**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.