KURUKSHETRA UNIVERSITY KURUKSHETRA
Course: B.Sc. (Hons) IT
Semester-III
Paper Code: BSIT -304
Nomenclature: - Microprocessor Architecture and Programming-I

Max. Marks: 40+10*
Time: 3hrs.

UNIT-I

SAP-I & SAP-II: Simple As Possible computer (SAP-1), Architecture, Instruction Set, Programming SAP-1, Fetch Cycle, Execution Cycle, SAP-II Architecture, Memory Reference instructions, Register Instructions, Jump and Call instructions, Logic instructions.

UNIT-II

SAP-III: Programming Model, MOV & MVI, arithmetic instructions, increments, decrements and rotates, logic instructions, Arithmetic and logical immediates, jump instructions, extended register instructions, indirect instructions, stack instructions.

UNIT-III

8085 Microprocessor: Block diagram, Pinout diagram, Instruction set of 8085, Fetching and Executing, Instructions of 8085, Fetch execute overlap. Instruction word size, Addressing modes.

UNIT-IV

Interrupts: The 8085 interrupt Circuit, 8085 vectored interrupts, Interrupt Instructions, Restart instructions, Concept of DMA.

Reference Books:

1. Digital Computer Electronics- A Malvino (2nd Edition)
2. Microprocessor Architecture, programming and application with the 8085 by R S Gaonkar

Note:

1. Syllabus in each Theory Paper is divided in 4 units.
   I. A Student is required to attempt 5 questions in all.
   II. Question No 1 is compulsory, consisting of short answer type questions based on all the 4 units.
   III. Two questions will be set from each unit. A student is required to attempt one question from each unit.
   IV. All questions carry equal marks.
2. Use of simple calculator is permissible.
3. Instructions should be imparted using SI system of units. Familiarity with CGS system of units should also be ensured.
4. Distribution of Marks: 40+10.
   * Each theory question paper will be of 40 marks of 3 hours duration and 10 marks in each theory paper are to be awarded through internal assessment in each semester.
5. Work load – 3 periods per week per theory paper