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ANNA UNIVERSITY – UNIVERSITY DEPARTMENT
B.E DEGREE EXAMINATION, APRIL 2011
Electrical and Electronics Engineering
EE 9152 OBJECT ORIENTED PROGRAMMING

Duration: Three Hours | Answer All Questions | Max Marks: 100

Part A (10 x 2 =20 Marks)

1.
```
int i,j,k=4;
for(i = 0; i < k; i++)
        for(j=0; j < k && j % 2 == 0; j++) printf("*");
```
What is the output of the above code?
2. State the differences between pointers and references.
3. State the types of constructors and when each of them will be invoked.
4. What is the application of destructors?
5. State the difference between function overloading and function overriding.
6. What is a virtual base class?
7. State the difference between virtual function and pure virtual function.
8. What is implicit type conversion?
9. How can you identify type during run time?
10. What is an exception?

PART B (5 x 16 = 80 Marks)

11. I. Describe object oriented programming and how it is different from the procedure oriented programming? (8)
    II. Implement a *Person* class. Each object of this class will represent a human being. Data members should include the person's name, year of birth, and year of death. Include a default constructor, a destructor, access functions, and a print function. (8)

12.a. Implement a complete class to represent a bank account. Include the following members: Data Members (Name of the depositor, Account Number, Type of account, Balance amount in the account) and Member functions (To assign initial values, To deposit an amount, To withdraw an amount after checking the balance, To display name and balance) (8) (8)

OR

12.b. I. Describe dynamic memory allocation and its application (8)
II. Write a function that is passed an array of n pointer to floats and returns a pointer to the maximum of the n floats (8)

13.a. Briefly explain with suitable examples the different types of inheritance

OR

13.b. Demonstrate with examples the following:
I. Abstract classes (8)
II. Deriving classes by different access specifiers (8)

14.a Demonstrate template class and template functions with suitable examples

OR

14.b. Create a class called Complex, with required data members and member functions. The Complex class should perform mathematical and logical operations with complex numbers. Overload the following operators: <<,* and +.

15.a. Describe exception handling with suitable examples and also specify the limitations of it.

OR

15.b. I. Explain the different ways of casting and their significance (8)

II. With an example demonstrate run time type identification (8)

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