

**CS/IT - 402****BE. IV Semester**

Examination, December 2015

**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 questions 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 registers?
- b) Write down the basic function of computer.
- c) Define implicit and register addressing mode with example.
- d) Explain Von-Neumann model for computation.

OR

Draw the block diagram of 8085 microprocessor.

**UNIT - II**

2. a) What is the parity bit and why we use it?
- b) How the selection of address is done in control memory.
- c) Draw and explain typical hardwired control unit.
- d) What are the major design considerations in micro instruction sequencing?

OR

Explain floating point representation with example.

**UNIT - III**

3. a) Define the term I/O interface.
- b) Define the term simplex, half duplex and full duplex.
- c) List the features of IOP.
- d) Explain the different modes of data transfer between the central computer and I/O devices.

OR

Explain handshaking method of asynchronous data transfer with diagram.

**UNIT - IV**

4. a) What is the use of virtual memory in computer system?
- b) Explain the operation of cache memory.
- c) What is Content Addressable Memory? What are its advantages?
- d) Draw block diagram of memory hierarchy in a computer system and explain in brief.

OR

Write short notes on 'Memory Management Hardware'.

**UNIT - V**

5. a) What is Flynn's Taxonomy?
- b) What is Multiprocessors?
- c) What is parallel processing? Explain the significance of parallel processing.
- d) Give a summary of arithmetic and logical operation that are defined for the vector architecture.

OR

What are the different forms available to establish an inter-connection network? Give the summary of those.