

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. How to represent Instruction in a Computer System ?
2. Distinguish between auto increment and auto decrement addressing mode.
3. Define ALU.
4. What is Subword Parallelism ?
5. What are the advantages of pipelining ?
6. What is Exception ?
7. State the need for Instruction Level parallelism.
8. What is Fine grained Multithreading ?
9. Define Memory hierarchy.
10. State the advantages of virtual memory.

PART – B (5 × 16 = 80 Marks)

11. (a) Discuss about the various components of a computer system. (16)

OR

(b) Elaborate the different types of addressing modes with a suitable example. (16)

12. (a) Explain briefly about floating point addition and Subtraction algorithms. (16)

OR

(b) Define Booth Multiplication algorithm with suitable example. (16)

13. (a) What is pipelining ? Discuss about pipelined data path and control. (16)

OR

(b) Briefly explain about various categories of hazards with examples. (16)

14. (a) Explain in detail about Flynn's classification. (16)

OR

(b) Write short notes on : (16)

(i) Hardware multithreading

(ii) Multicore processors.

15. (a) Define Cache Memory ? Explain the Various Mapping Techniques associated with cache memories. (16)

OR

(b) Explain about DMA controller, with the help of a block diagram. (16)

Dr. C. JEGADHEESAN,
PRINCIPAL,
Chettinad College of Engineering & Technology,
PUGLIYUR - PO., KARUR (DT.) - 639 114.