UNIT - 1

Part - A

1. Write steps involved in program execution?
2. What is accumulator?
3. What is the different between the RISC and CISC?
4. What is fetch and decode of an instruction
5. What is the role of pc in processor?
6. How sum and carry out is computed in a half adder
7. How overflow could occur in an addition operation?
8. What are the contents of a control word?
9. What is microprogrammed control?
10. What is the access time of a memory?
11. What is the role of MAR in accessing data from memory

Part - B

1. What do you understand by instruction formats? Write instruction formats of mips rx000 processor?
2. Give overall organization of arm6
3. Give overall organization Of motoraola 68020
4. Draw diagram of a typical cpu with general register organization
5. Draw diagram of a typical CPU with general register organisation.
6. Describe IEEEE 754 floating point number format?
7. Explain the types of instructions
8. What are the basic components of the CPU of a computer system? Describe the roles of each of the components in the functioning of computer system.
9. What do you understand by instruction formats Write instruction formats of MIPS RX000 processor.
10. Give overall organization of ARM6.
11. Give overall organization of Motorola 68020.
12. Write algorithm/HDL. description of two's complement multiplier. Draw its data path.
13. Write non-restoring division algorithm for unsigned integers. Illustrate the same.
14. Discuss various memory replacement policies with suitable examples.
15. Write in detail about cache memory Discuss various memory replacement policies with suitable examples.
16. give design of a 4 bit carry look ahead adder
17. Write in detail about cache memory
18. Give microprogrammed control unit of two complement multiplier

UNIT - 2

1. Explain with example the overflow rule of the addition of numbers.
2. Explain the basic concept of pipelining.
3. Describe microprogrammed control and compare it with pipeline control
4. Write and demonstrate booth algorithm for multiplication.

UNIT - 3

1. Write a detailed note on Super-scalar processing.
2. With the help of a block diagram depict the micro programmed control unit of a basic computer.
3. Describe miroprogrammed control in detail.
4. Give hard wired control design for ged processor.

UNIT - 4

1. Explain the working of hard disk with the help of a diagram.
2. Explain the working of read-write memory
3. Depict the memory Hierarchy. Compare associative mapping with direct mapping
4. Give 1-bit storage circuit of a static and a dynamic RAM.
5. Describe working of a 2D RAM.
6. Discuss various memory replacement policies with suitable examples.

UNIT - 5

1. Describe the I/O module structure.
2. Explain the three I/O techniques
3. What are the mechanisms to handle I/O operation? Explain in detail.