Semester-VI
Course: B.Sc (Hons.)IT
Paper Code: BSIT 605
Nomenclature: - Embedded Systems & 8051 microcontroller

Max. Marks: 45+5*
Time: 3hrs.

UNIT-I

Embedded systems – introduction, role of processor and other hardware units, embedded systems on chip, Introduction to CISC and RISC architecture. Structural units of processor, processor selection for embedded system, memory devices for embedded systems

UNIT-II

Microcontrollers- survey, types, processor architecture, microcontroller memory types, microcontroller features, Microcontroller 8051 Architecture :Hardware, I/O pins, ports and circuits, external memory, counters and timers

UNIT-III

Serial data Input/output, Interrupts 8051 instruction set – data Move Instructions, Logical operations, Arithmetic operations, Jump and call Instructions

UNIT-IV

An 8051 Microcontroller design: Specifications, a microcontroller design, testing the design, timing subroutines, Lookup tables, Serial data transmission

References:

1. Embedded Systems Architecture, Programming and Design, by Raj Kamal, TMH, 2003.
2. The 8051 Microcontroller by Kenneth J. Ayala, Penram International.
3. Programming and Customizing 8051 Microcontroller by Myke Predko, Tata McGraw Hill.

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