



CBCS SCHEME

18MT36

Third Semester B.E. Degree Examination, Jan./Feb. 2021 Computer Organization

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Write the basic functional units of a computer and explain function of each units with suitable diagram. (10 Marks)
- b. Write a note on byte addressability, Big-endian assignments, Little-Endian assignments. (10 Marks)

OR

- 2 a. Explain the basic operational concepts between the processor and memory. (12 Marks)
- b. How to measure the performance of the computer? Explain. (08 Marks)

Module-2

- 3 a. What is Addressing Mode? Explain any four types of addressing modes with examples. (10 Marks)
- b. Write a short note on following:
 - i) Assembly language
 - ii) Assembler directives. (10 Marks)

OR

- 4 a. Explain the concept of Basic Input/Output operation. (10 Marks)
- b. Define stack frame. Explain the concept in detail with suitable diagram. (10 Marks)

Module-3

- 5 a. What is I/O interface? With neat diagram, explain hardware arrangement of connecting I/P device to bus with its classification. (10 Marks)
- b. Define Interrupt. Explain the three techniques to enable and disable interrupts. (10 Marks)

OR

- 6 a. Define DMA. Explain the concept of DMA controller with suitable diagram along with registers and parameters. (10 Marks)
- b. Write a note on:
 - i) Single bus organization
 - ii) Difference between memory mapped I/O and I/O mapped I/O. (10 Marks)

Module-4

- 7 a. Discuss the Internal Organization of $2m \times 8$ asynchronous DRAM chip. (12 Marks)
- b. Explain following terms: i) PROM ii) EPROM iii) EEPROM (08 Marks)

OR

- 8 a. What is virtual memory? Explain the concept with suitable diagram. (12 Marks)
b. Mention the difference between synchronous DRAM and asynchronous DRAM's. (08 Marks)

Module-5

- 9 a. Explain the Internal operation of CPU by using the structure of single bus organization. (12 Marks)
b. Define memory Read operation. Mention the steps for memory read operation. (08 Marks)

OR

- 10 a. Explain following concepts:
i) Hardwired control unit (14 Marks)
ii) Micro programmed control unit. (06 Marks)
b. Describe the sequence of steps for execution of an instruction.

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