SARDAR PATEL UNIVERSITY
MASTER OF COMPUTER APPLICATIONS
SEMESTER – III
COURSE PS03CMCA21 (Object Oriented Programming Using Java)
Tuesday November 20th 2018

Time: 2:00 pm to 5:00 pm   **Max. Marks: 70**

Q-1 Choose the most appropriate option for each question: [8]

1. Integer is -
   A) A reference   B) A primitive type
   C) A wrapper class   D) None of these
2. Which of the following is not a part of JRE?
   A) Java compiler   B) API class libraries
   C) Java interpreter   D) None of these
3. If class A HAS_A class B, then
   A) A should inherit from B   B) A should contain B
   C) B should inherit from A   D) B should contain A
4. The number of elements in an array *ary* can be accessed using -
   A) ary.size()   B) ary.size
   C) ary.length()   D) ary.length
5. Which method is used to register an event handler for a JButton?
   A) addOnClickListener   B) addClickListener
   C) addEventListener   D) addActionListener
6. To execute an insert statement, _____ method of Statement is used.
   A) executeUpdate()   B) executeNonQuery()
   C) executeQuery()   D) executeInsert()
7. The Scanner class can be initialized to accept input from the keyboard using -
   A) new Scanner(new InputStreamReader(System.in))
   B) new Scanner(new BufferedReader(System.in))
   C) new Scanner(System.in)
   D) new Scanner(InputStream)
8. A class whose objects need to be serialized must -
   A) implement Serialized   B) implement Serializable
   C) extend Serialized   D) extend Serializable

Q-2 Answer the following questions (Any Seven):   [14]

1. What was the first name for the Java programming language? For what purpose was it originally designed?
2. What are the advantages of Java over C++?
3. List the primitive data types in Java that hold integers.
4. Write java language statements to convert a string *str1* into an integer *n1* and an integer *n2* into a string *str2*.
5. Explain the default constructor in Java. Which keyword is used to invoke parent class constructor form the subclass constructor?

6. Define abstract methods and static methods.
7. What is the use of the StringBuilder and StringBuffer classes? What is the difference between them?
8. List the events in the lifecycle of a Java applet.
9. Which class provides common implementation for operations on a set of values? Which package provides the Date class?

Q-3

A. Explain the terms JRE, JDK, JVM. List the different editions of Java. Which is the official reference implementation of the JDK? [6]

B. Explain the syntax of class inheritance, definition of interfaces and their use with suitable examples. [6]

OR

B. Describe any six methods of the String class in short. [6]

Q-4

A. Name and explain in brief any six classes from the java.io package. [6]

B. Write a short note on exceptions and exception handling in Java. [6]

OR

B. Write the syntax for the following in the context of JDBC: [6]
Defining a JDBC URL, Loading a JDBC driver, creating connection, creating statement, executing different types of queries

Q-5

A. Write a short note on AWT and Swing. Differentiate between the two. [6]

B. Explain any three classes from the java.util package in brief. [6]

OR

B. Write a Java program that accepts a student's 7-character PID. The first character in the PID may [6] be M, I or L for MCA, Msc (IT) and PGDCA respectively. The second character may be G or S indicating grant-in-aid or self-financed programme. The next two digits indicate the year of entry, while the last three digits contain a unique serial number. The program should display these components of the PID as per the following sample format:
Programme: MCA Batch: Grant-in-aid Year of Entry: 2017 Serial No. 103

Q-6

A. Write a short note on multithreading in Java. [6]

B. Explain encapsulation with suitable figures and examples. [6]

OR

B. Write a short note on network programming in Java. [6]