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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.) EXAMINATION, JUNE 2018

Second Semester

Core Course—CS 2CR T05—OBJECT ORIENTED PROGRAMMING USING C++

(Common to Computer Application M III, Computer Science M III,
Information Technology M III and B.C.A. Programmes)

[2017 Admissions only]

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer any ten questions.
Each question carries 2 marks.*

1. What are the fundamental data types in C++ ?
2. Distinguish between constructor and destructor.
3. What does polymorphism means in C++ ?
4. Differentiate between static data members and static member functions.
5. Explain about virtual base class.
6. What is a virtual function?
7. How is a static member function different an ordinary member function ?
8. Write the syntax to define an inline function outside the class definition.
9. How is dynamic initialization of objects achieved in C++ ?
10. Define an abstract class.
11. What is a stream ? Name any two streams generally used for file I/O.
12. List out any two applications of this pointer.

(10 × 2 = 20 marks)

Part B

*Answer any six questions.
Each question carries 5 marks.*

13. Explain the merits of OOP language compared to conventional programming languages.
14. What is a friend function ? Explain with help of an example.
15. What is an inline function ? How does an inline function differ from an ordinary function ? Explain with example.
16. Explain the role of virtual functions in implementing run-time polymorphism.

Turn over

17. Write a C++ program to count the words this and these present in a text file THESIS.txt'.
18. Write a C++ program to perform the following operations on a string class without using built-in string functions :
 - (a) Reverse the string.
 - (b) Concatenate two strings.
19. Explain different techniques to pass arguments to a function with the help of example.
20. What is function overloading ? Explain with the help of example.
21. Explain the various methods to open a file in C++.

(6 × 5 = 30 marks)

Part C

*Answer any two questions.
Each question carries 15 marks.*

22. Discuss the concepts of Object Oriented Programming with suitable example.
23. Explain different types of inheritance with example.
24. Explain all the three cases of type conversions with example.
25. Write a C++ program for the following :
 - (a). Create a class string and overload == operator to compare two strings.
 - (b) Add two matrices using operator overloading.

(2 × 15 = 30 marks)