

rgpvonline.com

Roll No

MEDC-102**M.E./M.Tech., I Semester**

Examination, December 2015

Micro Controller System Design*Time : Three Hours**Maximum Marks : 70*

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) With suitable examples explain how I/O devices are connected using memory mapped I/O and peripheral I/O in 8085.
b) Design a 8085 microprocessor system to interface an 8 K × 8 EPROM and 8 K × 8 RAM.
2. a) Explain the 8085 interrupt system in detail.
b) Explain various machine cycles supported by 8085.
3. Explain how microcontrollers and microprocessors can be used for the washing machine control application. Use sketches.
4. Explain the functions and operating modes of timer in 8051. Also, Explain the functional pin diagram of 8051 Microcontroller.

5. a) Write the Analog to Digital conversion program in 8051 microcontroller to convert analog data into digital. Digitalize the input for every 100μs and store the 1000 values in external RAM location 4000 b to 43E7h.
b) Explain the JUMP instructions present in 8051 microcontroller with a mnemonic code and its operation for each.
6. What is software development modular approach? Explain in detail with suitable diagram.
7. Explain the different steps to receive data serially using 8051. Write a program for 8051 to transfer the message continuously "GOOD LUCK" serially at baud rate of 9600, 8 bit data with 1 stop bit.
8. a) Draw the format of SCON register. Explain different bits in it.
b) Write a C program to move DC motor with 25% duty cycle pulse. Show an interface of 8051 controller with a stepper motor drive circuit and explain its principles of operation.

rgpvonline.com