2/21

1411E1192

Candidate's Seat No :_____

M.Sc. Sem.-3 Examination

502

D. S.

Time : 2-30 Hours] **November-2025** **[Max. Marks : 70**

Instructions: All questions are compulsory. Use of non-programmable scientific calculator is allowed.

Q.1 (a) What is AWS Data Pipeline? Describe its features and provide the process to create, manage, and delete a pipeline. (07)

(b) Illustrate the key considerations for hosting a web application on AWS. Include aspects like scalability, security, cost, and architecture. (07)

OR

(a) Describe the architecture and benefits of using Amazon Elastic MapReduce (EMR). Include the steps to set up an EMR cluster. (07)

(b) What are the different types of tasks performed by Amazon Machine Learning? Describe the use cases of each with examples. (07)

Q.2 (a) What is Amazon DynamoDB? Describe its key benefits and explain how you can run it locally for development and testing. (07)

(b) Describe Amazon Redshift. How can you set it up and what are its core features that support data warehousing and analytics? (07)

OR

(a) Explain Amazon S3 in detail. How can users configure an S3 bucket, upload objects, and manage storage efficiently? (07)

(b) Explain Cloud Computing in detail. How does it differ from traditional computing, and what are the key benefits it offers to businesses? (07)

Q.3 (a) Compare and contrast Amazon RDS, DynamoDB, and Redshift in terms of architecture, use cases, scalability, and performance. (07)

(b) Explain Amazon RDS. Describe its features and steps involved in setting up and connecting to a MySQL DB instance. (07)

OR

(a) Discuss the different types of cloud deployment models (Public, Private, Hybrid). Give real-life examples and their use cases. (07)

(b) What is AWS Storage Gateway? Describe its types, especially Volume Gateway and Gateway-Virtual Tape Library (VTL), with examples. (07)

Q.4 (a) Discuss the cost factors associated with Amazon RDS. How does pricing vary based on instance type, storage, and region? (07)

(b) Discuss the various Amazon EBS volume types. Compare their performance, use cases, and cost-effectiveness. (07)

OR

(a) Describe the working of AWS CloudFront. How does it deliver content efficiently across global edge locations? (07)

(b) What is AWS Identity and Access Management (IAM)? Explain its components such as users, groups, roles, and policies with examples. (07)

P.T.O

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Q.5 Attempt any SEVEN out of TWELVE: (14)

(1) List two types of tasks performed by Amazon Machine Learning.
(2) Name the AWS service used for large-scale data processing using Hadoop.
(3) Which AWS service allows CDN-based content delivery?
(4) What is the purpose of Amazon KCL (Kinesis Client Library)?
(5) What is Multi-Factor Authentication (MFA) in AWS?
(6) How do you delete a DB instance in RDS?
(7) What are two benefits of using Amazon EMR?
(8) Name any two features of Amazon RDS.
(9) What is the primary use of Amazon Redshift?
(10) How do you delete an AWS Data Pipeline?
(11) What does RDS stand for in AWS?
(12) What are the three main cloud service models?

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