Subject Code: G6801/R13

 M. Tech – I Semester Regular/Supplementary Examinations, April, 2015
   MICROCONTROLLERS FOR EMBEDDED SYSTEM DESIGN
(Common to VLSI&ES, ES&VLSI, VLSID&ES, ES&VLSID and ES)

Time: 3 Hours   Max Marks: 60

Answer any FIVE questions
All questions carry EQUAL marks
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1. a) Draw the ARM architecture and explain the registers and operation of ARM
       controller
    b) Explain the ARM design philosophy in detail

2. a) Define Interrupt and explain the interrupt vector table of ARM processor
    b) Explain the pipeline concept of ARM processor

3. Explain the different conditional instruction set of ARM controller along with
    examples of each one

4. a) Explain the difference between ARM instruction set and Thumb instruction set in
       detail
    b) Explain the concept of Exception handling in ARM processor in detail

5. a) Explain the integer and floating arithmetic operation in ARM programming
    b) Briefly list out the Register and multi register load-store instructions with examples

6. a) Draw the Cache Architecture and explain its operation in detail
    b) Explain the concept Paging technique in ARM processor

7. a) Give the different polices presented in cache and explain any two polices in detail
    b) Define Scheduling and explain different instruction scheduling methods used in
       ARM processor

8. write short notes on following terms in detail
    a) Page tables, Translation, Access permissions in Cache
    b) Content switch in memory management of ARM
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