

TDC Even Semester Exam., 2019

COMPUTER SCIENCE

(Honours)

(2nd Semester)

Course No. : BCSH-203

(**Computer System Architecture**)

Full Marks : 35

Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. What is the difference between a direct and an indirect address instruction? How many references to memory are needed for each type of instruction to bring an operand into a processor register? 7

2. Write short notes on the following : 7
(a) Register transfer language
(b) Instruction cycle

UNIT—II

3. Explain the difference between hardwired control and microprogrammed control. Is it possible to have a hardwired control associated with a control memory? 7
4. Define the following : 2+2+2+1=7
(a) Microoperation
(b) Microinstruction
(c) Microprogram
(d) Microcode

UNIT—III

5. What are the basic differences among a branch instruction, a call subroutine instruction and a program interrupt? 7
6. What are the different addressing modes? Explain with examples. 7

(3)

UNIT—IV

7. Write Booth algorithm for multiplication of signed 2's complement numbers. 7
8. Explain the architecture of different ways of adding decimal numbers. 7

UNIT—V

9. Explain a typical asynchronous communication interface with block diagram. 7
10. Explain the architecture of a DMA controller. 7
