



## End Term (Odd) Semester Examination December 2024

Roll no.....

Name of the Course and semester: MCA I

Name of the Paper: Cloud Computing

PaperCode:TMC113

Time: 3 hour

Maximum Marks: 100

### Note:

- (i) All the questions are compulsory.
- (ii) Answer any two sub questions from a, b and c in each main question.
- (iii) Total marks for each question is 20 (twenty).
- (iv) Each sub-question carries 10 marks.

Q1.

(2X10=20 Marks) CO1

- a. State cloud computing and list its main characteristics. Discuss the different types of clouds (public, private, hybrid) and provide examples for each.
- b. Describe the architecture of a typical compute node in a cloud environment. Include details about the role of virtual machines and containers in compute services.
- c. Define cloud storage and explain the differences between file storage, block storage, and object storage. Provide examples of cloud services that offer each type of storage.

Q2.

(2X10=20 Marks) CO2

- a. Explain the differences between virtual machines and containers in cloud computing. How do they each impact resource utilization, deployment, and scalability?
- b. Differentiate between File storage and Block storage in cloud environments.
- c. Explain the need for cloud databases and the advantages of using them over traditional on-premises databases.

Q3.

(2X10=20 Marks) CO3

- a. Imagine you are managing an e-commerce platform. Which cloud deployment model would you choose and why?
- b. Suppose you need to move an on-premises application to the cloud. What are the first steps you would take in selecting a cloud deployment model?
- c. If you have a small online store, which AWS database service would you use to store customer information?

Q4.

(2X10=20 Marks) CO4

- a. Why would a company use a virtual machine instead of using physical servers?
- b. How would you choose between public, private, and hybrid cloud deployment models for a business? Provide a scenario for each.
- c. How does the architecture of compute nodes in cloud computing affect scalability and performance?

Q5.

(2X10=20 Marks) CO5

- a. Explain the purpose of a Content Delivery Network (CDN) and analyze how Amazon VPC can be utilized to enhance secure networking in cloud computing environments.?
- b. Evaluate the effectiveness of different cloud network models (e.g., hybrid, multi-cloud) in terms of security and cost-efficiency.
- c. Analyze the benefits and drawbacks of using a public cloud compared to building a private cloud network for a small business. Provide a reasoned recommendation based on specific business needs.