Module 4

1. How do you design FAST ADDERS? Explain a 4 bit carry look ahead adder.
2. Write circuit arrangement for sequential binary multiplier, explain with example.
3. Discuss with a neat diagram, single bus organization of the data path inside a processor.
4. What do you mean by micro-instruction? Design Basic Organisation of a micro Programmed control unit with diagram.

5. Explain the design of a 16bit carry look ahead adder built from 4 bit adders

6. Explain the design of a 4 bit carry look ahead adder

7. Design 4 bit carry look ahead logic and explain how it is faster than 4 bit ripple adder.

8. Design a logic circuit to perform addition/subtraction of two n bit numbers X and Y.

9. Write and explain the control sequence for execution of an unconditional branch instruction.

10. Draw and explain multiple bus organization. Explain its advantages.

11. Mention and explain the control sequence for execution of an unconditional branch instruction.

12. With the block diagram explain the basic organization of a micro programmed control unit.

13. Discuss the organization of hardwired control unit

14. Write the micro routine for the instruction add –(Rsrc), Rdst

15. Explain the single bus organization of the processor.

16. Differentiate hardwired and microprogrammed control unit.

17. Write down the control sequence for an instruction add R4,R5,R6 for three bus organization

18. With an example explain the field coded microinstructions.

19. Explain Addition and Subtraction of Signed Numbers.

20. Explain Design of Fast Adders.

MODULE 5

1.Define pipelining.

2. What are the four types of computers according to Flynn's taxonomy?Explain

3. What is Arithmetic Pipeline in Computer Architecture?Explain with example.

4. What is Array processor?Explain its types.

5. What are the 5 stages of instruction pipeline? Explain briefly.

6.explain the following

1.Arithmetic Pipeline

2. Instruction Pipeline

3.RISC Pipeline,

4. Vector Processing

5.Array Processors.