A stack organized computer is a type of computer architecture in which the memory is organized as a stack. In this architecture, the stack is used to store data, operands, and return addresses. The stack pointer (SP) is a register that points to the top of the stack.

When an instruction is executed, the operands are pushed onto the stack, and the result is also stored on the stack. The stack is also used to store return addresses when a subroutine is called.

The execution of instructions in a stack organized computer can be described as follows:

1. Fetch the instruction from memory.
2. Decode the instruction to determine the operation to be performed.
3. Push the operands onto the stack.
4. Perform the operation on the operands.
5. Store the result on the stack.
6. Update the stack pointer.
7. Repeat steps 1-6 for the next instruction.

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34. Explain different modes of data transfer between the central computer and I/O device ?
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36. 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.
37. 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.
38. Explain hardwired microprogrammed control unit ? What is address sequencer circuit ?
39. Draw and explain the memory hierarchy in a digital computer. What are advantages of cache memory over main memory?
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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
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