Register Number : 393CS20000 QP-Code : 20CS11T

Makeup Examination Nov/Dec - 2022

I Semester Diploma Examination

FUNDAMENTALS OF COMPUTER (20CS11T)

Time: 3 Hours] **[Max. Marks: 100**

Instruction: i) Answer ONE full question from each section.

ii) One full question carries 20 marks.

SECTION – I

1. (a) Explain different types of number systems. (10)

(b) Convert the following (6)

(i) $(111000)_2$ to ($)_{10}$

(ii) $(425)_{10}$ to ($)_2$

(iii) $(147)_8$ to ($)_2$

(c) Write a note on ASCII code. (4)

2. (a) List and Explain basic gates with logic symbol, expressions and truth table. (10)

(b) Develop truth table for 3 inputs OR gate. (10)

SECTION-II

3. (a). State and prove Demorgan's Theorem. (04)

(b). Differentiate multiplexer and demultiplexer. (06)

(c). Explain 4:1 multiplexer. (10)

4. (a). Implement decimal to BCD encoder. (10)

(b). Design full adder circuit with truth table. (10)

SECTION – III

5. a. Explain the working of a Laser Printer with a neat diagram. (10M)

b. Classify Computers according to purpose. (5M)

c. List various input and output devices. (5M)

6. a. Define Computer network. List and explain its categories? (10M)

b. What are the various methods of data processing? (5M)

c. Classify Counters. List any 2 applications of Counters. (5M)

SECTION – IV

7. a. Explain the functional units of computer with neat diagram (8)

b. What are the various data processing methods. (6)

c. Explain any 2 cyber security threats. (6)

OR

8. a. Differentiate between BIOS and UEFI. (6)

b. List the different OS available in market and which OS is used in desktop, laptops and mobiles, (5)

c. Show or explain hierarchical arrangement of computer memory in terms of speed ,size and cost. (6)

d. List different network topologies. (3)

SECTION – V

9. a. Explain the following (10)

i. Stored program concept. ii. BIOS

b. Define variable. Mention the rules for naming variables. (5)

c. Draw a flowchart to find sum and average of 3 numbers. (5)

OR

10. a. Explain the different generations of Programming languages. (10)

b. A user enters the input, write an algorithm to check whether entered input is a character or a number. (10)