B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Fourth Semester

Branch—Computer Science and Engineering

COMPUTER ORGANIZATION (R)

(Prior to 2007 Admissions—Supplementary)

Time : Three Hours   Maximum : 100 Marks

Part A

*Answer **all** questions briefly.*
Each question carries 4 marks.

1. Describe the situation when single bus CPU organization is suited.

2. Describe the steps required for execution of an instruction.

3. Give the basic block diagram of a 4 bit serial adder.

4. Differentiate between restoring and non restoring division.

5. What are the factors that influence the design of a control unit ?

6. Differentiate between horizontal and vertical Micro instructions.

7. Write short notes on interleaved memories.

8. What are the advantages of dividing the main memory into different modules.

9. Write short notes on different types of plotters.

10. Differentiate between OMP and OCR.

(10 × 4 = 40 marks)

Part B

*Answer **either** (a) **or** (b) section of each module.*
Each full question carries 12 marks.

MODULE 1

11. (a) Explain in detail about CPU organization.   (12 marks)

Or

(b) Describe the different interconnection structures.   (12 marks)

MODULE 2

12. (a) Describe in detail the circuits required for arithmetic addition and subtraction.   (12 marks)

Or

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(b) Differentiate between fixed point arithmetic and floating point arithmetic circuits with examples.

(12 marks)

MODULE 3

13. (a) Briefly describe the different types of control units. Explain.

(12 marks)

Or

(b) What are the steps involved in processor logic design.

(12 marks)

MODULE 4

14. (a) What are the factors to be considered while designing a memory.

(12 marks)

Or

(b) Explain the concept of virtual memory in detail.

(12 marks)

MODULE 5

15. (a) Describe Rs. 232C standards in detail.

(12 marks)

Or

(b) Describe the different types of output devices you are familiar with.

(12 marks)

[5 × 12 = 60 marks]

[20

Time : Three

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