U.S.N

P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Third Semester, Master of Computer Applications (MCA)

Semester End Examination; Feb. - 2021

Programming with Java

Time: 3 hrs   Max. Marks: 100

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

1 a. List key attributes of object-oriented programming and illustrate each attributes with example. — 10

   b. Explain the following with example:

   i) Java Development Kit

   ii) Enhanced for loop — 10

2 a. Define constructor. List rules of creating constructor and illustrate with example default and parameterized constructor. — 10

   b. Discuss advantage of array and illustrate with example single and multidimensional array in Java. — 10

UNIT - II

3 a. Write string methods syntax and example for the following:

   i) Length( )   ii) indexOf ( )

   iii) charAt( )   iv) compareTo( ) — 10

   b. Define method overloading. List advantages of method overloading and different ways to overload the method. Illustrate method overloading with example. — 10

4 a. List rules related to Static Member and Static Method. Give example for both. — 10

   b. Write Java program to find the area of rectangle using command line arguments. — 10

UNIT - III

5 a. Discuss the following:

   i) Interface

   ii) Package — 10

   b. Explain with example the ways of using *super* keyword in Java. — 10

6 a. What are interface? What are their benefits? Explain how it is implemented in Java with suitable example? — 10

   b. Discuss the following with example:

   i) Abstract class

   ii) Method overriding — 10

UNIT - **IV**

7 a. Demonstrate with example the purpose of the following keywords:

  i) try   ii) catch   10

  ii) throw   iv) throws

  b. How synchronization is achieved in Java? Illustrate producer-consumer problem with example.   10

8 a. Write reason of using custom exception. Illustrate with Java program custom exception.   10

  b. Write a program to create two threads, one thread will print odd numbers and second thread will print even numbers between 1 to 10 numbers.   10

UNIT - **V**

9 a. Define Enumeration. Illustrate with example valueOf( ) and values( ) methods in Java.   10

  b. Write use of socket class. Write client / server Java program that uses socket class (Greeting client is a client program that connects to a server by using socket and sends a greeting and then waits for a response).   10

10 a. Write Java program to create an enumeration Day of week with seven values SUNDAY through SATURDAY. Add a method isWorkday( ) to the Day of week class that returns true if the value on which it is called is MONDAY through FRIDAY. For example, the call Day of Week**.**SUNDAY**.**isWorkday( ) returns false.   10

  b. List InetAddress and HTTPURL connection class four methods. Write Java program using InetAddress class to get IP address of www.pescemandya.org website.   10

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