



VIT

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

REG.NO.:

SLOT: G1+TG1

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

Programme Name & Branch : B.Tech CSE and Specialization
Course Code and Course Name : BCSE355L and Cloud Architecture Design
Faculty Name(s) : Common to All
Class Number(s) : Common to All
Date of Examination : 23.08.2025
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:

CO1: Demonstrate an in-depth understanding of AWS Cloud architecture, services, and design patterns.

CO4: Configure and manage advanced AWS networking features, storage solutions, database technologies, and compute resources.

Q. No	Question	M	CO	BL
1.	a) A bank has an on-premises data centre for managing customer's sensitive data like customer identity, financial records. It also wants to launch a loan application portal, machine learning models in the cloud. Propose and exemplify the suitable cloud deployment model for the bank officials. (5 Marks) b) A government agency wants to migrate its legacy system to the cloud. It wants to retain full control over sensitive citizen data and application logic. It plans to use the help of AWS cloud services for networking, physical security, physical infrastructure, and compliance of Infrastructure. Identify and suggest the best suitable cloud service with a detailed description of the same. (5 Marks)	10	1	3
2.	Which web service is used to securely manage identities and access to AWS services and resources? Describe the way to manage identities and access control of multiple users with a necessary diagram and policies.	10	1	2
3.	Click Media is a media streaming company. It offers a wide variety of TV shows, movies, documentaries, anime, and more on internet-connected devices. They provide service to 190 countries, though content libraries vary by region. They are looking for a suitable AWS storage service(s) to optimize cost,	10	4	3



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	performance, and availability for following different types of data. a. Video assets, thumbnails, subtitles, and metadata that are actively being processed or streamed. b. Archived versions of videos, logs, or backup media not accessed daily but still requires fast access. c. Long-term archival of data such as old media content, logs, compliance data. d. For media data with unpredictable access patterns. Recommend your solution to Click Media company by providing a detailed explanation.			
4.	a. Write about the EC2 instance naming format. And indicate the meaning of each term in c6g.4xlarge. b. Complete the given diagram (write appropriate answers in the place of question marks). <pre>graph TD Start[??] --> Pending[pending] Pending --> Running[running] Running --> ShuttingDown[shutting-down] ShuttingDown --> Terminated[terminated] Pending --> Stopping[stopping] Stopping --> Stopped[stopped] Stopped --> ShuttingDown Stopping --> Pending Stopped --> Pending subgraph "EBS-backed instances only" Stopping --> Stopped Stopped --> ShuttingDown end</pre> c. Compare and Contrast Reboot with Stopping, Hibernating with Terminating in the view of EC2 instance lifecycle.	10	4	2
5.	A company wants to create an isolated network in a cloud environment to launch set of Apache Tomcat Servers and a set of Database servers. They aim to provide public access to Apache Tomcat Servers and private access to Database servers. With a neat sketch, Write about the suitable cloud service and its architecture to meet out the above mentioned requirements.	10	4	2
