Questions from UNIT-1 and UNIT-2

Q.1) Difference Between Computer Architecture and Computer Organization.

Q.2) Explain Control unit organization and difference between hardwired Control unit and Micro-Programmed Control Unit.

Q.3) Explain all the different ways in which location of operand is specified in an instruction called as addressing modes.

Q.4) Write a program to evaluate the arithmetic statement:

X = (A-B+C)/(G*H)

a. Using a memory type computer with three address instructions.

b. Using a general register computer with two address instructions.

c. Using an accumulator type computer with one address instructions.

d. Using a stack organized computer with zero address instructions.

Q.5) Write a program to evaluate the arithmetic statement:

X = A+B/C*(D+E)-F

a. Using a memory type computer with three address instructions.

b. Using a general register computer with two address instructions.

c. Using an accumulator type computer with one address instructions.

d. Using a stack organized computer with zero address instructions.

Q.6) Explain Look-ahead carry generator.

Q.7) Describe all the methods of obtaining 2's Complement of a number.

Q.8) Subtract 46 from 15 using the 8-bit 2's complement arithmetic.

Q.9) Add -14 to +25 using the 8-bit 1's complement method.

Q.10) Design the flowchart for signed binary multiplication or Booth algorithm using 2's complement numbers:

a. (-9) x (-13).

b. (-2) x (8).

Q. 11) with a neat flowchart explain how floating point addition or subtraction is performed.

Q.12) Show the content of register E, A, Q and SC (Counter) during the process of division of 10100011 by 1011. (use a dividend of eight bits)

Q.13) Define following terms:

a. Control Memory

b. Micro instruction

c. Micro Operation

Q.14) List the advantages and disadvantages of micro-programmed control unit over hardwire control unit.

Q.15) Draw neat flowchart for restoring division method with the evaluation-

Dividend= 1010

Divisor= 0011

Find remainder and quotient?

Q.16) Draw neat flowchart for restoring division method with the evaluation-

- Dividend= 1011
- Divisor= 0101

Find remainder and quotient?

Q.17) Explain types of instructions organization and instruction format.

Q.18) Differentiate between fixed point and floating point number representation.

Q.19) What is the IEEE floating point representation.

Q.20) What is the meaning of normalization and how to calculate the bias of the exponent value.