

**EXAMINATION PAPER**

**FACULTY: COMPUTER SCIENCE & MULTIMEDIA**

**COURSE: MASTER OF COMPUTER SCIENCE**

**YEAR/SEMESTER: TWO / THREE**

**MODULE TITLE & CODE: CLOUD COMPUTING: CCP 233**

**DATE: Thursday, 27 June 2024**

**TIME ALLOWED: 3 HOURS  START: 1:00 PM FINISH: 4:00 PM**

**Instruction to candidates**

1. This question paper has THREE (3) Sections.
2. Answer all **7** questions in Section A, VSAQ
3. Answer **7** questions out of 9 in Section B, SAQ.
4. Answer **2** questions out of 3 in Section C, LAQ.
5. No scripts or answer sheets are to be taken out of the Examination Hall.
6. Lengthy answers do not win more marks. Students are advised to write clear and concise answer with valid relevant examples

***Do not open this question paper until instructed***

*(Candidates are required to give their answers in their own words as far as practicable)*

**SECTION A**

**Very Short Answer Questions**

**Attempt all seven (7) questions [2 × 7 = 14]**

1. Enlist any two characteristics of cloud computing.
2. State any two benefits of Virtual Data Centre.
3. Give any two types of SLA.
4. State any two features of open source cloud eucalyptus.
5. Differentiate between Public cloud and Private cloud.(any two points)
6. Define VSAN.
7. State any two uses of Cloud portal.

**SECTION B**

**Short Answer Questions**

**Attempt only seven (7) questions out of eight (9) questions [7 × 8 = 56]**

Q. 1   Short Answer Question (Chapter 1: Introduction)

What is virtualization? Provide one real-world example where virtualization is applied.

Q. 2   Short Answer Question (Chapter 4: Cloud Service Administration)

Compare and contrast the Google File System (GFS) and the Hadoop Distributed File System (HDFS).

Q. 3   Short Answer Question (Chapter 4: Cloud Service Administration)

Outline the life cycle stages of a Service Level Agreement (SLA) in cloud computing.

Q. 4   Short Answer Question (Chapter 7: Data Management)

Identify and explain the key risks associated with cloud computing.

Q. 5   Short Answer Question (Chapter 2: Business Values, Introduction)

Discuss the characteristics of different Cloud Service Models (e.g., IaaS, PaaS, SaaS).

Q. 6   Short Answer Question (Chapter 8: Information Storage In Cloud Computing)

Explain the architecture of a storage system in cloud computing.

Q.7 Short Answer Question (Chapter 9: Discovery of Private & Hybrid Clouds)

Describe the concept of federated cloud computing and its benefits.

Q. 8   Short Answer Question (Chapter 5: Cloud Computing Technology)

Explain the architecture and functioning of Microsoft Azure with the help of a diagram.

Q. 9   Short Answer Question (Chapter 10: Cloud Computing Standards)

Discuss general security issues in cloud computing, providing at least four examples.

**Group C**

**Long Analytical or Case Question**

**Attempt any two (2) questions out of three (3) questions [2 × 15 = 30]**

Q. 1 Long or Analytical Answer Question (Chapter 6: Accessing & The Cloud Chapter 8: Information Storage in Cloud Computing)

An Enterprise Enhancing Cloud Security and Storage

1. The enterprise is assessing security risks in their cloud system. Discuss the types of analysis required and identify the challenging areas.
2. They are considering storage zones with encryption keys to protect cloud storage. Explain this approach with diagrams.
3. C) The enterprise needs to manage identities in the cloud. Discuss the reasons and methods for identity management. (5 + 5 + 5)

Q. 2 Long or Analytical Answer Question (Chapter 3: Cloud Computing Technology & Chapter 2: Business Values, Introduction)

1. Discuss Identity as a Service (IDaaS) in detail. Explain its components and benefits.
2. Explain the concepts of Workloads, Pods, and Silos in cloud environments.
3. Discuss open SaaS and explain the role of Mashups in creating composite applications.

(5 + 5 + 5)

**Q. 3** Long or Analytical Answer Question (Chapter 9: Discovery of Private & Hybrid Clouds)

Design a Virtual Data Centre. Identify the key elements needed and provide a block diagram to illustrate your design. (15)

Good Luck