



# United International University (UIU)

Dept. of Computer Science & Engineering (CSE)

**Final Exam Trimester: Summer - 2023**

**Course Code: CSE 4587 Course Title: Cloud Computing**

**Total Marks: 25**

**Duration: 2h.**

Figures are in the right-hand margin indicating full marks.

**Any examinee found adopting unfair means will be expelled from the trimester / program as per UIU disciplinary rules.**

**Answer all questions.**

**Q1** a) Describe cloud virtualization w.r.t. partitioning, data encapsulation, isolation and hardware dependence. **[10 x 1 = 10]**

- b) Describe three advantages of virtualization.
- c) How does virtualization differs from cloud computing?
- d) How does virtualization work in cloud?
- e) Classify virtualization based on their characteristics.
- f) Classify virtualization based on virtualization techniques in cloud computing.
- g) What is docker?
- h) How does virtual machines differ from containers?
- i) Provide two examples of containerization.
- j) What is hypervisor?

**Q2** a) Compare between three approaches to virtualize cloud servers, namely grid approach, OS level virtualization and hypervisor-based virtualization. **[2 + 3 + 5 + 5 = 15]**

- b) Differentiate between Type 1 and Type 2 Hypervisor. Describe them briefly with proper examples.
- c) How do you categorize the virtualization of cloud based on their characteristics? Describe them briefly.
- d) How do you categorize the virtualization of cloud based on virtualization techniques in cloud computing? Describe them briefly.