Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 28-10-2025 **Time:** 11.00am to 12.30pm

School: SOCSE/SOE	**Program:** B.Tech. Computer Science and Engineering (CSE)	
Course Code : CSD3426	**Course Name:** Cloud Services for Big Data and Analytics	
Semester: VII	**Max Marks**: 50	**Weightage**: 25%

CO - Levels	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**14**	**36**			

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 x 2M=10M**

1	Mention one advantage and one limitation of redundant cloud architectures.	**2 Marks**	**L2**	**CO2**
2	What is a community cloud? Give an example.	**2 Marks**	**L1**	**CO1**
3	Differentiate between utility computing and cloud computing.	**2 Marks**	**L2**	**CO1**
4	What are multi-tier cloud architectures?	**2 Marks**	**L1**	**CO2**
5	Differentiate between compute-intensive and data-intensive models.	**2 Marks**	**L2**	**CO2**

Part B

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

6.	**a.**	Explain the characteristics and benefits of cloud computing.	**10 Marks**	**L2**	**CO 1**
		Or			
7.	**a.**	Discuss cloud deployment models: public, private, hybrid, and community with examples.	**10 Marks**	**L2**	**CO 1**

8.	**a.**	Discuss redundant and non-redundant cloud architectures with examples.	**8 Marks**	**L3**	**CO 2**
	b.	Explain the design considerations for a 3-tier architecture in cloud applications.	**7 Marks**	**L3**	**CO 2**
		Or			
9.	**a.**	Evaluate the effectiveness of different cloud service models (IaaS, PaaS, SaaS) in addressing enterprise challenges such as scalability, cost optimization, and security. Which model would you recommend for a large e-commerce company and why?	**8 Marks**	**L5**	**CO 1**
	b.	Critically compare 3-tier and N-tier architectures in terms of scalability, fault tolerance, and cost. Which architecture is more suitable for data-intensive cloud applications? Justify your answer.	**7 Marks**	**L5**	**CO 2**

10.	**a.**	With a neat diagram, explain NIST cloud architecture layers.	**8 Marks**	**L3**	**CO 2**
	b.	Compare single-site and hybrid architectures.	**7 Marks**	**L3**	**CO 2**
		Or			
11.	**a.**	With suitable examples, analyze design considerations in cloud programming models.	**15 Marks**	**L5**	**CO 2**