**MARWADI UNIVERSITY**

**Faculty of Computer Applications**

Masters of Computer Applications

**SEM: 1**          **MU FINAL EXAM**          January: 2023

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**Subject: - Object Oriented Programming using JAVA (05MC0103)**          **Date:-**   27-01-2023

**Total Marks:-100**          **Time: - 02:00 pm to 05:00 pm**

**Instructions:**
       **1. All Questions are Compulsory.**
       **2. Make suitable assumptions wherever necessary.**
       **3. Figures to the right indicate full marks.**

**Question: 1.**

    (a)    MCQ Questions                                         [10]

        1)  What is the extension of java code files?
           (a)  .js
           (b)  .txt
           (c)  .class
           (d)  .java

        2)  _____ is known as the base class of all classes in java.

           (a)  Object
           (b)  Class
           (c)  Exception
           (d)  None of the above

        3)  Scanner class belongs to _____ package.

           (a)  java.lang
           (b)  java.util
           (c)  java.io
           (d)  None of the above

        4)  _____ is known as the default package of java.

           (a) java.util
           (b) java.io
           (c) java.lang
           (d) None of the above

        5)  In Java a thread can be created by _____.

           (a) extending the Thread class.
           (b) implementing the Runnable interface.
           (c) Both a and b
           (d) None of these

6) _____ is the default priority of Thread

(a) 1
(b) 5
(c) 10
(d) none of the above

7) _____ is the base class of every Exception classes in java.

(a) Throwable
(b) Exception
(c) Error
(d) None of these

8) _____ block if present will always be executed.

(a)  finally
(b)  static
(c)  final
(d)  None of the above

9)  What type of methods an interface contains by default?

(a) abstract
(b) static
(c) final
(d) private

10) _____ is known as a class which has no name.

(a)  Inner class
(b)  Anonymous class
(c)  Static nested class
(d)  Local class

(b)     Give Answers in one sentence.                                    [10]

1.  Who is known as the father of Java?
2.  List out the primitive data types of java.
3.  What is Array in java?
4.  List out the operators of java.
5.  List out the members of class in java.
6.  List out the features of OOP.
7.  Give the difference between String and StringBuffer.
8.  What is Daemon Thread?
9.  Give the difference between throw and throws in java.
10. What is the full form of JVM.

**Question: 2**.

      (a)      Explain features of Java in detail. [08]

      (b)      Describe Initializer block and Class-Initializer block in java. [08]

**OR**

      (b)      Describe Constructors in java by giving suitable example. [08]

**Question: 3**.

      (a)  Explain the role of interface in java by giving a suitable example. [08]

      (b)      Write a note on finally keyword in java. [04]

      (c)      Write a note on method overloading in java. [04]

**OR**

      (a)      Describe abstract class in java by giving a suitable example. [08]

      (b)      Write a note on this keyword in java. [04]

      (c)      Write a note on programming structure of java. [04]

**Question: 4**.

      (a)      What is Inheritance? Describe in detail about various types of inheritance.
               Also give suitable example of Multi-level inheritance [08]

      (b)  Explain about Exception handling in java by giving a suitable example. [08]

**OR**

      (a)  Explain collections in detail by giving a suitable example. [08]

      (b)  Explain about generics in detail by giving a suitable example. [08]

**Question: 5**.

      (a)      Write a note on final keyword in java by giving a suitable example. [06]

      (b)      Discuss about Wrapper classes in java by giving a suitable example. [06]

      (c)      Write a note on static keyword in java. [04]

**OR**

(a)     Write a note on the concept of Lambda expression in java by giving a suitable example.     [06]

(b)     Discuss about packages in java by giving a suitable example.     [06]

(c)     Write a note on Type Casting and Type conversion in java.     [04]

## Question: 6.

(a)     Write a note on Thread Life cycle in detail.     [08]

(b)     Create a java program to copy the content of one file in another file.     [04]

(c)     Create a class "Vehicle" with instance variable vehicle_type. Inherit the class in a class called "Car" with instance model_type, company name etc. display the information of the vehicle by defining the display() in both super and sub class.     [04]

### OR

(a)     Write a note on nested classes in java in detail.     [08]

(b)     Create a java program that executes two threads. One thread displays "Thread1" every 2,000 milliseconds, and the other displays "Thread2" every 4,000 milliseconds. Also note that the it should display the output of every thread at least 5 times.     [04]

(c)     Create a java program that demonstrates any four methods of String Class and also give the output of the program.     [04]

## ---Best of Luck---