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| [UNIVERSITY LOGO] | **STANFORD UNIVERSITY** Computer Science Department *CS 349: Cloud Computing Systems* Winter 2025 |

Instructor: Professor Sarah Chen | Date: March 15, 2025

## INSTRUCTIONS:

1. Read all instructions carefully before beginning  
2. Write your answers clearly in the spaces provided  
3. For multiple choice questions, circle the letter of your answer  
4. Show all work for calculation problems  
5. Check your answers before submitting

# Advanced Cloud Computing Final Exam

*Duration: 3 hours | Total Points: 100*

Comprehensive examination covering cloud architecture, microservices, and distributed systems.

## INSTRUCTIONS

• Read each question carefully and completely before answering

• For multiple choice questions, select the best answer

• Write clearly and legibly for all written responses

• Show all work for calculation problems where applicable

• Review your answers before submitting

• Ask the instructor if you have any questions

**Question 1.** (5 points)

Which cloud service model provides the highest level of abstraction?

A. Infrastructure as a Service (IaaS)

B. Platform as a Service (PaaS)

C. Software as a Service (SaaS)

D. Function as a Service (FaaS)

**Question 2.** (25 points)

Explain the benefits of microservices architecture.

**Answer:** (Use the space below for your complete response)

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**Question 3.** (3 points)

Kubernetes can automatically scale pods based on CPU usage.

A. True

B. False