

97692

B.C.A. 6th Semester (Only Reappear)

Examination, December - 2024

**OBJECT TECHNOLOGIES AND PROGRAMMING
USING JAVA**

Paper -BCA-307

Time allowed : 3 hours] [Maximum marks : 80

Note : *Question No. 1 is compulsory. Attempt five questions in total, the first being compulsory and select one question from each unit.*

1. Write a short note on the following :

- | | |
|---|---|
| (a) Data Abstraction and Encapsulation. | 2 |
| (b) Applications of OOPs | 2 |
| (c) Java Virtual Machine | 2 |
| (d) Abstract Classes | 2 |
| (e) Throw and throws keyword | 2 |
| (f) CLASSPATH in Java | 2 |
| (g) Stream Classes | 2 |
| (h) String Buffer classes | 2 |

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(2)

Unit - I

2. (a) Differentiate between Procedure-oriented and Object-oriented Languages. 8
- (b) What are Object-oriented Language? What are their main Benefits and applications? 8
3. Define the following terms: $4 \times 4 = 16$

- (a) Abstraction
- (b) Inheritance
- (c) Polymorphism
- (d) Encapsulation

Unit - II

4. (a) Why is Java more suitable than other languages? Explain its essential features. 10
- (b) What are control statements in JAVA? Write a program to show the use of the For loop. 6

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5. Describe the following in Java :

- | | |
|------------------------|---|
| (a) Data types | 4 |
| (b) Method Overloading | 4 |
| (c) Method Overriding | 4 |
| (d) Constructors | 4 |

Unit - III

6. (a) What do you mean by exceptions? How can they be handled in Java? What are the advantages of using an exception-handling mechanism in a program? Illustrate with example. 8
- (b) Explain User-defined Exceptions with the help of the program. 8
7. (a) What are Abstraction and Abstract classes in OOPs? How we can achieve abstraction in Java? Explain using a suitable example. 8
- (b) What are Java packages? How are they accessible? 8

Unit - IV

8. (a) Explain the concept of multithreading. How can a thread be created? Explain with the help of a program. 8
- (b) What do you mean by thread priority? Write a program to implement thread priority. 8

Unit - III

9. (a) What is an I/O stream in Java? Explain reading and writing in files with Java code. 8
- (b) Explain String operations in Java. 8