

Computer System Architecture Practice Question

1. List the steps involved in the instruction execution.
2. Write in detail about various addressing modes.
3. Explain the architecture of a basic Computer.
4. Define Pipeline processing.
5. Explain the Differences between CISC & RISC.
6. Explain the various Instruction types.
7. Write in detail about various addressing modes.
8. What are the types of micro operations
9. Give the principle of operation of Booth's multiplication algorithm.
10. Explain the Booth's algorithm for multiplication of signed two's complement numbers.
11. What is a control word.
12. What is micro instruction.
13. What is micro program.
14. What are the differences between the main memory and control memory.
15. Write down the expressions for speedup factor in a pipelined architecture.
16. What is space diagram.
17. Describe in detail about pipeline processing.
18. What is meant by operation code.
19. Define Register reference instruction.
20. What is instruction cycle.
21. What is the role of I/O ports.
22. List the different addressing modes.
23. Write a short note on Instruction Cycle.
24. Differentiate SISD, SIMD, MIMD
25. What is Register Stack? Explain.
26. Write notes on the following:
27. a) Stored program concept
28. b) Common Bus System.
29. Draw the block diagram of a dual 4-to-1-line multiplexers and explain its operation by means of a function table.
30. Construct a 5-to-32-line decoder with four 3-to-8-line decoders with enable and one 2-to-1 line decoder.
31. Perform the subtraction with the following unsigned binary numbers by taking the 2's complement of the subtrahend. a. $11010 - 10000$ b. $11010 - 1101$
32. Convert the hexadecimal number F3A7C2 to binary and octal.
33. Simplify the Boolean function F together with the don't-care conditions d in (1) sum-of-products form and (2) product-of-sums form. $F(w,x,y,z) = \sum (0, 1, 2, 3, 7, 8, 10)$ $d(w,x,y,z) = \sum (5, 6, 11, 15)$