VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

REG.NO.:

SLOT: D1+TD1

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2025-2026

Programme Name & Branch : B.Tech CSE
Course Code and Course Name : BCSE408L - Cloud Computing
Faculty Name(s) : Dr.Sudha S, Dr.Balakrishnan, Dr.Anny Leema A, Dr.Chellatamilan T Dr.Satish C J, Dr.Kakelli Anil Kumar, Dr.Narayanan Prasanth N, Dr.Jothi K.R
Class Number(s) : VL2025260502042, 43, 44, 45, 47, 48, 66, 68
Date of Examination : 30.01.2026
Exam Duration : **90 minutes** **Maximum Marks: 50**

General instruction(s):

- Answer All Questions
- M - Max mark; CO – Course Outcome; BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)
- Course Outcomes
  1. Design and develop cloud application and deploy it.
  2. Evaluate the various cloud services and deployment models in the infrastructure.

Q. No	Question	Module	Marks	CO	BL
1.	Illustrate the NIST cloud computing reference architecture and explain the roles and responsibilities of each component in detail.	1	10	02	02
2.	A mid-sized organization has a team of employees working on a critical software development project. The employees need secure access to corporate desktops and project-specific applications from home and branch offices. The IT team wants to reduce hardware costs, ensure a consistent desktop environment, and simplify management of project resources. Explain how the organization can provide secure, remote access to corporate desktops and project-specific applications. Discuss the different technological approaches to delivering virtual desktops, highlighting their advantages and challenges.	2	10	01	03
3.	A large enterprise plans to modernize its IT infrastructure by adopting a Software-Defined Data Center to achieve greater flexibility, automation, and scalability. As a cloud architect, explain the concept of SDDC, illustrate its architecture, and discuss the key components involved in it.	2	10	01	02
4.	Compare the features of serverless computing with traditional cloud service models, IaaS and PaaS with suitable use cases. Discuss the serverless service offered by AWS used to run user-defined functions with appropriate examples.	3	10	02	04
5.	An organization plans to build its own private data center using AWS Cloud. It requires connectivity between multiple VPCs and also with its on-premises network. (a) Justify why Amazon VPC is suitable for this requirement. (b) Explain the role of VPC components such as subnets and routing table. (c) Discuss how VPC Peering and AWS Direct Connect help in achieving secure connectivity.	3	10	02	03

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