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15MT36

Third Semester B.E. Degree Examination, Aug./Sept.2020
Computer Organization

Time: 3 hrs.   Max. Marks: 80

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

Module-1

1 a. Explain the basic functional unit of a computer with suitable block diagram. (08 Marks)
   b. Explain connection between memory and processor with respective register. (08 Marks)

OR

2 a. What is meant by Computer? Explain any four types of computer with example. (08 Marks)
   b. Explain Big – endian and little Endian methods with suitable example. (08 Marks)

Module-2

3 a. Explain the principle of operation of stack with suitable instruction and diagram. (08 Marks)
   b. Define Addressing modes. Explain any three Addressing modes with examples. (08 Marks)

OR

4 a. Define Assembler. Explain Assembler directives along with general format. (08 Marks)
   b. Explain basic input / output operation with neat diagram. Mention difference between Memory mapped I/O and I/O mapped I/O. (08 Marks)

Module-3

5 a. Explain the concept of Direct Memoy Access with suitable figure. (08 Marks)
   b. Explain different methods used for eEnabling and disabling the interrupts. (08 Marks)

OR

6 a. Define Bus Arbitration. Explain the two approaches to bus arbitration. (08 Marks)
   b. Explain i) Daisy chain interrupt priority scheme   ii) Protocols of USB. (08 Marks)

Module-4

7 a. Define Virtual Memory. Explain how Virtual Memory works with suitable diagram. (08 Marks)
   b. Explain with neat diagram, working of Synchronous DRAM. (08 Marks)

OR

8 a. Explain direct mapping cache memory, with suitable figure. (08 Marks)
   b. With neat diagram, explain connection of memory to the processor. (08 Marks)

Module-5

9 a. Explain 3 – bus Organization of data path with suitable diagram. (08 Marks)
   b. Explain Hardwired Control Unit with suitable diagram. (08 Marks)

OR

10 a. With neat block diagram, explain a complete processor. (08 Marks)
   b. With neat block diagram, explain single bus organization. (08 Marks)

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