BT-5/D-20

45116

COMPUTER ORGANIZATION AND ARCHITECTURE

Paper–CSE-307N

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *five* questions in all selecting at least *one* question from each unit.

UNIT–I

1. (a) Devise an algorithm for multiplication of two integers represented in sign-magnitude representation. 7

    (b) What is IEEE standard for representing floating-point numbers ? Represent (23.125) in single precision IEEE format. 8

2. (a) What is computer architecture? How is it different from computer organization ? 5

    (b) Devise an algorithm for division of two integers using non-restoring method. 10

UNIT–II

3. (a) What is interrupt ? Explain interrupt cycle with the help of flowchart. 7

    (b) What is microprogram sequencer ? Explain its working with suitable diagram. 8

4. (a) What are memory reference instructions? Explain their fetch-decode-execute cycle. 8

    (b) What are different registers in a computer? How are they connected through bus? Explain with diagram. 7

UNIT–III

5. (a) Explain stack based CPU organization with suitable diagram. Also explain the instruction formats of this organization. 7

    (b) What are displacement-based addressing modes? Explain them with their applications. 8

6. (a) What is RISC architecture? Explain the characteristics of RISC architecture. 7

    (b) What is array processor? Explain its working with suitable diagram. 8

UNIT–IV

7. (a) Explain isolated I/O and memory-mapped I/O. 7

    (b) What is strobe control transfer? Explain destination-initiated strobe control method with timing diagram. 8

8. (a) What is parallel priority interrupt structure? Explain its working with suitable diagram. 7

    (b) What is I/O Channel? Explain its working with suitable diagram. 8

Previous Pathshala