Q.P. Code – 42135

First Semester B.Sc. Degree Examination, October/November 2019

(CBCS Scheme)

Computer Science

COMPUTER CONCEPTS & OOP'S USING C++

Time : 3 Hours] *[Max. Marks : 90*

Instructions to Candidates : Answers ALL Questions.

SECTION – A

Answer any **TEN** sub-questions from the following. Each sub-question carries **1** mark : **(10 × 1 = 10)**

1. Define Assembler.
2. What is ASCII code?
3. What is the size of double data type?
4. Write the syntax of conditional operator.
5. What is cascading?
6. What is the output of

```
int main ( )
{
    For (int i = 10 ; i > 0 ; i - -)
    Cout <<i ;
}
```

7. Do-while loop does not execute the block even once True or False?
8. Both break and continue statement should be associated with an if condition justify your answer.
9. What is a function?
10. Write syntax of declaring 2-D array.
11. What is function overriding?
12. What is a stream?

SECTION – B

Answer any **FIVE** questions : **(5 × 3 = 15)**

13. State Boolean Laws.
14. Write the structure of C++ program & explain.
15. Explain For loop syntax.
16. Explain declaration & initialization of Array.
17. Explain the syntax of class definition.
18. Write syntax of operator overloading and explain.
19. Write iostream class hierarchy.

SECTION – C

Answer any **SIX** questions : **(6 × 5 = 30)**

20. State and prove Demorgan's Theorem.
21. Explain tokens in C++ programming.
22. Explain cin and cout operators in C++.
23. With program explain any two jump statements.
24. Explain any 5 string handling functions.
25. What is constructor? Explain default constructor with example.
26. Explain types of inheritance.
27. With suitable program differentiate between structure and union.

SECTION – D

Answer any **FIVE** questions : **(5 × 7 = 35)**

28. (a) Prove NAND gate as Universal gate.
    (b) Explain J.K. Flip flop. **(3 + 4)**
29. (a) Simplify F(A,B,C) = (1, 3, 6, 7) using K-map.
    (b) Illustrate logical operator with suitable example. **(4 + 3)**

30. (a) Differentiate between pre-tested and post-tested loop.

(b) What is pointer? Illustrate pointer with program. **(4 + 3)**

31. (a) Write a C++ program to illustrate multilevel inheritance.

(b) Differentiate call by value & call by reference function. **(4 + 3)**

32. (a) Write the characteristics of OOPs.

(b) What is friend function? Explain with example. **(3 + 4)**

33. (a) Write a program to illustrate overloading binary '+' operator.

(b) Explain virtual class. **(5 + 2)**

34. (a) Write syntax of switch case and explain briefly.

(b) Explain Inline Function

(c) Mention any two file I/O functions. **(3 + 2 + 2)**
