



**B.E DEGREE EXAMINATIONS: MAY 2015**

(Regulation 2013)

Fourth Semester

**ELECTRONICS AND INSTRUMENTION ENGINEERING**

U13CST304: Object Oriented Programming With C++

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. The packing of data and functions into a single component is known as
  - a) encapsulation
  - b) polymorphism
  - c) abstraction
  - d) none of the above
2. The statement `int num[2][3]={ {1,2}, {3,4}, {5, 6} }`; assigns a value \_\_\_\_\_ to `num[1][2]`
3. Which of the following is not a type of constructor?
  - a) Copy constructor
  - b) Friend constructor
  - c) Default constructor
  - d) Parameterized constructor
4. To hide a data member from the program, you must declare the data member in the \_\_\_\_\_ section of the class
5. Which allows you to create a derived class that inherits properties from more than one base class?
  - a) Multilevel inheritance
  - b) Hybrid Inheritance
  - c) Hierarchical Inheritance
  - d) Multiple inheritance
6. Operator overloading is \_\_\_\_\_ time polymorphism.
7. You have assigned the address of V to the pointer P, Which statement will display the value stored in V?
  - a) `cout<<P;`
  - b) `cout<<*Value;`
  - c) `cout<<&P;`
  - d) `cout<<*P;`
8. A pointer to base class object can hold address of \_\_\_\_\_
9. The function `read()` and `write()` are used to read and write
  - a) Data
  - b) Objects
  - c) File
  - d) information
10. A program terminates abnormally if there is no \_\_\_\_\_ block for a thrown

**PART B (10 x 2 = 20 Marks)**

**(Not more than 40 words)**

11. Define data abstraction
12. Write rules for naming the identifiers in C++.
13. Write some situations where inline expansion may not work
14. What is static member function?
15. Define late binding.
16. Mention the ambiguity between default constructor and default argument constructor
17. Write the syntax of pure virtual function
18. List out some of the error handling functions
19. Write the syntax of creating a custom manipulator
20. List the flags that do not have bit fields

**PART C (5 x 14 = 70 Marks)**

**(Not more than 400 words)**

**Q.No. 21 is Compulsory**

21. Write a C++ program that will give the conditions of environment required, food habits and unique characteristics of pet animals like fish and dog. Define a base class called pet that describe any common household pet; two derived classes called fish and dog with items specific to that type of animals. Write pure virtual functions in the base class for operations that are common to both types of animals. Write a program to test the usage of classes.
  
22. a) Explain the various important paradigm and advantages of object oriented programming with an programming example  
(OR)  
b) (i) Difference between class and structure and also illustrate with an example (7)  
(ii) Write a program to add length of a table in feet and inch. (7)
  
23. a) (i) Compare copy constructor and Assignment Operator in a class (7)  
(ii) Describe the concepts of descriptor functions with example (7)

**(OR)**

b) How do you passing objects as arguments and returning objects in C++? Explain with an example

24. a) Write a C++ program using inheritance to implement the following. A newspaper agent pays two variant rates for the delivery of newspapers. A delivery boy can earn RS. 2 on a morning delivery but only Rs. 1.50 on an evening delivery. Boys are salaried either for a morning delivery or for an evening paper round but not for both. Read (Input) the code for round (0 for morning and 1 for evening) and the number of total paper rounds in one week done by a boy and compute his earning and display it.

**(OR)**

b) (i) What is Function Template? Write the syntax for function template. Write (7)  
Bubble sort program for function template.

(ii) How does the left shift and right shift operator are overloaded with an example (7)

25. a) Write a program to write and read data in a file using object I/O functions write ( ) and read( ). Declare class with data members name [2], m int bill no, int \_amount debited and int received \_ amount and in balance. Add 10 records and display the list of persons with balances. The user should have a facility to modify the existing records Describe the various file modes and its syntax

**(OR)**

b) Define exception. Mention the type of exception and explain in detail with example

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