

- (f) Define bus.
 (g) Define stack.
 (h) Write down two applications of associative memory.

Unit-II

2. Answer **any two** questions : 5×2=10
 (a) Describe direct mapping process in Computer Architecture?
 (b) Design D flip-flop.
 (c) Design a magnitude comparator.
 (d) Write short note on different types of Address Bus.

Unit-III

3. Answer **any one** question : 10×1=10
 (a) Describe RISC and CISC architectures of computer. 5+5
 (b) Implement a full-subtractor circuit. Obtain the simplified expression of the function. 5+5

$$F(w,x,y,z) = \sum (4,6,7,8,9,10,11,14)$$

B.Sc. 1st Semester (Honours) Examination-2022-23

COMPUTER SCIENCE

Course ID : 11512 Course Code : SH/CSC/102/C-2

Course Title :

Computer System Organization and Architecture (New)
Computer System Architecture (Old)

Time : 1 Hour 15 Minutes

Full Marks : 25

*The figures in the right hand margin indicate full marks.
 Candidates are required to give their answers in their own words as far as practicable*

Unit-I

1. Answer **any five** questions : 1×5=5
 (a) Write down the truth table of XOR gate.
 (b) Define Combinational circuit.
 (c) Represent the decimal number 21.27 to binary.
 (d) Why is cache memory used?
 (e) What is decoder?