



QP CODE: 26019348



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc ELECTRONICS

Core Courses - EL010401 - ARM PROCESSOR BASED EMBEDDED SYSTEM

2019 Admission Onwards

92B00C26

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What are the commonly seen embedded system software components?
2. What are the components of ARM processor?
3. What is the function of Q flag in the CPSR?
4. Briefly explain the function of DABT exception.
5. Discuss about exception priorities.
6. How Branch instruction is executed?
7. Discuss about co-processor instruction Syntax.
8. Write down an example for simple thumb ADD instruction.
9. Explain the operation of BL instruction in thumb state.
10. How can you program the loops more efficiently?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Write a short note on ARM bus technology.
12. Give a brief explanation about the memory map of ARM microcontroller.





13. Discuss about the working of Program counter and Stack Pointer in ARM.
14. Explain with figure how the banking of registers is possible in supervisor mode.
15. Write a short note on ARM instruction sets classification.
16. Describe in detail the functions of SWAP instruction.
17. Analyse the working of multiple register load store instruction in Thumb state.
18. Write a short note on efficient structure arrangement in ARM programming.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain different design philosophies of an embedded system.
20. Explain the different Core extensions used in ARM.
21. Explain various logical and comparison instructions with suitable examples.
22. Explain about ARM- THUMB interworking and branch instructions.

(2×5=10 weightage)

