19U233S (Pages: 2) Name……

Reg. No……

SECOND SEMESTER B.Sc. CS DEGREE EXAMINATION, APRIL 2020

(CUCBCSS – UG)

CC15U BCS2 B02 – OOP CONCEPTS AND DATA STRUCTURES USING C++

(Computer Science - Core Course)

(2015, 2016 Admissions - Supplementary)

Time: Three Hours Maximum: 80 Marks

SECTION - A

Answer ***all*** questions. Each question carries 1 mark.

1. _____ data member is used to share information among all objects.
2. _____ is a variable which contains the address of another variable.
3. _____ operator is used to allocate memory for an object at runtime.
4. Operator used to define a function outside the class is _____
5. _____ is an example of runtime polymorphism.
6. Stream used to read information from a file is _____
7. _____ is a linear data structure.
8. Function which is invoked automatically at the time of object removal is _____
9. Each node of a linked list contains _____ and _____
10. _____ searching is more powerful within an array with large number of elements.

(10 x 1 = 10 Marks)

SECTION - B

Answer ***all*** questions. Each question carries 2 marks.

11. Define operator overloading.
12. What is meant by this pointer?
13. Which are the different operations to be performed within an array?
14. Define doubly linked list.
15. Write an algorithm to perform insertion sorting.

(5 x 2 = 10 Marks)

SECTION - C

Answer any ***five*** questions. Each question carries 4 marks.

16. Explain about fundamental data types of C++.
17. Write a program to implement function overloading.
18. Write a short note on memory management operators.

19. Explain constructor with arguments.
20. Importance of friend function in C++.
21. Write a program to implement stack operations using class and object?
22. Explain deletion operation using a circular linked list.
23. Write a short note on Applications of queues.

(5 x 4 = 20 Marks)

SECTION - D

Answer any ***five*** questions. Each question carries 8 marks.

24. Explain about principles of Object Oriented Programming.
25. Write a short note on types of inheritance in C++.
26. Explain virtual function using an example.
27. Write a short note on stream classes for file management.
28. Explain bubble sorting technique with algorithm and example.
29. Implement Queue operations using linked list.
30. Explain how to evaluate an infix expression with suitable example.
31. Explain various hashing functions and collision handling methods.

(5 x 8 = 40 Marks)

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