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Question Paper Code: 53124

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2010

Fifth Semester

Electronics and Communication Engineering

EC 2303 — COMPUTER ARCHITECTURE AND ORGANIZATION

(Regulation 2008)

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

PART A - (10 x 2 = 20 Marks)

- 1. What are the types of CPU organizations?
- 2. What are the different types of address instructions? Give examples to each.
- What is a coprocessor?
- 4. What is a datapath?
- 5. What are the design methods for control units?
- 6. What is a pipeline control?
- Define Random Access Memory.
- 8. What are the advantages of using virtual memory?
- Define an interrupt.
- 10. What are the possible data transfer modes available with peripherals.

PART B
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 (5 × 16 = 80 Marks)

11. (a) Explain the architecture of basic computer with neat diagram. (16)

Or

(b) Define addressing mode. Classify addressing modes and explain each type with example. (16)

Draw the diagram of a carry look ahead adder and explain the carry lookahead principle. Or Describe in detail booth's multiplication algorithms and its hardware (b) implementation. Explain the different type of hazards that can occur in a pipeline (16) 13. What are superscalar processors? Explain the typical structure of a (b) typical superscalar processor? Draw the neat sketch of memory hierarchy and explain the need of cache 14. (a) memory. Or Explain the organization of magnetic disk in detail. (16)(b) Explain the difference between CISC and RISC processors. (16)15, (a) (b) Explain the DMA mode of data transfer. (16)

