CODE: 17CF00204

MCA I Year II Semester (R17) Regular Examinations, June 2018

OBJECT ORIENTED PROGRAMMING THROUGH C++

Time : 3 hours Max Marks : 60

Answer all **five** units. (5 x 12 = 60 Marks)

UNIT-I

1. (a) Explain the fundamental characteristics of Object Oriented Programming language?

(b) Write the differences between the procedure Oriented Programming and Object Oriented Programming?

OR

2. (a) What is an operator? Explain any five operators in C++ with examples?

(b) Explain the string handling functions in C++? Write a C++ program to check the given string is a palindrome or not without using string functions?

UNIT-II

3. (a) What are the different parameter passing methods in C++? Explain with example.

(b) Explain the following with illustrative examples?
(i) Recursive functions (ii) Default argument (iii) Scope of variables.

OR

4. (a) What are friend functions? Show how the private data is accessed by the friend functions?

(b) Discuss the importance of data abstraction and encapsulation with real time example

UNIT-III

5. (a) What is a class template? Explain the use of a template class with suitable example?

(b) Write a template function to find the minimum and maximum value in an array?

OR

6. (a) What is an operator overloading? Create a class complex that will contain complex numbers. Use operator overloading to create addition, subtraction and multiplication operators which will operate on complex?

(b) Write a C++ program to overloading '<<' operator to print time object ?

UNIT-IV

7. (a) Discuss about the different types of inheritance in C++ with suitable example?

(b) Write a C++ program to read and print employee information using multiple inheritance?

OR

8. (a) Differentiate static and dynamic binding?

(b) What are virtual functions? Explain their need using a suitable example? What are the rules associated with virtual functions?

UNIT-V

9. (a) What is file handling in C++? Write a C++ program to read data and write data to a student file?

(b) Describe the exception handling mechanism in C++ by giving suitable example?

OR

10. (a) Explain in detail various file operations with syntax and examples?

(b) Write about Stack unwinding in C++?

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