

Code :R7410405

R7

IV B.Tech I Semester(R07) Supplementary Examinations, May/June 2011
MICROCONTROLLERS & APPLICATIONS
(Electronics & Communication Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Draw the architecture of a microcontroller and present the resources.
(b) Explain the interrupt mechanism available in 8051 microcontroller.
2. (a) What are the data transfer functions present in 8051 family microcontrollers instruction set? Explain any two of them with suitable example.
(b) Illustrate the instructions for logical operations on internal RAM.
3. (a) Draw and explain the interrupt handling structure of a microcontroller unit.
(b) Explain the concept of polling to determine the interrupt sources and assignment of the priorities among them.
4. (a) Explain the importance of programmable timers in the microcontroller unit with relevant example.
(b) Draw the structure of free running counter in microcontroller and explain its role on real time control.
5. (a) Draw and explain the architecture of keyboard-cum-display controller.
(b) Discuss about prototype MCU based measuring instruments.
6. (a) What is meant by Real Time Operating System? Explain the features of RTX51 RTOS.
(b) Explain the importance of software development tools for microcontrollers with proper illustration.
7. (a) Draw and explain the memory organization of Intel 80196 family MCU system.
(b) Write notes on Interrupt mechanism in 16-Bit microcontrollers.
8. (a) Draw and explain, in brief, the architecture of ARM 32-bit microcontroller.
(b) Discuss about ARM/Thumb instruction set.
