

COA

2 marks question

- 1) What is the main purpose of a server?
- 2) Mention any two applications of supercomputers.
- 3) Define word length. Give a typical range.
- 4) What is memory access time?
- 5) Define clock rate and give its relation with clock cycle time.
- 6) State any two ways to improve computer performance.
- 7) What is the range of numbers that can be represented using 4-bit 2's complement?
- 8) Write an example of a three-address instruction.
- 9) What is overflow in integer arithmetic? How can it be detected?
- 10) Differentiate Load and Store memory operations
- 11) Explain the functionality of MAR and MDR.
- 12) Illustrate the memory access mechanism.
- 13) Discuss the significance of clock signals.
- 14) Compare RISC and CISC instructions.
- 15) Using 2's complement perform subtraction of two signed numbers -2 and -3.
- 16) Discuss zero address instruction with an example.
- 17) Discuss the possibilities for increasing the clock rate of a system.
- 18) Compare big endian and little-endian representation scheme.
- 19) List out different types of Computers.
- 20) Write a short note on Super Computer.
- 21) List Out Various functional units of Computer.
- 22) write the purpose of Memory Address Register (MAR) and Memory Data Register (MDR)

- 23) Write a short note on Program Counter (PC) and Instruction Register (IR)
- 24) Write a short note on three sets of lines included in Bus with a neat sketch of Bus Structure.
- 25) List Out the four types of operations performed by Instruction Set
- 26) Explain the functionality of MAR and MDR.
- 27) Illustrate the memory access mechanism.
- 28) Discuss the significance of clock signals.
- 29) Compare RISC and CISC instructions.
- 30) Using 2's complement perform subtraction of two signed numbers -2 and -3.
- 31) Discuss zero address instruction with an example.
- 32) Discuss the possibilities for increasing the clock rate of a system.
- 33) Compare big endian and little endian representation scheme .
- 34) Explain various ways to improve computer performance. .
35. Define the types of buses used in a computer.
36. State different methods of representing a number.
37. Summarize the type of ROM used in computer system.
38. Distinguish between MAR and MDR in Computer Architecture.
39. Perform $-12 + 8$ using 2's complement system.
40. Define clock rate.
41. Compute the overflow values for the 5-bit signed number $(-12) + (-10)$

PART-B

Long Answer

10 marks question.

- Q1) Perform the $(+21) + (-16)$ and $(-23) + (+13)$ arithmetic operations using 2's comp
- Q2) Explain in detail about Basic Instruction Types? Differentiate between RISC and CISC Instruction Sets?
- Q3) Explain the functional units of a computer with neat diagram.
- Q4) List the basic instruction types. Explain all the types with example.
- Q5) With the neat diagram explain how processor is connected with the memory.

Q6) Explain the memory organization of a computer with necessary sketches.