Charotar University of Science and Technology

Devang Patel Institute of Advance Technology and Research

Department of Computer Science & Engineering

Microprocessor and Computer Organization

Question Bank

1. What are the different types of addressing modes of 8086 instruction set?
2. What are the different types of instructions in 8086 microprocessor?
3. What is the maximum memory size that can be addressed by 8086?
4. How many data lines and address lines are available in 8086?
5. Calculate the physical address, when segment address is 1085H and effective address is 4537H.
6. List the flags of 8086.
7. List the registers present in 8086 μP and discuss its functionality
8. With the help of neat block diagram, explain the internal architecture of 8086 microprocessor.
9. List the salient features of 8086 microprocessor.
10. What is an addressing mode? List and explain addressing modes supported by the 8086.
11. Explain Instruction with an example: PUSH, POP.
12. Explain Virtual 8086 mode paging system.
13. Differentiate: Real mode and protected mode operations.
14. What does mean by Segmentation? Explain in brief.
15. Explain the function of opcode pre-fetch queue in 8086.
16. Explain the physical memory organization in an 8086 μP.
17. Draw the internal architecture of 80186.
18. What are the features of 80286?
19. What are the features of 80386?
20. Write down the addressing modes of 80386 with examples
21. Draw the internal architecture of 80386.
22. Draw the interfacing diagram of 80286.
23. What are the functions of status pins of 8086?
24. What are the operating modes of 80286? Explain any one.
25. Explain protected modes operation in 80386 including memory segmentation.
26. What is descriptor? Describe descriptor table in detail.
27. What is a selector? Give its different fields and explain its role.
28. What is multitasking? Clear the concept of timesharing with proper illustration.
29. What is a segment descriptor? Give its format and discuss each field in brief.
30. What is paging? What is the role of the control registers in the paging system?

31. Explain real mode of operation of 80386.
32. What are the functionality of following pins in 80386 microprocessor?
    1.BE0-BE3
    2.ADS
    3.NA
    4.BS16
    5.D/C.
    6.BUSY
    7. LOCK
33. What is meant by paging? Describe the paging mechanism in 80386 processor
34. What is meant by superscalar architecture? Describe the superscalar architecture of Pentium • processor?
35. Brief out the hardware organization of Associative memory with diagrams.
36. State the functions of GDT and LDT in 80286.What is the size of each descriptor? How many descriptors does each table store?
37. What is protected virtual address mode?
38. What are the main features of Booth's algorithm?
39. Multiply 100111 with 11011 using booths algorithm
40. Describe the algorithm for integer division with suitable examples.
41. Draw the flowchart and explain about booths algorithm.
42. Define Hit and Miss?
43. Explain virtual memory.
44. Differentiate SRAM and DRAM.
45. What is virtual memory? Explain the relation between address space and memory space in a virtual memory system along with its memory table for mapping?
46. Explain Booth's algorithm. Apply Booth's algorithm to multiply the signed numbers +13 and -6.