

5633033

B.Tech. DEGREE EXAMINATION,
NOVEMBER/DECEMBER 2016

Third Semester

Computer Science and Engineering

COMPUTER ORGANIZATION AND ARCHITECTURE

(2013–2014 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

All questions carry equal marks.

1. What is the purpose of Accumulator?
2. What is the purpose of Memory Buffer Register (MBR)?
3. What is an instruction?
4. State the need for subroutines.
5. Define : interface.
6. What is DMA?

7. State the basic operation of cache memory.
8. What is RAM?
9. What is meant by hardwired control?
10. Why the data bus is bidirectional?

PART B — (5 × 11 = 55 marks)

Answer ALL questions, choosing ONE from each Unit.

All questions carry equal marks.

UNIT I

11. What is meant by addressing mode? Explain the different types addressing modes in detail.

Or

12. Explain about shift and rotate instructions in detail.

UNIT II

13. Explain about IA-32 instructions in detail.

Or

14. Discuss about IA-32 assembly language with examples.

UNIT III

15. Discuss about Pentium interrupt structure in detail.

Or

16. Explain about handling multiple devices in detail.

UNIT IV

17. What is virtual memory? Explain in detail.

Or

18. Explain about semiconductor RAM memories in detail.

UNIT V

19. Explain how the instructions are executed in a computer detail.

Or

20. What is meant by pipelining? Discuss in detail.
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