

MAY 2015

P/ID 17462/RCM/PCAN

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Explain the general register organization.

Or

(b) Explain any five typical program control instructions with their functionality.
2. (a) Explain about arithmetic pipeline.

Or

(b) Write short notes on RISC pipeline.
3. (a) Explain the addition with signed magnitude data.

Or

(b) Explain subtraction of floating point numbers with a flowchart.
4. (a) Write short notes on handshaking.

Or

(b) Explain briefly about the I/O processor.

5. (a) Discuss the main memory in detail.

Or

(b) Describe Inter process communication and synchronization.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. Explain the different data transfer and manipulation instructions with examples.
7. Describe stack organization with an example.
8. Explain about vector processing.
9. Describe the algorithm for arithmetic multiplication with an example. Also give the flow chart and hardware implementation for the same.
10. Explain floating-point arithmetic addition algorithm with the flowchart.
11. Discuss on asynchronous data transfer.
12. Explain in detail about the concept of virtual memory.
13. Write a detailed note on cache coherence.