



**K23U 2338**

Reg. No. : .....

Name : .....

**V Semester B.Sc. Degree (C.B.C.S.S. – O.B.E. – Regular/Supplementary/  
Improvement) Examination, November 2023  
(2019 – 2021 Admissions)  
CORE COURSE IN COMPUTER SCIENCE  
5B09CSC : Java Programming**

Time : 3 Hours

Max. Marks : 40

**PART – A  
(Short Answer)**

Answer **all** questions.

**(6×1=6)**

1. What do you mean by widening conversion ?
2. Can you provide an example of declaring and initializing an array with a specific set of values at the same time.
3. Define Byte code.
4. What is the purpose of the setLayout() method in AWT ?
5. What is the purpose of the init () method in a Java applet ?
6. What is JDBC ?

**PART – B  
(Short Essay)**

Answer **any 6** questions.

**(6×2=12)**

7. In Java, what are the data types used to represent real numbers and what are the differences between them in terms of precision and range ?
8. Differentiate between pre-increment and post increment operators in Java.
9. Explain how garbage collection helps in managing memory in Java programs.
10. Explain the concept of a static method in Java and how it differs from an instance method.
11. Explain with an example how to create Checkbox AWT control.
12. Whether interface can be extended. Comment on it.

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13. What is the default behaviour when an unhandled exception occurs in Java ?
14. Describe the difference between a standalone Java application and a Java applet.

**PART – C**  
**(Essay)**

Answer **any 4** questions.

**(4×3=12)**

15. Describe the purpose and functionality of the ternary operator in Java. Provide an example of how the ternary operator is used to conditionally assign a value to a variable. Explain the syntax of the ternary operator and how it differs from a regular if-else statement.
16. Discuss the relationship between classes and objects, highlighting how a class serves as a blueprint for creating objects with predefined attributes and behaviours.
17. Describe the role of constructors in initializing objects, discuss the different types of constructors available in Java and explain their significance in object-oriented programming.
18. What is package ? Show with an example how to implement package concept in Java.
19. Discuss the life cycle of a Thread.
20. Discuss the role of Listener interfaces in Java event handling.

**PART – D**  
**(Long Essay)**

Answer **any 2** questions.

**(2×5=10)**

21. Discuss the condition control structures in Java, including if, if-else and switch statements. Explain their syntax and usage with examples.
22. Provide an example scenario where a superclass and subclass relationship can be applied and explain how the subclass extends or adds additional features to the inherited characteristics from the superclass.
23. Explain the concept of layout managers in AWT and how they help in organizing components within a container. Discuss at least three different layout managers.
24. Show with an example how the Runnable interface is used to implement Thread programming.