Exam.Code:0926
Sub. Code: 6877

1059

B.E. (Information Technology) Eighth Semester
ITE-842: Embedded System Design

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I. Answer the following:-
   a) Microprocessor
   b) Harvard architecture
   c) External memory
   d) Serial communication
   e) Input capture
   f) Time scheduling
   g) Task
   h) Timer function
   i) Task management
   j) Dynamic memory allocation (10x1)

UNIT – I

II. What are RISC and CISC processors? Discuss the criteria for selecting a microcontroller device. (10)

III. Discuss the advantages and disadvantages of Harvard and Von Neumann architecture. Why is it not advisable to use dynamic RAM with microcontrollers? (10)

IV. Explain the architecture of 8051 microcontroller and its various addressing modes. (10)

UNIT – II

V. Explain what is an instruction pipelining in PIC. What is the difference between PIC machine cycles in comparison with other Microcontroller? (10)

VI. What do you mean by the prescaling of PIC timers? What is the advantage of doing so? Is it possible to apply the prescaling to watchdog timer? If so, justify your answer. (10)

VII. Explain the OS units used in RTOS Kernel? Compare scheduling strategies, real time scheduling, round robin mode and time slicing scheduling. (10)

x-x-x