2E9102

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M. Tech. II Sem. (Main / Back) Exam., May - 2017
Computer Engineering
2MCS2 Design of Embedded Systems

Time: 3 Hours

Maximum Marks: 100
Min. Passing Marks: 33

Instructions to Candidates:-

Attempt any five questions. Marks of questions are indicated against each question. Draw neat and comprehensive sketches wherever necessary to clearly illustrate your answer. Assume missing data suitably if any and specify the same.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

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1. NIL _____   2. NIL _____

Q.1 (a) Write and explain characteristics and applications of embedded system. [14]

(b) Define components of embedded system. [6]

Q.2 (a) Explain data operations and flow control in ARM processor with appropriate

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examples. [12]

(b) Give comparison between RISC & CISC. [8]

Q.3 (a) Explain the concept of parallelism with instructions in detail. [12]

(b) Write short note on pipelining and super scalar execution. [8]

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Q.4 Write short notes on- [5×4=20]

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(a) Bus Protocols

(b) ARM Bus: Timers and Counters

(c) DMA

(d) System Bus Configurations

Q.5 Explain the Concept Analysis and optimization of execution time, energy power and

program size is detail.   rtuonline.com   [20]

Q.6 Explain following in detail -

(a) Supervisor mode [10]

(b) Exception and Traps [10]

Q.7 Explain Embedded System Accelerators in detail along with their application. [20]

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