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| **RIPHAH INTERNATIONAL UNIVERSITY, LAHORE CAMPUS** | | | | |
|  | **Course:** | **Object Oriented Programming 2c** | **Exam:** | **Quiz 2** |
| **Duration:** | **10 mins** | **Semester:** | **Spring 2024** |
| **Date:** | **19- March - 2024** | **Marks:** | **10** |
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| **Name:**  **Instruction/Notes:** | **Sap Id. Instructor: Ayesha Majid**  **READ ALL THE INSTRUCTIONS CAREFULLY.**   1. Attempt all the questions. It is advisable to go through the paper once before starting with the first question. 2. No leniency on Cheating | | | |

**QUIZ 2**

**Create a Java program to calculate and display the area and perimeter of different shapes: Rectangle, and Square. Use inheritance and method overriding to achieve this.**

**1. Create a Shape class with a method *calculateArea()* and *calculatePerimeter()* that returns 0.**

**2. Create a Rectangle class that inherits from Shape and overrides the calculateArea() and *calculatePerimeter()*  method to calculate and return the area and perimeter of a rectangle using the formula. Set the values of length and width within the method.**

**Area = length \* width**

**Perimeter = 2(length \* width)**

**3. Create a Square class that inherits from Shape and overrides the calculateArea() method and *calculatePerimeter()*  to calculate and return the area and perimeter of a square using the generalized formula**

**Area=side \* side**

**Perimeter= 4 \* side.**

**Set the values for side within the method.**

**4. In your main program, create objects of each shape type, and call their calculateArea() and calculatePerimeter methods to calculate and display their areas and perimeters.**