MSC CS-08

VMOU

Digital Logic

SET-1

Very Short Answer Questions

1. (i)Define control word?
   (ii) What do you mean by Stack Organization?
   (iii)Define Reverse Polish Notation?
   (iv)What is the difference between a microprocessor and a CPU?

   (v)What do you mean by implied mode?
   (vi)What do you mean by fixed point representation?
   (vii)What do you mean by overflow?
   (viii)What do you mean by biased representation?
   (ix) What is microprocessor?

   (x) List the components of a computer.

Short Answer Questions

2. Explain Flynn's classification about computer system.
3. Design and explain the working of 4 bit binary adder-subtractor.
4. Explain logic micro-operations.
5. Design a 4-bit combinational circuit shifter with multiplexer.
6. Explain characteristics of RISC and CISC computers in detail, give example of each.
7. Draw and explain the connectivity of various bus drivers with 8085 microprocessor.
8. Explain Control, Status & Data Buffer Register of USART 8251.
9. What is DMA?

Long Answer Questions

10. Describe n-address instruction formats for n=0, 1, 2 and 3 which format is used in stack organized computers.
11. A computer has 32-bit instructions and 12-bit addresses. If there are 250 two – address instructions, how many one-address instructions can be formulated?
12. How does cache memory improve the speed in memory hierarchy? Explain various cache mapping methods.
13. What is difference between UART and USART? Describe the function of DSR, DTR, RTS, CTS, TXD and RXD signals exchanged between a terminal and modem.

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Very Short Answer Questions

1. (i)What is microprocessor?
   (ii)Explain the terms: SSI, MSI and LSI.

   (iii)Define bit, byte and word.

   (iv)How many bytes make a word of 32 bits?

   (v)What is an assembler?

   (vi)What do you mean by locality of reference?

   (vii)What do you mean by hit ratio?

   (viii)What do you mean by hit & miss?

   (ix)Define mapping process?

   (x)What is tag field?

Short Answer Questions

2. Explain the difference between programmed I/O and interrupt initiated I/O giving an example of each.
3. What is DMA technique? Explain DMA controller and DMA transfer, with suitable diagram.
4. Explain handshaking based asynchronous data transfer with the help of all timing diagrams.
5. Explain associative memory with its hardware organization? Explain how the data is read and write in associative memory.
6. Specify the function of the address bus and the direction of the information flow on the address bus.
7. What are the advantages of an assembly language in comparison with high-level languages?
8. Write the difference between the machine language and the assembly language of the microprocessor.
9. What is the role of ALE and READY signal in 8085 microprocessor?

Long Answer Questions

10. Write the algorithm for addition/subtraction of 2's complements numbers. Explain with a suitable example.

11. A computer has 32-bit instructions and 12-bit addresses. If there are 250 two – address instructions, how many one-address instructions can be formulated?
12. Write the difference between a compiler and an interpreter.
13. Briefly explain serial communication methods and standards.