Q.P. Code – 68332

# Third Semester B.C.A. Degree Examination,

## October/November 2019

*(CBCS Scheme)*

## Computer Science

## OOP'S USING C++

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

*Instructions to Candidates : Answer all the Sections.*

SECTION – A

I. Answer any **TEN** questions : **(10 × 1 = 10)**

1. Who developed C++?
2. Define Data Encapsulation.
3. What is the use of 'enum' keyword?
4. Explain 'continue' statement?
5. What is the purpose of using 'delete' keyword?
6. What is scope resolution operator?
7. What do you mean by 'class header'?
8. What is 'this' keyword?
9. Define method overriding.
10. What is implicit typecasting?
11. Define pure virtual function.
12. What is a stream?

SECTION – B

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

13. What are the difference between POP and OOP?

14. Explain the structure of C++ program.

15. Explain 'cout' and 'cin'

16. Write a program to find the area of a circle using inline function.

17. Write a program to find the sum of digits for a given number using while loop.

18. What is copy constructor? Explain with an example.

19. What is polymorphism? Explain its types.

SECTION – C

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

20. What are manipulators? Explain its types with an example.

21. What is command line arguments? Write a program to find the factorial of a given number using command line arguments.

22. Explain passing arrays to function with an example.

23. What is inheritance? Explain the mode of accessibility.

24. Explain constructors and destructors in inheritance technique with an example.

25. What are templates? Write a program to find the largest of given two numbers using template function.

26. Explain iostream class hierarchy.

27. Define the terms :
    (a) Identifiers
    (b) Cascading
    (c) Nested class
    (d) Default arguments
    (e) Function prototype

SECTION – D

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

28. (a) Write a program to implement Digital Clock. **(3)**

(b) Explain if-ladder with an example. **(4)**

29. (a) What are the difference between while loop and do-while loop. **(3)**

(b) Explain switch-case with an example. **(4)**

30. What is friend function? Write a program to print the sum of two complex numbers using friend function.

31. What is operator overloading? Write a program to print the sum of two matrices using '+' operator overloading.

32. (a) Which are the operators cannot be overloaded in friend function. **(2)**

(b) Write a program to check the given two strings are equal or not using '= =' operator with friend function. **(5)**

33. What is an Exception? With an example explain the mechanism to handle Exceptions.

34. (a) Explain the different modes of opening a file. **(3)**

(b) Explain file pointers. **(4)**