NEW

Part-II   3-Tier

2018

COMPUTER SCIENCE

(General)

PAPER—III (Set-1)

(PRACTICAL)

Full Marks : 100

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Group—A

[Digital Electronics]

Answer any *one* question.   1×25

1. Construct an OR gate using NAND gates only. Verify the truth table.

2. Implement the following boolean function using logic gates.

$f(a, b, c) = ab\bar{c} + \bar{a}bc + a\bar{bc}$.

3. Construct and demonstrate the use of full subtractor.

4. Construct a full adder using minimum no. of NAND gates only.

5. Construct and verify a 1×4 DeMUX.

6. Implement the following expression using basic gates :

$f(a, b, c) = \Sigma(1, 3, 4, 6)$

7. Construct a 2 to 4 line decoder and verify it's truth table.

Group—B

(Programming in C & Data Structure)

Answer any *one* question.   1×35

1. Read a character string from keyboard. Eliminate all spaces between two consecutive words and print it.

(e.g. Input : I love my country.

Output : I love my country.)

2. Read an array integer in decending order. Find an element using linear search technique. If the element is found print the position of the element and if not, print a proper message.

3. Read an array of integers. Sort the integers using insertion sort technique.

4. Read an array of integers. Sort the integers using selection sort technique.

5. Read two matrices. Multiply those matrices and print the resultant matrix. If multiplication is not possible, print proper message.

6. Write a program to calculate the factorial of an integer using recursion.

Group—C

(MS-Word, Excel, Power Point)

Answer any *one* question.   1×20

1. Create the front page of your practical note book of the subject 'Computer Science'.

2. Create a powerpoint presentation with at least five slides describing the role of mobile in everyday use.

3. Use MS-Excel and prepare a sample marksheet of a student considering marks in each subject. Calculate total marks and provide grade to the student considering his / her average marks.

Viva-voce	10
Practical Note Book	10