

Exam.Code:0931

Sub. Code: 6919

1078

B.E. (Electronics and Communication Engineering)**Seventh Semester****EC-701: Embedded System Design**

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Attempt the following:-
- What is the use of the AMBA interface and where is it present in the architecture
 - What is an embedded system?
 - What are the different categories of embedded system?
 - Explain about RISC architecture.
 - When will you choose to use ARM *and* when will you choose to use Thumb instructions?
 - What is the use of Write-Back?
 - What is Conditional Execution in ARM?
 - When should i use '!' in ARM programming and where is it Not Allowed to be used in ARM programming?
 - How is RTOS different from other OS
 - How will you manually Enable / Disable an interrupt in ARM Processor? (10x1)

UNIT - I

- What are the types of addressing modes in ARM? Explain in detail.
 - What are exceptions in ARM? Explain exception entry and exit. (5,5)
- Explain ARM programmer's models programmer's models.
 - Write a program in assembly language to evaluate $(A + 8B + 7C - 27)/4$, where $A = 25$, $B = 19$ and $C = 99$. (5,5)
- Differentiate between CISC and RISC architecture.
 - Which features does ARM have in common with many other RISC architectures? (5,5)

UNIT - II

- When will you choose to use ARM and when will you choose to use Thumb instructions? Explain ARM and Thumb programmers models.
 - Explain ARM programmer's models programmer's models. (5,5)

P.T.O.

(2)

- VI. a) What are the Features of ARM7?
b) How to Interface KEYPAD with ARM7? (5,5)
- VII. a) Write a program to output " Electronics & Communication" in the display using Thumb Instructions.
b) Describe similarities and differences in ARM and Thumb. (5,5)

x-x-x