

Roll No. : 349702

Total No. of Pages : 4

**BCA-301**

BCA THIRD YEAR EXAMINATION, 2023

**JAVA PROGRAMMING**

**( Paper - I )**

*Time Allowed : Three Hours*

*Maximum Marks : 100*

**PART-A**

**[Marks : 20]**

**Note:** Answer all questions (50-words each). All questions carry equal marks.

**PART-B**

**[Marks : 50]**

**Note:** Answer five questions (250 words each). Selecting one from each unit. All questions carry equal marks.

**PART-C**

**[Marks : 30]**

**Note:** Answer any two questions (300 words each). All questions carry equal marks.

**PART-A**

1. Answer the following questions :

(i) What do you understand by Java virtual machine ?

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- (ii) What is the purpose of static methods and variables ?
- (iii) What are the advantages of Packages in Java ?
- (iv) Why is multiple inheritance not supported in java ?
- (v) How does an exception propagate in the code ?
- (vi) How thread differs from process ?
- (vii) Draw applet life cycle.
- (viii) List and 2 event classes and their interfaces.
- (ix) Why Swing is called light weight ?
- (x) What is the use of components in swing ?

## **PART-B**

### **UNIT-I**

- 2. Why the main method is static in java ?
- 3. What do you understand by an instance variable and a local variable ?

### **UNIT-II**

- 4. How to access any data member or methods of the parent class in Java ?

5. Differentiate between import and static import with suitable example.

### UNIT-III

6. What are the states in the lifecycle of a Thread ?
7. What is the difference between wait ( ) and sleep ( ) method ?

### UNIT-IV

8. What is the difference between a scrollbar and a scrollpane ?
9. Explain the life cycle of anApplet.

### UNIT-V

10. What is a layout manager and what are different types of layout managers available in Java Swing ?
11. What is the difference between the paint ( ) and repaint ( ) methods ?

### PART-C

12. Write a java program to check whether a string is a palindrome in Java ?

13. Can we Overload or Override static methods in java ? Justify your answer.
14. What is the difference between exception and error in Java ? Can we just use try instead of finally and catch blocks ?
15. What is an adapter class ? What interface is extended by AWT event listener ?
16. Write a simple Java Swing program to create a JButton and adding it on the JFrame object inside the main () method.

---X---