2024/05

BACHELOR OF COMPUTER APPLICATION
FOURTH SEMESTER
PROGRAMMING WITH JAVA
BCA-402
[USE OMR SHEET FOR OBJECTIVE PART]

SET

B

Duration: 3 hrs.   Full Marks: 70

[**Objective**]

Time: 30 mins.   Marks: 20

Choose the correct answer from the following: *1 ×20=20*

1. Which of these keywords is used to define interfaces in Java?
   a. intf
   b. Intf
   c. interface
   d. Interface

2. What is the numerical range of a integer data type in Java?
   a. -2,147,483,647 to 2,147,483,647
   b. 0 to 65535
   c. 0 to 32767
   d. -128 to 127

3. Select the valid statement.
   a. char ch[]=new char(5)
   b. char ch[]=new char[5]
   c. char ch[]=new char()
   d. char ch[]=new char[]

4. Select the valid statement to declare and initialize an array.
   a. int[] A={}
   b. int[] A={1,2,3}
   c. int[] A=(1,2,3)
   d. int[][] A={1,2,3}

5. Identify the correct restriction on static methods.
   1. They must access only static data
   2. They can only call other static methods.
   3. They cannot refer to this or super.
   a. I and II
   b. II and III
   c. I and III
   d. All

6. Identify the keyword among the following that makes a variable belong to a class, rather than being defined for each instance of the class.
   a. final
   b. static
   c. abstract
   d. volatile

7. Identify the return type of a method that does not return any value.
   a. int
   b. void
   c. double
   d. None

8. What is the use of javac command?
   a. Execute
   b. Compile
   c. Interpret
   d. Debug

9. JRE stands for.......................
   a. Java Run Ecosystem
   b. JDK Runtime Environment
   c. Java Runtime Environment
   d. None of these

10. What makes the Java platform independent?
    a. Advanced programming language
    b. It uses bytecode for execution
    c. Class compilation
    d. All of these

11. Which of the following is not a Java features?
    a. Dynamic
    b. Architecture Neutral
    c. Use of pointers
    d. Object-oriented

12. Which of the following for loop declaration is not valid?
    a. for (int i = 99; i >= 0; i / 9)
    b. for (int i = 7; i <= 77; i += 7)
    c. for (int i = 20; i >= 2; - -i)
    d. for (int i = 2; i <= 20; i = 2* i)

13. Which package contains the Button class?
    a. java.util package
    b. java.util package
    c. java.awt package
    d. java.io package

14. Which option is false about the *final* keyword?
    a. A *final* method cannot be overridden in its subclasses
    b. A *final* class cannot be extended
    c. A *final* class cannot extend other classes
    d. A *final* method can be inherited

15. Which keyword is used for accessing the features of a package?
    a. package
    b. import
    c. extends
    d. export

16. What is meant by the classes and objects that dependents on each other?
    a. Tight Coupling
    b. Cohesion
    c. Loose Coupling
    d. None of the above

17. Which statement is true about Java?
    a. Java is a sequence-dependent programming language
    b. Java is a code dependent programming language
    c. Java is a platform-dependent programming language
    d. Java is a platform-independent programming language

18. Which one of the following is not a Java feature?
    a. Object-oriented
    b. Use of pointers
    c. Portable
    d. Dynamic and Extensible

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

20. What is the extension of compiled java classes?
    a. .js
    b. .txt
    c. .class
    d. .java

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Time : 2 hr. 30 mins.   Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. a) What are the differences in C++ and Java?   5
    b) What are the differences in traditional and Java compiler?   5

2. a) What are the characteristics of final keyword?   5
    b) What are the characteristics of static keyword?   5

3. a) What are the features of abstract keyword?   5
    b) What are the illegal combinations of final keyword?   5

4. a) What are the different types of inheritances?   5
    b) What are the java interfaces? What are the features of interface? 5

5. a) What are the different events types in java?   5
    b) What is event driven programming in java?   5

6. a) What is a java iterator? Write a simple iterator program.   5
    b) What are the differences between java vector and array?   5

7. a) Write a java program that contains final class and static variable. 5
    b) Write a java program that contains multiple interfaces.   5

8. Explain in details about the various parts of the program along with 10
    output generated as well.

```java
import java.util.ArrayList;
import java.util.Collections; // Import the Collections class

public class Main {
  public static void main(String[] args) {
    ArrayList<Integer> myNumbers = new ArrayList<Integer>();
    myNumbers.add(33);
    myNumbers.add(15);
    myNumbers.add(20);
    myNumbers.add(34);
    myNumbers.add(8);
    myNumbers.add(12);

    Collections.sort(myNumbers); // Sort myNumbers

    for (int i : myNumbers) {
      System.out.println(i);
    }
  }
}
```

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