PCI BUS:

The Peripheral Component Interconnect (PCI) bus is a type of computer bus that is used to connect hardware devices to the motherboard of a computer. The PCI bus has been widely used in personal computers since the mid-1990s, and it is still in use today, although it has largely been replaced by newer bus technologies.

The PCI bus is a high-speed, parallel bus that supports multiple devices on the same bus. Each device on the PCI bus has a unique identification number, known as a device ID, which is used to identify the device and its associated drivers.

The PCI bus supports a range of devices, including sound cards, network cards, and video cards, as well as storage devices such as hard drives and solid-state drives. The PCI bus is also used to connect other types of peripheral devices, such as printers and scanners.

SCSI BUS:

The Small Computer System Interface (SCSI) bus is another type of computer bus that is used to connect hardware devices to a computer. The SCSI bus was first introduced in the 1980s and was commonly used in servers and workstations. Today, the SCSI bus is still in use in some enterprise-level applications, but it has largely been replaced by newer technologies.

The SCSI bus is a high-speed, parallel bus that supports multiple devices on the same bus. Each device on the SCSI bus has a unique identification number, known as a SCSI ID, which is used to identify the device and its associated drivers.

The SCSI bus supports a wide range of devices, including hard drives, tape drives, CD/DVD drives, and scanners. The SCSI bus also supports a variety of data transfer modes, including

asynchronous, synchronous, and fast synchronous.

USB BUS:

The Universal Serial Bus (USB) bus is a newer type of computer bus that is widely used to connect hardware devices to a computer. The USB bus was first introduced in the late 1990s and has since become one of the most widely used bus technologies.

The USB bus is a serial bus that supports multiple devices on the same bus. Each device on the USB bus has a unique identification number, known as a USB ID, which is used to identify the device and its associated drivers.

The USB bus supports a wide range of devices, including keyboards, mice, printers, scanners, cameras, and storage devices such as external hard drives and flash drives. The USB bus also supports a variety of data transfer modes, including low-speed, full-speed, and high-speed. In addition, the USB bus provides power to connected devices, which eliminates the need for separate power supplies.

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19. Write a short note on design of arithmetic unit ?

20. Write a short note on Array processors ?

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22. What is the format of Micro Instruction in Computer Architecture explain ?

23. What is the layout of pipelined instruction in Computer Architecture ?

24. What is Memory Organization ? Discuss different types of Memory Organization in Computer System.

25. Computer Organization Q and A

26. Write short note on improving cache performance methods in detail ?

27. What is Multiprocessor ? Explain inter process communication in detail ?

28. Briefly explain the concept of pipelining in detail ?

29. Discuss the following in detail: RISC architecture, Vector processing ?

30. Define the instruction format ? Explain I/O System in detail ?

31. Explain the design of arithmetic and logic unit by taking on example ?

32. Explain how addition and subtraction are performed in fixed point number ?

33. Explain different modes of data transfer between the central computer and I/O device ?

34. Differentiate between Serial and parallel data transfer ?

35. Explain signed magnitude, signed l's complement and signed 2's complement representation of numbers. Find the range of numbers in all three representations for 8 bit register.

36. If cache access time is lOOns, main memory access time is 1000 ns and the hit ratio is 0.9. Find the average access time and also define hit ratio.

37. Explain hardwired microprogrammed control unit ? What is address sequencer circuit ?

38. Explain how a stack organized computer executes instructions? What is Stack?

39. Draw and explain the memory hierarchy in a digital computer. What are advantages of cache memory over main memory?

40. What is Associative memory? Explain the concept of address space and memory space in Virtual memory.

41. What is Paging? Explain how paging can be implemented in CPU to access virtual memory.

42. Explain SIMD array processor along with its architectural diagram ?

43. Write short notes on

44. Draw the functional and structural views of a computer system and explain in detail ?

45. Explain general register organization.

46. Compare and contrast DMA and I/O processors ?

47. Define the following: a) Flynn's taxonomy b) Replacement algorithm

48. Explain the various pipeline vector processing methods ?

49. Describe the language features for parallelism ?

50. What are different addressing modes? Explain them.

51. Explain any page replacement algorithm with the help of example ?

52. What is mapping? Name all the types of cache mapping and explain anyone in detail.

53. Explain arithmetic pipeline ?

54. Write short notes on, a) SIMD, b) Matrix multiplication c) Instruction format

55. Differentiate: a) Maskable and non-maskable interrupt b) RISC and CISC
56. Computer Organization Previous Years Solved Questions
57. Booths algorithm to muliyiply +5 and -15