U.G. 2nd Semester Examination - 2020

COMPUTER SCIENCE

[HONOURS]

Course Code : CMSH/CC-P-203

Course Title : Programming in C++ Lab.

[PRACTICAL]

Full Marks : 75   Time : 6 Hours

Marks Distribution :

Experiment : 60 marks

Viva voce : 10 marks.

Lab Notebook : 5

Answer **two** questions.   30×2=60

1.   Write a C++ program which takes the radius of a circle as input from the user, passes it to another function that computes the area and the circumference of the circle and displays the value of area and circumference from the main() function.

2.   Write a C++ program to illustrate the operator overloading concept using Matrix addition as an example.

3.   Write a C++ program to illustrate virtual function implementation.

4.   Write a C++ program to illustrate exception handling concept using stack operation as an example.

5.   Write a C++ program to illustrate dynamic polymorphism using different shapes as an example.

6.   Write a C++ program to implement the concept of binary operator overloading.

7.   Write a C++ program illustrating Class Declarations, Definition, and Accessing Class Members.

8.   Write a C++ program that reverses the elements of an array in place. The function must accept only one pointer value and return void.

9.   Write a C++ program that copy the contents of one text file to another file, after removing all white spaces.

10.   Write a C++ program to calculate Factorial of a number (i) using recursion, (ii) using iteration.

11.   Write a C++ program to compute the sum of the first n terms of the following series

$$S = 1+1/2+1/3+1/4+……$$

12.   Write a C++ program to operator overloading.

13.   Write a C++ program to find weather a number is Armstrong number.

14. Write a C++ program to generate a Fibonacci series.

15. Write a C++ program to use pointer for both base and derived classes and call the member function. Use Virtual keyword.

16. Write a C++ program to create multilevel inheritance. (Hint: Classes A1, A2, A3)

17. Write a C++ program to declare a class. Declare pointer to class. Initialize and display the contents of the class member.

18. Write a C++ to illustrate the concepts of console I/O operations.

19. Write a C++ program to display Names, Roll No., and grades of 3 students who have appeared in the examination. Declare the class of name, Roll No. and grade. Create an array of class objects. Read and display the contents of the array.

20. Write a C++ program to read the data of N employee and compute Net salary of each employee (DA=52% of Basic and Income Tax (IT) =30% of the gross salary).

21. Write a C++ program to write a given number in word.

22. Write a C++ program to create an array of pointers. Invoke functions using array objects.

23. Write a C++ program to read the data of N employee and compute Net salary of each employee (DA=52% of Basic and Income Tax (IT) =30% of the gross salary).

24. Write a C++ program to create an array of pointers. Invoke functions using array objects.

25. Write a C++ program to display Names, Roll No., and grades of 3 students who have appeared in the examination. Declare the class of name, Roll No. and grade. Create an array of class objects. Read and display the contents of the array.

26. Write a C++ program to illustrate the concepts of console I/O operations.

27. Write a C++ program to allocate memory using new operator.

28. Write a C++ program illustrating use of virtual function.

29. Write a program in C++ to demonstrate default constructor. Create a class having two data members in the private section. Define a default constructor to initialize these data members to initial value and display these values with the help of member function.

30. Write a program in C++ to display student's information using friend function.

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