Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations –October 2025

Date: 07-10-2025 **Time:** 09.30am to 11.00am

School: SOCSE	**Program:** B. Tech (CSG)	
Course Code : CSD2004	**Course Name:** Cloud Computing For Data Science	
Semester: V	**Max Marks**: 50	**Weightage**: 25%

CO – Levels	CO1	CO2	CO3	CO4	CO5
Marks	26	24			

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. 5Q x2M=10M

1	What is Virtualization? List different types of virtualization.	**2 Marks**	**L1**	**CO1**
2	Define Docker and Kubernetes.	**2 Marks**	**L1**	**CO1**
3	Define Cloud Computing. List out the features of Cloud Computing.	**2 Marks**	**L1**	**CO1**
4	What are S3 storage classes, and when would you use Glacier over Standard storage?	**2 Marks**	**L1**	**CO2**
5	Define a Data Lake and a Data Warehouse. What is the key difference between them?	**2 Marks**	**L1**	**CO2**

Part B

Answer the Questions. **Total Marks 40M**

6.	**a.**	Explain in detail Infrastructure As A Service(IAAS) and Platform As A Service(PAAS) highlighting their pros and cons.	**10Marks**	**L2**	**CO 1**
	b.	Explain Google Cloud Platform and Microsoft Azure Cloud Providers in detail with the help of use cases.	**10 Marks**	**L2**	**CO 1**
		Or			
7.	**a.**	Explain Cloud Deployment Models in detail with the help of diagrams and appropriate examples.	**10 Marks**	**L2**	**CO 1**
	b.	Describe Server Virtualization and Network Virtualization in detail.	**10 Marks**	**L2**	**CO 1**

8.	**a.**	Explain the concept of buckets in Amazon S3 and containers in Azure Blob.	**10 Marks**	**L2**	**CO 2**
	b.	Explain the concept of ETL (Extract, Transform, Load) in cloud data engineering and Discuss how cloud-based ETL tools such as AWS Glue, Google Cloud Dataflow, and Azure Data Factory help in building scalable data pipelines. Provide a real-world use case to support your answer.	**10 Marks**	**L2**	**CO 2**
		Or			
9.	**a.**	A company wants to migrate 50 TB from on-premises to AWS. Explain the migration tool would you recommend and justify the same.	**10 Marks**	**L2**	**CO 2**
	b.	Explain the importance of cost optimization in cloud computing. Describe at least three techniques such as resource right-sizing, storage tiering, and reserved/spot instances that organizations can use to reduce cloud costs. Support your answer with a suitable example.	**10 Marks**	**L2**	**CO 2**