M – 2019

2131270

Subject Code : 41 (NS)

COMPUTER SCIENCE

Time : 3 Hours 15 Minutes] [Total No. of questions : 37] [Max. Marks : 70

PART – A

Answer **all** the questions. Each question carries **1** mark. **(10 × 1 = 10)**

1) Expand the term DDRRAM.

2) Write the standard symbol for two input NOR gate.

3) Give an example for non-primitive data structure.

4) What is meant by data encapsulation?

5) Which symbol is used as address operator in C++?

6) Define tuple.

7) What is Wide Area Network (WAN)?

8) What is ring topology?

9) Mention any one type of e-commerce.

10) What is free-hosting?

P.T.O.

PART – B

Answer **any five** questions. Each question carries **2** marks. **(5 × 2 = 10)**

11) Prove that $x \cdot \overline{x} = 0$ by perfect induction method.

12) Prove $x \cdot (x + y) = x$ algebraically.

13) Give any two applications of OOP.

14) What is destructor? Write the symbol used for destructor.

15) Mention any two ofstream functions.

16) Define primary key and candidate key.

17) Differentiate between DELETE and DROP Commands in SQL.

18) Briefly explain circuit switching technique.

PART – C

Answer **any five** questions. Each question carries **3** marks. **(5 × 3 = 15)**

19) What is the purpose of UPS? Mention different types of UPS.

20) Explain the working of two input NAND gate with logic symbol and truth table.

21) Give the memory representation for two dimensional array using Column Major Ordering.

22) Define an array of pointers. Give an example.

23) What is a data file? Differentiate between text file and binary file in C++.

24) Mention different database models. Explain any one.

25) Write any three advantages of e-Commerce.

26) Explain any three text formatting tags in HTML.

PART – D

Answer **any seven** questions. Each question carries **5** marks. **(7 × 5 = 35)**

27) Given Boolean function.

$f(a,b,c,d) = \Sigma(0, 1, 2, 3, 4, 6, 8, 10, 12, 14)$.

Reduce it by using Karnaugh map.

28) Write an algorithm to delete an element from a queue data structure.

29) What is primitive data structure? Explain different operations performed on primitive data structures.

30) Mention any five advantages of OOP over procedural programming Languages.

31) Explain member function outside class definition. Give an example.

32) What is a friend function? Write the characteristics of a friend function.

33) Give the definition for a constructor and mention the rules for writing constructor function.

34) What is inheritance? Briefly explain hierarchical and hybrid inheritance.

35) Briefly explain the advantages of database system.

36) Explain any five relational/ Comparison operators in SQL with suitable examples.

37) Define the following.

a) SIM

b) SMS

c) Wi–fi

d) Chatting

e) Video Conference.