ThoughtWorks Mock Exam - OS & OOPs

Instructions:
- Time: 60 minutes
- Attempt all questions.
- Write answers in short & clear points (What, Why, Where, How if applicable).

Section A: Operating Systems

1. Explain Contiguous vs Non-Contiguous Memory Allocation. Give an example.

2. What is Paging? Explain the role of Page Table with a neat diagram.

3. Define Segmentation. How is it different from Paging?

4. What is Fragmentation? Differentiate between Internal and External Fragmentation.

5. Explain Virtual Memory with the help of Demand Paging concept.

Section B: Object Oriented Programming

6. Define the Four Pillars of OOP (Encapsulation, Inheritance, Polymorphism, Abstraction) with real-life examples.

7. What is a Class and Object? Explain with a real-world analogy.

8. Differentiate between Method Overloading and Method Overriding with code examples.

9. What is a Constructor? Explain types of Constructors with examples.

10. Explain Static vs Non-Static members with an example program.

11. Differentiate between Abstract Class and Interface. Where would you use each?

Marks Distribution

Section	Questions	Marks
A: Operating Systems	Q1 - Q5	25
B: OOPs	Q6 - Q11	25
Total	-	50