Total No. of Questions : 8]   [Total No. of Printed Pages : 2

Roll No ....

MCA-405(A)
M.C.A. IV Semester
Examination, May 2019

Java Programming and Technologies
(Elective-I)

Time : Three Hours

Maximum Marks : 70

Note: i)   Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain the various features of Java programming.   7
   b) Explain the steps required to develop Java application. Also discuss role of JVM.   7

2. a) Differentiate narrowing with widening. Explain with example.   7
   b) Explain the following: 7
       i)   Finalize ( ) method.
       ii) Garbage collection in Java.
       iii) Use of this keyword.

3. a) Differentiate between C++ and Java with respect to inheritance. What is the role of 'Super' key word in Java   7
   b) Define interface. Explain how to define implement and assign variable in Interface to perform one interface multiple method.   7

4. a) Explain importance of multi threading. Demonstrate how multi threading can be implemented in Java to achieve parallalism.   7
   b) Write a program which contains one method which will throw an out of array index exception and use proper exception handles so that exception should be printed.   7

5. a) Explain different phases of applet development life cycle.   7
   b) Discuss few AWT containers with suitable example.   7

6. a) Explain the role of event listeners in event handling list the Java event listeners.   7
   b) Differentiate between byte stream and character stream. How they used to read data truss user.   7

7. a) Write a Java program to read few records from a table using JDBC-ODBC bridge.   7
   b) How both TCP and UDP socket is created in Java in order to exchange. Messages between client and server.   7

8. Write short notes on any two: 14
   a) RMI
   b) Adapter class
   c) Abstract class
   d) Bitwise operator

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