
Bansilal Ramnath Agarwal Charitable Trust
Vishwakarma Institute of Technology
(An Autonomous Institute affiliated to Savitribai Phule Pune University)
Department Program In Information Technology
Java Programming Code-21435

Duration: 3 Hour

Marks: 80

Instruction

1) All Questions are Compulsory.

1. Attempt any Three

1. What is the difference between == and .equals() in Java? CO2 -- R
2. How does garbage collection work in Java? CO4 -- R
3. What is the Java Virtual Machine (JVM) and how does it work? CO1 -- R
4. Explain the concept of inheritance in Java. Write a program with a base class Animal and a derived class Dog. CO2 -- U

2. Attempt any Three

1. Define a class Book with attributes title, author, and price. Include a constructor and a method to display book details. CO2 -- R
2. Explain the ArrayList class and its advantages. Write a program that demonstrates adding, removing, and accessing elements in an ArrayList. CO4 -- R
3. What are the main features of Java Collections Framework? CO2 -- U
4. What is the purpose of the final keyword in Java? CO1 -- U

3. Attempt any Three

1. Explain the difference between primitive and reference data types in Java. Provide examples. CO1 -- R
2. Write a program that reads two integers from the user and performs division, handling any potential ArithmeticException. CO3 -- U
3. Write a program that uses a switch statement to determine the day of the week based on a number input (1 for Sunday, 7 for Saturday). CO1 -- U
4. What is the difference between checked and unchecked exceptions? Provide examples of each. CO3 -- R