MEVD-105

M.E/M.Tech., I Semester

Examination, December 2014

Embedded Micro Controller Programming

Time : Three Hours

Maximum Marks : 70

Note: 1. Attempt any one questions from each unit.

2. All questions carry equal marks.

Unit - I

1. Draw internal organization diagram for general purpose 16-bit microprocessor. Also discuss the flag register supported by this architecture. 14

OR

2. How VLIW processors are different from super scalar processors. Illustrate architecture of a DSP processor. 14

Unit - II

3. Explain pipelining in RISC architecture. 14

OR

4. Design a 4 x 4 ROM to store following data: (use diode matrix technology) 14

Address	Data
00	3h
01	Fh
10	oh
11	5h

Unit - III

5. Discuss the timer/ counter mechanism supported by 8051 microcontroller. 14

OR

6. Write a program to read one port as the status of switches and write another port to control devices (ON/OFF) connected to that port. Why configuration of port is necessary before use them. (Assume 8051 microcontroller in this application) 14

Unit - IV

7. Design an interfacing scheme to interface 8-bit ADC with 8051 microcontroller and a seven segment LED display. Input to ADC is a analog signal that is varies between 0-5V randomly. Output of the system is to display this voltage on seven segment LED display your design should contain hardware design block diagram of the system and software flow chart. 14

OR

8. Design a system to control speed of a DC motor with PWM techniques using 8051 microcontroller your design should included hardware circuitry, block diagram of the system and software flowchart. 14

Unit - V

9. Discuss the architecture of ARM processor. 14

OR

10. Write a short note on addressing modes in ARM processor.14