

Instructions : 1. All questions are compulsory.
2. Figures to the right indicate full marks.

- I. A. State whether the following statements are True or False. (5x1= 5)
- Loop Buffer is very good for small loops or jumps.
 - RAM is volatile memory.
 - Top level of memory hierarchy is Register.
 - In Horizontal Micro-programming high degree of parallel operations is not possible.
 - Program Counter does not hold address of next instruction to be fetched.
- B. Answer the following. (5x1= 5)
- What is Interrupt Handler ?
 - What is ENIAC ?
 - What is Magnetic Disk ?
 - What is I/O Controller ?
 - What is Transducer ?
- II. A. Write a note on Transistors. (2)
- B. Explain the Instruction Cycle. (3)
- C. Explain the basic Computer operations and draw the block diagram of Computer. (5)
- OR
- D. Explain the Traditional Bus Architecture with the diagram. (5)
- III. A. Write a note on Optical Storage. (2)
- B. Explain Dynamic RAM Structure. (3)
- C. Explain Single cache organization with the diagram. (5)
- OR
- D. Explain Direct Mapping with an example. (5)
- IV. A. State any four basic operations of Interrupt Driven I/O technique. (2)
- B. Explain Simple FireWire Configuration. (3)
- C. Explain five functions of I/O Module. (5)
- OR
- D. Explain the operation of Direct Memory Access. (5)

V. A. Perform the following operations.

i.) $(+3) + (+4)$

ii.) $(-7) + (+5)$

(2x1)

B. Perform the following conversions.

i.) $(88)_{10} = (X)_2$

ii.) $(1001011)_2 = (X)_{10}$

(2x1.5=3)

C. Explain Indirect Addressing.

OR

D. Explain Program Status Word.

(5)

(5)

VI. A. State any four basic elements of Processor.

B. Explain Micro-program Word Length.

C. Explain CPU with Internal Bus.

OR

D. Explain Control Unit Organization.

(2)

(3)

(5)

(5)
