AWS CERTIFICATE SOLUTIONS ARCHITECT ASSOCIATE COURSE CONTENT(SAA-CO3)

1 Introduction to AWS

1.1 Overview of AWS services and their categories.

1.2 AWS Global Infrastructure: Regions, Availability Zones, and Edge Locations.

1.3 AWS Identity and Access Management (IAM) basics.

2 Compute Services

2.1 Amazon EC2 (Elastic Compute Cloud):Instances, instance types, and use cases.

2.1 Auto Scaling: Configuration and best practices.

2.2 Elastic Load Balancing: Types and use cases.

2.3 AWS Lambda: Serverless computing.

3 Storage Services

3.1 Amazon S3 (Simple Storage Service): Objectstorage fundamentals.

3.1 Amazon EBS (Elastic Block Store): Block storageand snapshots.

3.2 Amazon Glacier: Data archiving.

3.3 Storage Gateway: Hybrid cloud storage.

4 Database Services

4.1 Amazon RDS (Relational Database Service):Managed relational databases.

4.1 Amazon DynamoDB: NoSQL databases.

4.2 Amazon Redshift: Data warehousing.

5 Networking Services

5.1 Amazon VPC (Virtual Private Cloud): Networkingin the cloud.

5.2 Route 53: DNS and domain registration.

5.3 Direct Connect: Dedicated network connectionto AWS.

6 Security and Identity

6.1 AWS IAM: Advanced security configurations.

6.2 Amazon Cognito: Identity federation.

6.3 Security best practices.

7 Monitoring and Management Tools

7.1 AWS CloudWatch: Monitoring and logging.

7.2 AWS CloudTrail: Audit trail for API calls.

7.3 AWS Trusted Advisor: Cost optimization.

8 Deployment and Orchestration

8.1 AWS Elastic Beanstalk: Platform as a Service (PaaS).

8.2 AWS CloudFormation: Infrastructure as Code (IAC).

8.3 AWS OpsWorks: Chef and Puppet forapplication management.

9 High Availability and Scalability

9.1 Amazon Route 53: DNS for high availability.
9.2 Multi-region architecture.
9.3 Load balancing and scaling.

10 Resilient Architectures

10.1 Disaster recovery planning.
10.2 Backup and restore strategies.
10.3 Data synchronization and replication.

11 Optimizing Costs

11.1 Cost management best practices.
11.2 AWS cost-effective resources.
11.3 AWS Billing and Cost Management tools.

12 Case Studies and Best Practices

12.1 Real-world architectural scenarios.
12.2 Best practices for various use cases.