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Seat No. :

20/4/2023

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 :

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- (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