

BT-5/D-21**45201****COMPUTER ORGANIZATION AND ARCHITECTURE****Paper–PC–IT-305A**

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT-I

1. (a) Explain Von-neumann model of Computer. 8
- (b) Explain the essentials of Multilevel view point of Machine. 7
2. What do you understand by Computer Instruction ? Discuss Instruction Cycle. Explain Memory reference, Register reference and Input-output Instructions. 15

UNIT-II

3. (a) Explain Register Transfer Language (RTL) with example. 8
- (b) Discuss the essentials of designing of Control Unit. 7
4. Explain the following with suitable representation : 5×3=15
- (a) Arithmetic Micro Operation.
- (b) Logical Micro Operation.
- (c) Shift Micro Operation.

UNIT-III

5. Explain the functioning of Central Processing Unit (CPU). With suitable examples, explain the essentials of Accumulator, Register, Stack and Memory. 15

6. (a) Explain Program control and Program Interrupt. 8
(b) Compare and contrast RISC and CISC. 7

UNIT-IV

7. (a) Compare Ram and ROM with their types and examples. 8
(b) What is Cache Memory ? Explain Associative and Direct mapped Cache. 7
8. Explain the following in detail :
(a) Direct Memory Access (DMA). 8
(b) Input-Output Processor. 7

