

B.E. Eighth Semester (Electronics & Telecommunication Engineering) (CGS)
10644 : Professional Elective-II : Arm System Development and Design : 8 XT 04

P. Pages : 2

Time : Three Hours



AU - 3001

Max. Marks : 80

- Notes :
1. Assume suitable data wherever necessary.
 2. Diagrams and chemical equations should be given wherever necessary.
 3. Illustrate your answer necessary with the help of neat sketches.

SECTION - A

1. a) Explain design aspect for low power consumption computer design. 7
b) Explain Pipeline hazards and Pipeline efficiency. 7

OR

2. a) Explain concept of Pipeline. 7
b) Compare Reduced Instruction Set computers and complex Instruction Set computers. 7
3. a) Explain how Load- store architecture is different than complex instruction set computer architecture. 7
b) What is cross- development? Explain cross- development tool kit. 6

OR

4. a) Which features of most other RISC architectures are not shared by the ARM? 7
b) Write short note on. 6
 - a) ARM assembler.
 - b) Linker.
 - c) ARM symbolic debugger.
5. a) Explain the following instructions. 6
 - a) BEQ bypass.
 - b) LDR R0, [R1], R2.
- b) Write a program to find the average of numbers stored in the memory. Four numbers are stored in memory starting from memory location 0x0000 0900. 7

OR

6. a) Describe the Data transfer instructions of ARM processor. 6
b) What is stack addressing? Explain the following team. 7
a) Full ascending. b) Empty ascending.
c) Full descending. d) Empty descending.

SECTION – B

7. a) Compare 3-stage pipeline and 5-stage pipeline ARM organization. 7
b) Explain ARM data processing instructions execution. 6

OR

8. a) Write short note on. 6
a) ARM7TDMI co-processor interface.
b) Data transfer between ARM processor and Co-processor.
b) Draw and explain ARM core control structure. 7
9. a) Explain Branch and Branch with Link. 7
b) Explain data processing instructions with its Binary encoding. 7

OR

10. a) Explain multiple register transfer instructions with its Binary encoding. 7
b) Draw and explain single word and unsigned byte data transfer instructions in ARM processor. 7
11. a) Explain the following memory faults in short. 6
a) Abort timing.
b) ARM data aborts.
c) LDM data abort.
b) Draw and explain coprocessor data operation instruction. 7

OR

12. a) Draw and explain status register to general register transfer instructions. 6
b) Draw and explain Breakpoint instruction with its Binary encoding. 7
