

**Model Paper – 1**  
**Hi-Tech Institute of Engineering & Technology**  
**B.C.A. Examination**  
**(Semester-3<sup>rd</sup>) Odd Semester**  
**Computer Architecture & Assembly Language**  
**(BCA-303)**

**Time: 3 Hours**

**Maximum Marks: 75**

**Faculty Name:** Ms. Charu Singh

**Note:** Attempt questions from all sections as per instructions.

**Section – A**

**Note:** Attempt all questions.

5 x 3 = 15

1. What is the use of register? Name any two register.
2. Differentiate between hardwired and micro-programmed controls.
3. Distinguish between fixed point and floating point representation.
4. What is cache memory? Describe its operations in brief.
5. Convert the following into reverse polish notation.  
A\*B+C

**Section – B**

**Note:** Attempt any two questions.

2 x 7.5 = 15

6. What is Booth algorithm? Explain it in detail.
7. Differentiate between RISC and CISC.
8. Define Interrupt. Explain its various types.

**Section – C**

**Note:** Attempt any three questions.

3 x 15 = 45

9. Describe Direct Memory Access (DMA). Explain its functioning of DMA transfer with the help of diagram.
10. What is Priority Interrupt? Explain Polling and Daisy Chaining Priority.
11. Differentiate between:
  - a. General purpose and Special purpose register
  - b. Vector processing and Array Processing
  - c. Direct and Indirect Address Instruction
12. What do you mean by Addressing Modes? Explain various addressing modes with the help of examples.
13. Draw and explain the architecture of 8085 microprocessor along with all its registers and instruction set