UNIT-1

1. Differentiate Computer Organization, Computer Design and Computer Architecture.

2. Explain about Register Transfer and memory Transfer in detail.

3. Draw a neat sketch of Arithmatic, logic and shift unit and explain all the operations with examples.

4. Draw a neat flowchart of instruction cycle and explain in detail.

5. What is the difference between a direct and indirect address instruction? How many references to memory are needed for each type of instruction to bring an operand into a processor register?

4. UNIT-2

1. Explain the differences between Hardwired control and Micro programmed control. Is it possible to have a hardwired control associated with a control memory.

2. Explain in detail about different addressing modes with numerical example.

3. What is stack? Explain about stack organization.

4. Explain different instruction formats.

5. Explain Data transfer and manipulation instructions.

6. Explain about program control instructions.

UNIT-3

1. Describe fixed point representation and floating point representation of unsigned numbers.

2. Convert the following decimal numbers to the bases indicated

a. 7562 to octal b.1938 to hexadecimal c.175 to binary.

3. Perform the subtraction with the following unsigned decimal numbers by taking the

10’s compliment of the subtrahend.

a. 5250-131 b.1753-8640 c.20-100 d.1200-50

4. Perform the subtraction with the following unsigned decimal numbers by taking the 2’s compliment of the subtrahend.

A.11010-10000 b.11010-1101 c.100-110000 d.1010100-1010100

5. Derive an algorithm in flowchart form for adding and subtracting two fixed point binary numbers when negative numbers are in signed 1’s compliment representation.

6. Show the contents of registers E,A,Q and SC during the process of multiplication of two binary numbers,11111(multiplicand) and 10101(multiplier) the signs are not included.

7. Derive an algorithm for evaluating the square root of binary fixed point number.

UNIT-4

1. What are the different modes of data transfer? Explain each mode in detail.

2. Discuss about asynchronous data transfer and Input output interface?

3. What is priority interrupt explain various interrupt handling methods.

4. Explain memory Hierarchy.

5. Discuss in detail about input/output interrupts.

UNIT -5

1. What is pipeline? Explain space time diagram for pipeline.
2. Compare andcontrast RISC and CISC processor.
3. What is vector processing? Explain with an example of matrix multiplication.
4. Explain System bus structure for multiple processors.

5. Describe different interconnection structures in multiprocessors.

6. Explain in detail about interprocessor communication and synchronization.