

UNIT II QUESTION BANK

1. Difference between RISC and CISC processor.
2. List various advanced features of ARM processor.
3. List and explain various operating modes of ARM processor.
4. Define Interrupt vector table.
5. Give list of interrupt vector table.
6. Explain in short Instruction set of ARM processor
7. Define and Explain ARM assembly language program.
8. Give list of arithmetic instruction of ARM.
9. What is the use of TEQ AND TST instruction?
10. Write the general form of source lines in assembly language.
11. How is the literal pool accessed?
12. Write the syntax for load and store instructions.
13. Give list load and store instructions.
14. What is the maximum size of constant that can be used in immediate mode and why?
15. Explain read only and read write memory.
16. Describe the concept "System On Chip (SOC).
17. Draw ARM processor core and explain ARM as SOC.
18. Explain general and advanced features of ARM processor.
19. Describe register structure of ARM in detail.
20. Explain Structure of CPSR.
21. What is Interrupt vector table? How it is useful to the OS.
22. Explain AREA, CODE, END, LTOrg directive of ARM assembly program.
23. Write short note on "Load Store Architecture" of ARM instruction set.

24. Explain data processing arithmetic instructions with example. (ADD, ADC, ADDS, SUB, SBC, SUBS, MUL, MAL, etc)
25. Explain load and store instruction for single and multiple register with syntax and example. (LDR, STR, LDM, STM)
26. Explain shift and rotate instruction with neat diagram.
27. What is conditional code and how to implement those in instructions explain with example.
28. Describe Branch instruction with example.
29. What is literal pool? Why it is needed? How and where to implement it?
30. Explain the ARM Architecture.
31. Draw and explain the ARM core and list out its significant features
32. Write a note on Instruction set of ARM processor. Give examples wherever necessary
33. Explain how Multiple Register load-store happens in ARM processor.
34. Give the distinguishing features of ARM9 processor.
35. Give the distinguishing features of ARM Cortex M3.
36. Give the distinguishing features of Beagle-Black Bone.
37. Draw diagram and explain the register set of ARM processor.
38. Explain the operating modes of ARM Processor.
39. List and give details of different profiles of ARM cortex.
40. Explain 3-stage and 5-stage pipelining in detail.
41. Explain the following instruction
 1. MOV R1,R2,LSL #2
 2. RSB R3,R3,R3,LSL #3
 3. MOVEQ R9,R1
 4. MLA R0,R1,R2,R3
42. Write a program to calculate $5X + 4Y^2$ Using ARM Instruction set.
43. Give the different ways of loading constants.

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44. List the important features that make ARM ideal for embedded applications
45. What are the advantages & disadvantages of pipelining
46. How is the instruction LDR different from the pseudo instruction LDR?
47. How is the 'rotation to the left' achieved in the RAM?
48. What do the following instructions mean & what is accomplished

1. ANDEQ R1,R2,R4
2. ADDHI R2,R4,R2
3. MOVAL R7,R5
4. SUBME R1,R2,R7
5. CMP R1,R2
6. B NEW
7. TEST R1,R3
8. MOVGT R2,R5
9. LDMIA R10,{R9,R1-R5}
10. STMIA R1,{R2-R4}
11. ADDLT R5,R6,R7
12. STRB R2,[R6,R7,#0X24]
13. X RN 0
14. BASE_ADDR EQU 0X40000000

49. Write instructions for the following
 1. Move into R7, a byte multiplied by 8
 2. Move into R6, a word multiplied by 17
 3. Move into R5, a number divided by 8

50. How 'Data Alignment' is achieved in ARM

51. Explain with example two data types of ARM

52. Write a note on

1. History of ARM processor
2. The ARM Core
3. The ARM microcontroller
4. RISC vs CISC
5. ARM SoC
6. Interrupt vector table
7. Assembly language rules

53. List & explain advanced features of ARM Processor

54. Explain the Early Naming Conversion of ARM processor

55. Explain following naming conversion

1. ARM7TDMI
2. ARM7TDMI-SARM920T
3. ARM1026EJ-S

56. Explain architecture versions of ARM processor

57. Why FIQ mode uses another set of registers

58. Explain with example

1. LSL
2. LSR
3. ASR
4. ROR
5. RRX

59. List & explain with example all the arithmetic instructions

60. List & explain with example all the logical instructions

61. Explain following directive

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- The AREA Directive
- The ENTRY directive
- The END directive
- The EQU directive
- The RN directive
- Directives for defining data

62. How the constants are loaded in immediate mode in ARM

UNDERSTAND!!! IMPLEMENT!!! ANALYZE!!!