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Question Paper Code : Q 2763

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

Seventh Semester

Electrical and Electronics Engineering

CS 1034 — COMPUTER ARCHITECTURE

(Common to Electronics and Instrumentation Engineering and Instrumentation and Control Engineering)

(Regulation 2004)

(Common to B.E. (Part-Time) Seventh Semester, Electrical and Electronics Engineering, Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 4 = 40 marks)

1. Compare between various data types.
2. Define the RTL and instruction cycle.
3. What is micro programmed control?
4. Mention the characteristics of RISC.
5. Define pipelining.
6. Bring out the applications of array processors.
7. What is the difference between programmed I/O and memory mapped I/O?
8. What does mean by cache coherence?
9. Mention the memory standards with its applications.
10. Give the importance of virtual memory.

PART B — (5 × 16 = 80 marks)

11. (a) (i) With a neat block diagram describe the basic computer design and organization. (10)
- (ii) What is micro-operation? Explain the various types of Micro operation with an example. (6)

Or

- (b) (i) Explain the various types of data types with an example. (8)
- (ii) What is interrupt cycle? Discuss the I/O interrupts with an example. (8)
12. (a) (i) What is address sequencing? Explain the design of control unit. (8)
- (ii) Describe the various types of instruction formats. (8)

Or

- (b) What do you mean by addressing mode? Describe the various types of addressing modes with an example. (16)
13. (a) (i) What is parallelism? Explain the concepts of parallelism. (8)
- (ii) With suitable example describe the RISC architecture. (8)

Or

- (b) (i) Explain the vector processing with help of neat block diagram. (8)
- (ii) Describe the computer arithmetic with suitable example. (8)
14. (a) Describe the following :
- (i) Peripheral devices. (8)
- (ii) DMA. (8)

Or

- (b) (i) What are the various important issues in I/O organization? Explain each with an example. (8)
- (ii) Explain the PC bus architecture with neat block diagram. (8)

15. (a) (i) What is memory? Explain the memory hierarchy with example. (8)
(ii) With a neat block diagram explain the memory management hardware. (8)

Or

- (b) (i) Write short notes on Cache memory. (8)
(ii) Explain the functions of main memory with its design. (8)

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