5. Define properties of semiconductor Memory and explain different types of Memory.

6. List and briefly define the possible states that define an instruction execution.

7. (a) What are the major functions of an I/O module?

   (b) Explain three techniques for performing I/O.

8. What is an operating system? Discuss the major types of OS scheduling.

9. Write short notes on any three of the following :

   (a) Boolean Algebra

   (b) Combinational Circuit

   (c) Sequential Circuit

   (d) DMA

   (e) DRAM

   (f) Magnetic Disk

   (g) Gates

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2020

Time : 3 Hours

Full Marks : 80

Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

Answer five questions in which Q. No. 1 is compulsory.

1. Choose the correct answer of the following :-

   (i) Floating point representation is uses to store :

   (a) Boolean values

   (b) Whole numbers

   (c) Real integers

   (d) Integers

   (ii) In computers, subtraction is generally carried out by :

   (a) 9's Complement

   (b) 10's Complement

   (c) 1's Complement

   (d) 2's Complement

(iii) What characteristic of RAM memory makes it not suitable for permanent storage ?

(a) Too slow

(b) Unreliable

(c) It is volatile

(d) Too Bulky

(iv) The idea of cache memory is based :

(a) On the property of locality of reference.

(b) On the heuristic 90-10 rule

(c) On the fact that references generally tend to cluster.

(d) All of the above

(v) Which of the following is lowest in memory hierarchy ?

(a) Cache Memory

(b) Secondary Memory

(c) Registers

(d) RAM

(vi) Virtual Memory consists of :

(a) Static RAM

(b) Dynamic RAM

(c) Magnetic Memory

(d) None of these

(vii) An n-bit unisoprocessor her :

(a) n-bit program counter

(b) n-bit address register

(c) n-bit ALU

(d) n-bit instruction register

(viii) The circuit converting binary data into decimal is :

(a) Encoder

(b) Multiplider

(c) Decoder

(d) Code converter

2. (a) Write difference between organization and architecture of Computer.

(b) Explain generations of Computer.

3. Define addressing mode and explain different types of addressing modes.

4. Explain pin configuration of Intel 8085.