

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - V CS&BS : SUMMER : 2025
SUBJECT: CLOUD, MICRO SERVICES & APPLICATION

Day : Tuesday
Date : 20/05/2025

S-24173-2025

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Assume suitable data **WHEREVER** necessary.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

Q.1 Compare and contrast the three primary cloud deployment models, public cloud, private cloud and hybrid cloud. Highlight their advantages and disadvantages and provide scenarios where each is best suited. (10)

OR

Give an overview of major public cloud platforms such as AWS, Azure, and Google cloud. Compare their key features and capabilities and provide examples of when an organization might choose one over the others. (10)

Q.2 Explain the fundamental principles of cloud computing and how they differ from traditional on premises IT infrastructures. Provide examples to illustrate these principles. (10)

OR

Discuss the importance of disaster recovery and business continuity planning in cloud computing. How can organizations design and implement effective cloud based disaster recovery solutions to ensure high availability of their services. (10)

Q.3 Provide overview of Google cloud platform (GCP) and its compute Engine service. Compare Google compute Engine with other virtual machine offerings. (10)

OR

Explain Role of Google kubernetes Engine (GKE) in managing containerized application. How it integrates with other GCP services. (10)

Q.4 Explain key characteristics of a Microservices. Architecture. Provide examples to illustrate how these characteristics contribute to the scalability and maintainability of a Microservices based system. (10)

OR

Analysis real world case studies of companies that have successfully adopted micro services and cloud native architectures. (10)

Q.5 Provide introduction to Docker and its significance in modern software developments. How Docker simplifies the developments and management of application in diverse environments. (10)

OR

Explain the benefits of version control and continuous integration continuous development (CI/CD) in a Dev OPS pipeline (10)

Q.6 Discuss common threats and vulnerabilities that applications face and describe strategies for securing applications in the cloud. (10)

OR

Discuss cloud incident response and disaster recovery strategies. How disaster recovery procedures in the content of Azure, AWS and Google cloud environments. (10)
