[EUREC-722]  
B.Tech. Degree Examination  
Electronics & Communication Engineering  
VII SEMESTER  
MICROCONTROLLERS & APPLICATIONS  
(Effective from the admitted batch 2007–08)  

Time: 3 Hours  
MaxMarks: 60

Instructions: Each Unit carries 12 marks.  
Answer all units choosing one question from each unit.  
All parts of the unit must be answered in one place only.  
Figures in the right hand margin indicate marks allotted.

UNIT-I
1. a) With a neat figure explain 8051 microcontroller architecture  
   6  
b) Write short notes on Internal memory of 8051  
   6
OR
2. a) Give the significance of synchronous serial communication of  
   8051 microcontroller  
   6  
b) List the factors to be considered for selection of microcontroller  
   for particular application  
   6

UNIT-II
3. a) Explain the instruction (i) WR (ii) RD (iii) SET BC  
   6  
   (iv) ADDC A, R7 with example  
   6  
b) Write a program to subtract 155F83H from 24749BH. Save  
   the result in RAM location starting at 50H  
   6
OR
4. a) Explain 8051 interrupts with related SFR  
   6  
b) Explain the difference between control and conditional flag.  
   Draw and explain flag register of 8051 microcontroller  
   6

UNIT-III
5. a) Explain the priority level of various interrupts with their vector  
   addresses  
   6  
b) Discuss the use of RTOs in Design  
   6
OR
6. a) Explain interfacing of RTC with 8051 microcontroller  
   6  
b) Explain Non-markable interrupt sources  
   6

UNIT-IV
7. a) Explain keyboard interfacing with 8051 and draw flow chart for  
   detection and identification of key activation  
   6  
b) Draw and explain interfacing diagram for interfacing of common  
   anode seven segment display with 8051 microcontroller  
   6
OR
8. a) Explain with neat figure printer interfacing with 8051  
   microcontroller  
   6  
b) Explain interfacing of 8051 with Robotics and embedded  
   control  
   6

UNIT-V
9. a) Explain ARM architecture  
   6  
b) Write short notes on Memory map of Intel 80196 family. mcu.  
   6
OR
10. a) Explain I/O ports of 80196 mcu  
    6  
b) Explain ARM Thumb programming model  
    6