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| | MIDTERM EXAMINATION<br>SPRING 2006<br>CS304 – object oriented programming (Session - 1 ) | Marks:<br>Time: 120min |
|---|---|---|

StudentID/LoginID: _____

Student Name: _____

Center Name/Code: _____

Exam Date:

**Please read the following instructions carefully before attempting any question:**

1. **This examination is closed book, closed notes, closed neighbors.**
2. **Answer all questions.**
   a. **There is no choice.**
   b. **You will have to answer all questions correctly in this examination to get the maximum possible marks.**
3. **Do not ask any questions about the contents of this examination from anyone.**
   a. **If you think that there is something wrong with any of the questions, attempt it to the best of your understanding.**
   b. **If you believe that some essential piece of information is missing, make an appropriate assumption and use it to solve the problem.**
4. **Examination also consists of multiple-choice questions. Choose only one choice as your answer.**
   a. **If you believe that two (or more) of the choices are the correct ones for a particular question, choose the best one.**
   b. **On the other hand, if you believe that all of the choices provided for a particular question are the wrong ones, select the one that appears to you as being the least wrong.**

****WARNING: Please note that Virtual University takes serious note of unfair means. Anyone found involved in cheating will get an `F` grade in this course.**

| For Teacher's use only | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total |
| Marks | | | | | | | | | | | |

Question No: 1 ( Marks: 2 )

**int *p=new int;**

In the code given above, memory is allocated during program:

- compilation
- linking
- execution
- loading

Question No: 2 ( Marks: 2 )

The proper syntax to free the memory allocated to array a of five objects is

- free(a,5);
- delete(a,5);
- delete a;
- delete [] a;

Question No: 3 ( Marks: 6 )

What methods would you add to make this class declaration very useful?

```
Class Cat
{
    int GetAge() const;
    private:
        int itsAge;
};
```

Question No: 4 ( Marks: 18 )

Write a class **Coordinate** that performs the mathematical operations (**Addition and Multiplication**) on its coordinates with the help of operator overloading.

Class **Coordinate** should have the following **Private data members**

1. xCord
2. yCord

a) Write a parameterized constructor to initialize its coordinates/data members.
b) Write **member functions** to **Overload** the following **Operators** and **Display** the Results after **Operations**.

1. +
2. *

Question No: 5 ( Marks: 17 )

Create a class named **Employee**, its data members are

i. empName
ii. empDesignation
iii. empSalary

**a)** Create the object of this class using parameterized constructor in order to initialize all the three data members i.e. **empName, empDesignation** and **empSalary**

**b)** Write a member function of this class named **increment ()**, this function will calculate the incremented salary of the employee. In increment function user will enter the increment amount in the current salary of the employee and displays the incremented salary after the addition of increment.

**c)** write the getter and setter functions for the data members of this class

Question No: 6 ( Marks: 2 ) - Please choose one

**A system call**

- *Is an entry point into the kernel code*
- *Allows a program to request a kernel service*
- *Is a technique to protect I/O devices and other system resources*
- *All of the these*

Question No: 7 ( Marks: 2 ) - Please choose one

**Logical address is generated by,**

- *CPU*
- *Compiler*
- *Hard disk*
- *None of the these*