Total No. of Questions :5] *[Total No. of Printed Pages : 2*

Roll No .....

EC-302

B.E. III Semester

Examination, June 2016

Computer System Organization

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) What is Auxiliary memory?
   b) What is Register Transfer Language?
   c) Why address and data bus are multiplexed?
   d) List and explain most common addressing techniques with advantages and disadvantages.

OR

What is difference between instruction and micro operation? Explain in detail about various instruction formats.

Unit - II

2. a) What is the parity bit and why we use it?
   b) Explain 2's complement methods of subtraction of binary numbers.
   c) How the selection of address is done in control memory? Explain.
   d) What are the major design considerations in micro instruction sequencing?

OR

Write short notes on Microprogramming.

Unit - III

3. a) Define the term I/O interface.
   b) Define the term I/O processor.
   c) Write three modes of data transfer and explain any one of them.
   d) Briefly explain Daisy-chaining priority method of interrupt.

OR

Explain the isolated versus memory mapped I/O.

Unit - IV

4. a) What is hit ratio?
   b) Differentiate RAM and ROM.
   c) What is Content Addressable Memory? What are its advantages?
   d) Discuss various mapping procedures for transformation of data from main memory to cache memory.

OR

What is the use of virtual memory in computer system? Explain in detail, how the program is run through virtual memory.

Unit - V

5. a) What is pipelining?
   b) What is parallel processing?
   c) Discuss how parallelism can be achieved in conventional computer.
   d) Explain the pipelined architecture with its diagram.

OR

Describe the different types of interconnection structures.

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