

SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution) Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai Accredited by NAAC-UGC with 'A++' Grade (Cycle III) & Accredited by NBA (B.E - CSE, EEE, ECE, Mech&B.Tech.IT) COIMBATORE-641 035, TAMIL NADU



Java Inheritance and Polymorphism Puzzle Worksheet

Fill in the Blanks

- 1. Inheritance is implemented using the _____ keyword.
- 2. Polymorphism is achieved through method ______ and method ______.
- 3. A subclass is also known as a _____ class.
- 4. The _____ method in a subclass overrides the method in the superclass.
- 5. When a class extends another class, it inherits its _____ and _____.

Code Snippet Analysis

```
class Animal {
  void sound() {
     System.out.println("Animal makes a sound");
  }
}
class Dog extends Animal {
  void sound() {
     System.out.println("Dog barks");
}
class Cat extends Animal {
  void sound() {
     System.out.println("Cat meows");
  }
}
public class Test {
  public static void main(String[] args) {
     Animal a:
     a = new Dog();
     a.sound(); // (1)
     a = new Cat();
     a.sound(); // (2)
  }
}
```

Questions:

- 1. What will be the output of the program at (1)?
- 2. What will be the output of the program at (2)?
- 3. What concept of Java does this code demonstrate?