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**DMI-ST.EUGENE UNIVERSITY**  
**DEGREE EXAMINATION – DECEMBER – 2022**

**SEM:IV**

**351CS44 OBJECT ORIENTED PROGRAMMING WITH C++**

Time: 3 Hours

Max. Marks: 100

**Answer any Five questions (5 x 20 = 100 Marks)**

1. a) Write brief description of C++ (5 Marks)  
b) Describe the Key characteristics of object oriented programming. (10 Marks)  
c) What are input streams and output streams? (5 Marks)
2. a) State least FIVE rules for naming variables in C++. (5 Marks)  
b) Write the OUTPUT of the following fragment of the program code.

```
Int num1, j;  
For (num1=1,num1<=10,num1++)  
{ j=num1%2;  
If !(j==0)  
Cout<< num1;  
Cout << \n;  
else  
Cout <<"PASS";  
Cout <<\n;  
} (5 Marks)
```

c) Using the switch case structure write a program in C++ to display the name of the day in the week if you enter the number. E,g if you enter 1 it should display Sunday.number if you enter three numbers num1, num2 and num3. (10 Marks)

3. a) Describe the specifoers used in a C++ class. (6 Marks)  
b) Distinguish between a constructor and a destructor in C++? (4 Marks)

c) Write a C++ program with the class Cars and the member variables Name and Year, for the name of a car and year of manufacture respectively. The class should have a parameterized constructor to initialise the values of the object car1 and the values of the object car2 both of class Cars. The program should display the Name and Year of the objects car1 and car2. (10Marks)

4. a) Describe FIVE types of inheritance in C++ with their syntaxes ( 10 Marks)

b) Explain the compile time polymorphism in C++ (5 Marks)

c) What is the order of calling constructors in C++ inheritance by an object of the derived class? (5 Marks)

5. a) Explain the use of the following functions in C++ file processing.

(i) Open

(ii) Close (4 Marks)

b) Describe the THREE types of file access in C++ file processing. (6 Marks)

c) Write a program to read and display the contents of a text file. (10 Marks)

6. a) Explain inheritance in C++ with an example(5 Marks)

b) Explain ambiguity in multiple inheritance and write the program to correct it. (10 Marks)

c) Describe function overriding in C++ inheritance. (5 Marks)

7. a) State THREE advantages that object-oriented programming offers to software development.(6 Marks)

b) Describe parallel processing approach as a programming paradigm.(4 Marks)

c) Describe the Key characteristics of objet oriented programming. (10 Marks)