

Seat No. : \_\_\_\_\_

**AK-106**

**April-2023**

**BCA., Sem.-IV**

**CC-210 : Core JAVA**

**Time : 2:30 Hours]**

**[Max. Marks : 70**

1. (A) Differentiate between Java and C++. 7
- (B) What are classes and objects in Java ? Explain the process of garbage collection in Java. 7

**OR**

- (A) List and explain features of Java. 7
  - (B) What is a method ? Why methods are used in Java programming ? Explain the concept of method giving suitable example. 7
2. (A) What is an interface ? Differentiate between interface and abstract class. 7
  - (B) Define array. How to declare array in Java ? Explain the different types of arrays supported in Java. 7

**OR**

- (A) What are static methods ? Can the static methods be overridden ? Why is the main method static in Java ? 7
  - (B) What is inheritance ? Explain the use of 'super' keyword giving suitable example. 7
3. (A) What is a package ? How are they created and used ? Discuss : Java.lang package. 7
  - (B) What is exception ? Explain exception handling mechanism. 7

**OR**

- (A) What is wrapper class ? Explain any two wrapper classes. 7
  - (B) List methods of String class. Explain any three methods in detail. 7
4. (A) What is a Thread ? Explain different states of Thread. 7
  - (B) What is Thread priority ? Explain the concept giving suitable example. 7

**OR**

- (A) Discuss : Life cycle of an applet. 7
- (B) Discuss : Applet tag in detail. 7

5. Attempt any 7 :

- (i) Which method is used to find out that a thread is still running or not ?
- (ii) What is the base class in Java from which all classes are derived ?
- (iii) Which keyword is used to prevent inheritance ?
- (iv) 'this' keyword is used to refer to the current object. [True/False]
- (v) Protected access specification allows access to all classes in the same package and sub-classes in any package. [True/False]
- (vi) Interfaces cannot be extended. [True/False]
- (vii) Which of these cannot be used as variable name in Java ?
  - (a) keywords
  - (b) identifiers
  - (c) both keywords and identifiers
  - (d) None of the above
- (viii) What will be the output of the following code ?
 

```
class test {
    public static void main(String args[])
    {
        int g = 3;
        System.out.print(++g * 8);
    }
}
```

  - (a) 32
  - (b) 33
  - (c) 24
  - (d) 25
- (ix) Which method is used to perform some action when the object is to be destroyed ?
  - (a) delete()
  - (b) main()
  - (c) finalize()
  - (d) None of the above
- (x) \_\_\_\_\_ method returns the current capacity of the storage available for characters in the buffer.
  - (a) charAt()
  - (b) length()
  - (c) append()
  - (d) capacity()
- (xi) \_\_\_\_\_ is the base class of all Exception classes.
  - (a) Throwable
  - (b) RuntimeException
  - (c) IOException
  - (d) None of the above
- (xii) \_\_\_\_\_ method is called each time an AWT-based applet's output must be redrawn.
  - (a) repaint()
  - (b) paint()
  - (c) update()
  - (d) All of the above