COMPUTER ORGANIZATION QUESTION BANK

UNIT-1

Short Answer Questions

1. Define Computer Architecture.

2. What are the functional units of a computer.

3. Define Stored Program Organisation

4. Mention down the Computer Registers

5. Define the following

    i) Accumulator

    ii) BUN

    iii) Subroutine

Long Answer Questions

1. Explain in detail the process of compilation. IIustrate the output of each phase of compilation for the input   a= (b+c)*(b+c)*2

2. Explain the concept of computer registers.

3. i)Explain about the memory reference instructions.
    ii) Explain the concept of timing and control.

4. What is the difference between a direct and indirect address instruction. Explain about instruction cycle with a neat sketch.

5. Discuss the concept of Microprogrammed control unit.

6. Draw and discuss about instruction cycle.

7. What is an instruction format? Explain different types of instruction formats in detail

UNIT-2

Short Answer Questions

1. Define Instruction Cycle

2. Write down the functions performed by BIU and EU

3. Define Central Processing Unit

4. Define Register

5. Define the term Control word.

Long Answer Questions

1. Draw and discuss the maximum mode of 8086 system.

2. Explain about the following
   i) Processor Organisation.
   ii)Register Organisation.

3. Draw and discuss the minimum mode of 8086 system.

4. Discuss the concept of segmented memory.what are its disadvantages.

5. Discuss about the bus operation of 8086.

6. Explain in detail the physical memory organization of 8086

7. i) Brefily explain the architecture of 8086 with a neat sketch.
   ii) Discuss about the flag registers of 8086.

UNIT-3

Short Answer Questions

1. Represent the folloeing no's in single precision and double precision formats.
   a)$(1365.125)_{10}$ b)$(0.625)_{10}$

2. Perform the substraction for the following numbers.
   -78+49=?

3. Explain Fixed point representation

4. Define asynchronous communication interface and write down the another name for it.

5. Explain Subtraction of Binary Number in 2's Complement taking as example 35-45.

Long Answer Questions

1. Write about DMA function with neat diagram.

2. Draw and explain the flowchart for division algorithm with an example.

3. Draw a flow chart for multiplication operation and explain.

4. i) Write about booth multiplication algorithm.
   ii)Explain the substraction of binary no in 2's complement taking an example : 35-45.

5. a) Briefly explain about Division Algorithm with an example.
   b) Discuss Direct Memory Access (DMA b How can you justify Daisy Chain priority is useful in priority interrupt?

6. Explain with an example Booth's Algorithm for multiplication of signed 2's

   complement numbers?

7. What is handshaking? Explain source-initiated and destination initiated data transfer using handshaking.

UNIT-4

Short Answer Questions

1. What is a memory address map.

2. Define content addressable memory.

3. Explain the memory hierarchy?

4. What is the concept of virtual memory?

5. Define the term cache memory.

Long Answer Questions

1. Write about the memory management hardware.

2. Explain about the cache memory

3. Write about the Auxiliary memory

4. Write about the associate memory.

5. a) Explain Main Memory and its types.

   b)What are the different types of page replacement algorithms

6. Explain the Set-associative mapping in detail.

7. Briefly Explain about the concept of virtual memory

UNIT-5

Short Answer Questions

1. What is a crossbar switch

2. What is the concept of polling.

3. What is an array processor?

4. What is handshaking

5. What is a pipelining.

Long Answer Questions

1. Write about inter processor communication and Synchronization.

2. Discuss about architecture pipeline and instruction pipeline.

3. Explain about the parallel processing.

4. Explain about interconnection structures

5. Explain about the time shared common bus and discuss the structure for multiprocessors

6. Define RISC and explain the concept of delayed load and delayed branch.

7. a) Explain hazards to the instruction pipeline with their solution
   b) What is cache coherency and how is it eliminated?