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2063

Second Year (T.D.C.) Science Examination, 2018

COMPUTER SCIENCE

(Computer Organization)

Paper–III

Time Allowed : Three Hours

Maximum Marks : 50

PART - A   [Marks : 10

Answer all questions (50 words each).

All questions carry equal marks.

PART - B   [Marks : 25

Answer *five* questions (250 words each).

Selecting *one* from each unit. All questions carry equal marks.

PART - C   [Marks : 15

Answer any *two* questions (300 words each).

All questions carry equal marks.

P.T.O.

PART-A

1. (i)   Define indirect address.

    (ii)   What is mean by buffer ?

    (iii) Define stack.

    (iv)   What is interrupts ?

    (v)   Define signed magnitude data.

    (vi)   What is handshaking ?

    (vii) Which is a non-volatile memory ?

    (viii) Define seek time.

    (ix)   What is an assembler ?

    (x)   Define interfacing. $10 \times 1 = 10$

PART-B

UNIT - I

2. Explain memory reference instructions.   5

OR

Discuss binary adder and three state bus buffers.   5

UNIT - II

3. Briefly explain arithmetic and instruction pipelines.   5

OR

Write a note on general register organization.   5

UNIT - III

4. Explain multiplication algorithm for signed magnitude data.

     5

OR

Explain the following :

(i) Interrupt initiated I/O

(ii) Asynchronous serial transfer   2+2.5=5

UNIT - IV

5. Write a note on memory organization.   5

OR

Explain cache memory.   5

UNIT - V

6. Explain addressing modes for 8085.   5

OR

Write a note on 8085 assembly instructions.   5

UNIT - I

7. (a) Discuss register transfer and micro operations.

   (b) What is instruction cycle ? Explain.   5+2.5

UNIT - II

8. Write short notes on :

   (i) Software and hardware interrupts

   (ii) Logical and shift instructions   2.5+5

UNIT - III

9. Explain the following :

   (i) Division algorithm

(ii)   DMA transfer   4.5+3

UNIT - IV

10. Explain virtual memory.   7.5

UNIT - V

11. Explain 8085 assembly language programming with examples.   7.5