

DECEMBER 2015

P/ID 16152/PITSB

Time : Three hours

Maximum : 100 marks

PART A — (6 × 5 = 30 marks)

Answer any SIX of the Eight questions each in 200 words.

1. Name various data types and discuss how they are represented.
2. With register transfer language, Illustrate the swapping of contents of two registers, of 8 bit width.
3. How address sequencing is done?
4. What is RISC? State the advantages.
5. How a full adder circuit works in an ALU?
6. Among various interrupts, how priority is assigned and serviced?
7. State and explain the significance of cache memory.
8. What is arbitration? Where does it occur? State the solutions.

PART B — (7 × 10 = 70 marks)

Answer any SEVEN questions each in 500 words.

9. Describe different binary codes, their representations and conversions with relevant examples.
10. What are logical and shift operations? Illustrate with examples.
11. Write the steps, for the design of control unit.
12. How stack is organized and used for various operations?
13. Explain the principle of vector processing and array processors.
14. Highlight with examples on the operations of multiplication and division of numbers in ALU.
15. Why addressing mode is needed? Explain different types.
16. Explain how DMA works? What are the advantages and overhead.
17. How various memory units are organized and managed?