



VIT

Vellore Institute of Technology
CHENNAI

Reg. Number: 22BA21266

Continuous Assessment Test (CAT) – II - OCTOBER 2024

Programme	: B.Tech (CSE and its Specialization)	Semester	: Fall Semester 2024-25
Course Code & Course Title	: BCSE355L - AWS Solutions Architect	Class Number	: CH2024250100945 CH2024250100948 CH2024250100553 CH2024250101405
Faculty	: Dr. ASHOKA RAJAN R Dr. PRAKASH P Dr. PRADEEP K Dr. OM KUMAR C U	Slot	: B1+TB1
Duration	: 90 Minutes	Max. Mark	: 50

General Instructions:

- Write only your registration number on the question paper in the box provided and do not write other information.

Answer all questions

Q. No	Sub Sec.	Description	Marks
1		During a recent audit of the company's AWS environment, the IT security team discovered unusual activity, including several unauthorized access attempts to sensitive resources. The team needs to investigate this incident by examining detailed records of user actions and API calls made within the AWS account. They want to determine which users accessed the resources, what actions they performed, and whether any changes were made to user permissions during the timeframe of the suspicious activity. Additionally, the team is considering implementing a system that ensures the integrity of these records and allows them to set up alerts for any future unauthorized access. What steps should the team take to thoroughly investigate the incident and enhance their monitoring capabilities?	10
2		Vogel is the fastest growing data analytics company in India. The company's database have grown significantly over the year, and they are looking to migrate their on-premises databases to AWS database. i. Which AWS database engine would you recommend for the production Online Transaction Processing (OLTP) workload, and why? (5 Marks) ii. Which database type would you recommend for analytics, considering its heavy read workload, and why? (5 Marks) iii. For the production OLTP database, how would you implement high availability and disaster recovery? (5 Marks)	15

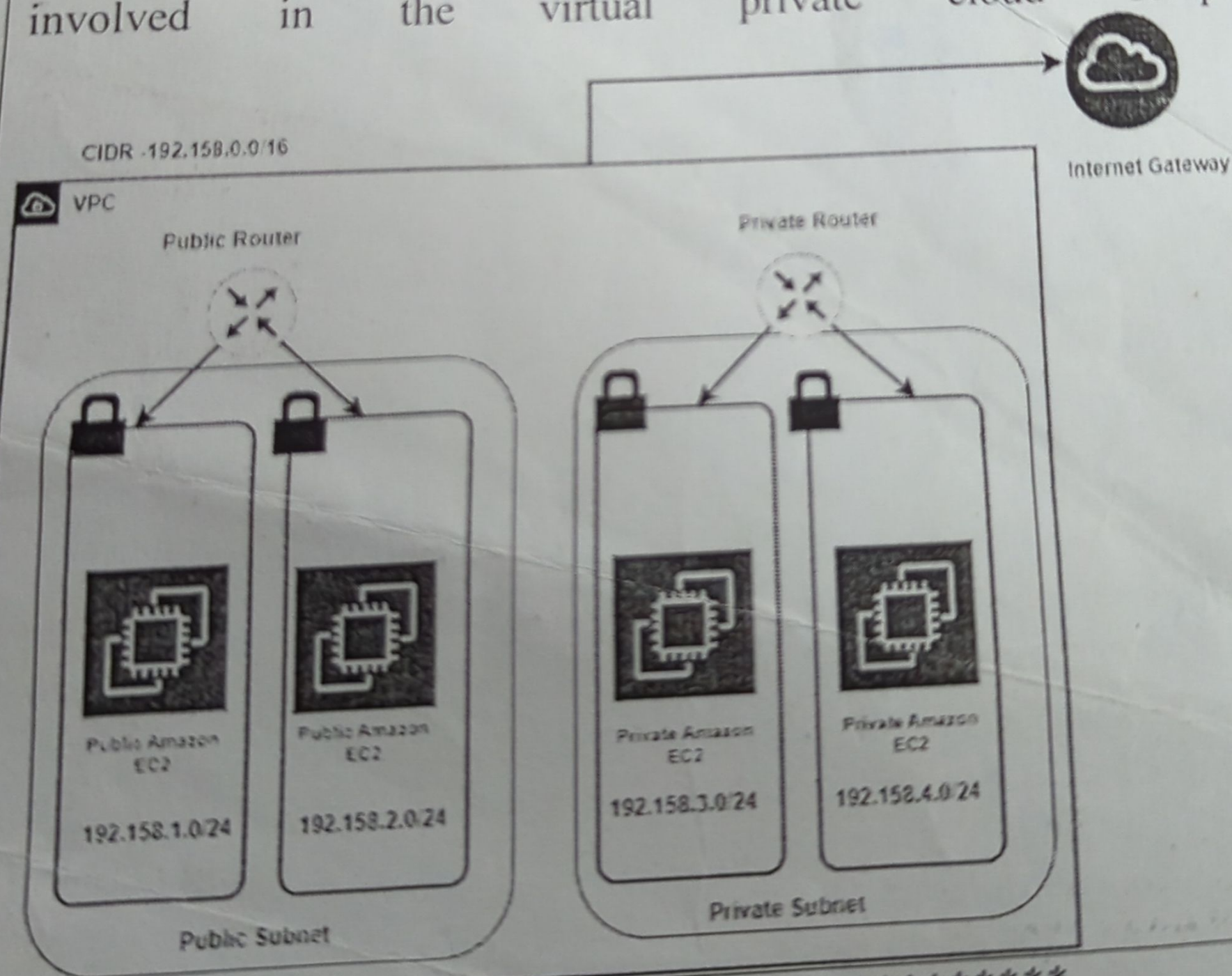
3

a

Mr XYZ is a cloud engineer in a mid-size company that has recently migrated its infrastructure to AWS. As part of the migration, you set up several EC2 instances, an RDS database, and are utilizing S3 storage for backups. After a couple of months, the company's AWS bill is significantly higher than expected. Your manager asks you to analyse the costs and suggest ways to optimize and reduce unnecessary expenses.

10

Mr Sigmoid is working as a cloud architect for a start-up that is launching a new web application. The application will be hosted on AWS and needs to be available globally with high availability and security. You have to design a VPC as mentioned in the below diagram. Explain the various steps and configurations that are involved in the virtual private cloud setup.



15

*****All the best *****