M – 2017

Subject Code : 41 (NS)

0512165

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) What is a bus?

2) Write the standard symbol for AND gate.

3) Define an array.

4) Is it possible to access data outside a class?

5) Mention any one advantage of pointer.

6) Define an entity.

7) What is chatting?

8) What is a server?

9) Expand www.

10) What is a website?

P.T.O.

PART – B

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

11) Prove algebraically $x + xy = x$.

12) State the principle of duality. Write the dual of $1 + x = 1$.

13) Define base class and derived class.

14) Write the features of default constructors.

15) Differentiate between read( ) and write( ).

16) Write the difference between data and information.

17) Give the syntax and example of UPDATE command in SQL.

18) What is communication (transmission) mode? Explain simplex mode.

PART – C

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

19) Explain the characteristics of motherboard.

20) Realize AND, OR, NOT gates using NAND gates.

21) Explain the memory representation of two dimensional array.

22) Define :

a) Pointer.

b) Static memory allocation.

c) Dynamic memory allocation.

23) Explain any three modes to open a file in C++.

24) Mention database users.

25) Give the services of e-commerce.

26) Explain any three HTML tags.

PART – D

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

27) Reduce $F(A,B,C,D)=\Sigma(0,4,6,7,8,12,14,15)$ using K - map.

28) Write an algorithm to insert an element in an array.

29) What is a stack? Write an algorithm for PUSH( ) and POP( ) operations.

30) Write the applications of OOPs.

31) Explain class definition with syntax and example.

32) Explain inline function with programming example.

33) What is a destructor? Write its syntax and example.

34) Write the types of inheritance. Explain any two.

35) Briefly explain the data processing cycle.

36) Write the purpose of following SQL functions :

a) count( )

b) max( )

c) min( )

d) avg( )

e) sum( ).

37) Give the measures for preventing virus.