KUMARAGURU
college of technology
character is life

Register Number:……..

**B.E/B.TECH DEGREE EXAMINATIONS: DEC 2014**

(Regulation 2009)

Second Semester

**CSE103 : OBJECT ORIENTED PROGRAMMING**

(Common to CSE/IT)

**Time: Three Hours** **Maximum Marks: 100**

**Answer all the Questions:-**

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

1. Data members declared inside the class are ----- by default
   a) Private b) Public
   c) Protected d) Static
2. How will you call the member function using object pointer
   a) . operator b) + operator
   c) - operator d) -> operator
3. Find the equivalent of Macro
   a) Static function b) Friend function
   c) Inline function d) Dynamic function
4. Code redundancy can be eliminated by
   a) Abstraction b) Polymorphism
   c) Encapsulation d) Inheritance
5. OOPs uses
   a) Top down approach b) Bottom up approach
   c) Object oriented approach d) a&c
6. A member function declared const cannot modify any of its
   a) Global data b) Public data
   c) Class's member data d) Static data
7. Parameter to copy constructor is
   a) Object reference b) Object
   c) Object data member d) Object data member pointer

8. Friend function can access

a) Private data member
b) Private and Public data member
c) Private, protected and public data member
d) Protected data member

9. Function overriding is related to

a) Static binding
b) Virtual function
c) Compile time binding
d) Function overloading

10. A class derived from more than one base class is called

a) Single inheritance
b) Multiple inheritance
c) Multilevel inheritance
d) Hybrid inheritance

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

11. Distinguish between top down and bottom up approach of programming techniques
12. Define a class for the object classroom with the necessary data members and member functions
13. Write a function to find the maximum of two numbers using return by reference.
14. What is function overloading? State its uses and which concept of OOPs is supported by function overloading?
15. Enumerate the types of constructors.
16. Write a function to print the given string with the following condition:
    - Get the number of times the string to be printed as default argument
17. What is multilevel inheritance? Give an example
18. Distinguish between structure and class
19. What is the use of virtual functions?
20. What are the rules to be followed while writing Static function?

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

21. a) State the uses of OOP and Explain how C++ supports the OOPs concept. Explain with an example for each concept.

**(OR)**

b) (i) Write a note on the structure of C++ program (4)

(ii) Write a simple C++ program to sort N numbers in ascending order. (10)

22. a) Explain different types of function prototypes with an example for each.

**(OR)**

b) (i) Write a program to find the given number is Prime or not using call by reference and return by reference. (7)

(ii) Write a program to add two integers and two floating point numbers using function overloading (7)

23. a) (i) Explain different types of constructors with an example (8)

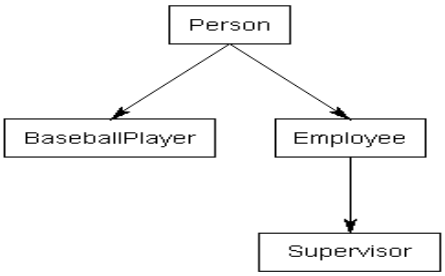
(ii) Write a program to add array elements using passing array as function argument. (6)

**(OR)**

b) Write a program to calculate the first rank holder of the class using array of objects. Each student has 3 subjects. Use the following concepts:

- Copy constructor
- Function overloading
- Operator overloading
- Constant parameter passing

24. a) Write a C++ program payroll system using multiple inheritance. Print the pay slip. DA is 40% and Deduction 12% of Basic and DA.




**(OR)**

b) Write a program to add distance in kilometers and meters using operator overloading. Use any two types of constructors and constant function.

25. a) (i) Write a program to do matrix addition using friend function (10)

(ii) Write a note on this pointer with an example (4)

**(OR)**

b) (i) Find the area of a rectangle and triangle using virtual function (8)

(ii) Explain static binding and dynamic binding using function overloading and virtual function. (6)

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