31. a. Relate the uses of the below services with the scenario and explain them in detail.     12   3   4
    i. Amazon Athena
    ii. Amazon Glue
    iii. Amazon EMR

**(OR)**

  b. Explain in detail the services offered by Amazon S3 and AWS Storage Gateway

32. a. Interpret how Amazon KMS helps out with security services? Justify with an example scenario.    12   4   5

**(OR)**

  b. Discuss in detail the scenario where the Amazon Guard Duty and Inspector are incorporated.

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# B.Tech. DEGREE EXAMINATION, JUNE 2023

Fifth Semester

## 18CSE308T - AWS SOLUTION ARCHITECT

(For the candidates admitted during the academic year 2018-2019 to 2021-2022)

**Note:**

i. **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40 minutes.

ii. **Part - B** and **Part - C** should be answered in answer booklet.

**Time: 3 Hours**        **Max. Marks: 100**

| | Part - A (20 × 1 Marks = 20 Marks) Answer All Questions | Marks | BL | CO |
|---|---|---|---|---|
| 1. | AWS is used on | 1 | 1 | 1 |
| | (A) All time    (B) On required | | | |
| | (C) Scaling is easy    (D) On required and Scaling is easy | | | |
| 2. | AWS had _____ revenue in 2019 | 1 | 1 | 1 |
| | (A) $35.02    (B) $24.31 | | | |
| | (C) $63.89    (D) $76.90 | | | |
| 3. | Choose the incorrect AWS Regions | 1 | 1 | 1 |
| | (A) US East (N.Virginia)    (B) US East (Ohio) | | | |
| | (C) US West (Oregon)    (D) US East (N.California) | | | |
| 4. | Identify the correct statement regarding pricing | 1 | 2 | 1 |
| | (A) pricing is the same in all the regions and is transparent on the service pricing page    (B) pricing varies from region to region and is transparent on the service pricing page | | | |
| | (C) pricing is the same in all the regions and is not transparent on the service pricing page    (D) pricing varies from region to region and is not transparent on the service pricing page | | | |
| 5. | AWS Availability zones are collected with | 1 | 1 | 2 |
| | (A) Low bandwidth, Ultra-Low latency networking    (B) High bandwidth, Ultra-Low latency networking | | | |
| | (C) Low bandwidth, low latency networking    (D) High bandwidth, low latency networking | | | |
| 6. | Amazon has _____ Points of presence | 1 | 1 | 2 |
| | (A) 216    (B) 210 | | | |
| | (C) 220    (D) 200 | | | |
| 7. | What does Amazon CloudFormation provide? | 1 | 2 | 2 |
| | (A) The ability to setup Autoscaling for Amazon EC2 instances    (B) A templated resource creation for Amazon Web Services | | | |
| | (C) A template to map network resources for Amazon Web Services    (D) A template to organize the memory based on the task | | | |

## Part - A (continued)

8. A user needs to determine whether an Amazon EC2 instance's security groups were modified in the last month. How can the user see if a change was made?    1   2   2
   - (A) Use Amazon CloudWatch to see if the security group was changed
   - (B) Use AWS CloudTrail to see if the security group was changed
   - (C) Use AWS Identity and Access Management (IAM) to see which user or role changed the security group
   - (D) Use Amazon EC2 to see if the security group was changed

9. Which of the following is NOT a supported subscriber for AWS SNS?    1   1   3
   - (A) AWS Kinesis Data Streams
   - (B) Amazon SQS
   - (C) HTTP(S) Endpoint
   - (D) AWS Lambda

10. Which of these storage protocols, is not recommended for AWS Datasync use case?    1   2   3
    - (A) SMB
    - (B) NFS
    - (C) SFTP
    - (D) S3

11. Which CloudFront distribution type requires you to provide a media player?    1   1   3
    - (A) Web
    - (B) Edge
    - (C) Streaming
    - (D) The Real-Time Messaging Protocol (RTMP)

12. You have set up a Direct Connect connection between your corporate data center and your VPC A in your AWS account. You need to access VPC B in another AWS region from your corporate datacenter as well. What should you do?    1   2   3
    - (A) Enable VPC Peering
    - (B) Use a Customer Gateway
    - (C) Use a Direct Connect Gateway
    - (D) Set up a NAT Gateway

13. When you set up an AWS Site-to-Site VPN connection between your corporate on-premises datacenter and VPCs in AWS Cloud, what are the two major components you want to configure for this connection?    1   2   4
    - (A) Customer Gateway and NAT Gateway
    - (B) Internet Gateway and Customer Gateway
    - (C) Virtual Private Gateway and Internet Gateway
    - (D) Virtual Private Gateway and Customer Gateway

14. Which service is a low cost, scalable warm tier for Amazon Elasticsearch service?    1   1   4
    - (A) UltraHot for Amazon Elasticsearch Service
    - (B) Ultra for Amazon Elasticsearch Service
    - (C) UltraWarm for Amazon Elasticsearch Service
    - (D) UltraCool for Amazon Elasticsearch Service

15. Which S3 Storage Class is the most cost-effective for archiving data with no retrieval time requirement?    1   1   4
    - (A) Amazon Glacier
    - (B) Amazon Glacier Deep Archive
    - (C) Amazon S3 Standard-Infrequent Access
    - (D) Amazon S3 Intelligent Tiering

16. You need to replicate API calls across two systems in real time. What tool should you use as a buffer and transport mechanism for API call events?    1   1   4
    - (A) AWS SQS
    - (B) AWS Lambda
    - (C) AWS Kinesis
    - (D) AWS SNS

17. Which of the following statement is a correct description of IAM policies?    1   1   5
    - (A) The Action element refers to the way IAM will react to a request
    - (B) The * character applies an element globally—as broadly as possible
    - (C) The Resource element refers to the third-party identities that will be allowed to access the account
    - (D) The Effect element refers to the anticipated resource state after a request is granted

18. Your company is planning on moving to the AWS Cloud. Once the movement to the Cloud is complete, they want to ensure that the right security settings are put in place. Which of the below tools can assist from a Security compliance. Choose the right answer from the options given below.    1   2   5
    - (A) AWS Inspector
    - (B) AWS CloudFront
    - (C) AWS Support
    - (D) AWS Kinesis

19. To enable In-flight Encryption (In-Transit Encryption), we need to have _____.    1   1   5
    - (A) an HTTP endpoint with an SSL certificate
    - (B) TCP endpoint without SSL
    - (C) an HTTPS endpoint with an SSL certificate
    - (D) TCP endpoint

20. How quickly will I get an attack notifications?    1   1   5
    - (A) within 15 minutes of attack detection
    - (B) within 20 minutes of attack detection
    - (C) within 30 minutes of attack detection
    - (D) Typically, AWS Shield Advanced provides notification of an attack within a few minutes of attack detection

## Part - B (5 × 4 Marks = 20 Marks)
### Answer any 5 Questions

| | | Marks | BL | CO |
|---|---|---|---|---|

21. Define and explain the three basic types of cloud services and the AWS products that are built based on them?    4   2   1

22. How do you upgrade or downgrade a system with near-zero downtime?    4   2   1

23. List out the steps involved in CloudFront solution.    4   1   2

24. Differentiate CloudFormation and AWS Elastic Beanstalk?    4   2   2

25. Elaborate in brief about the Storage Classes that are available in Amazon S3.    4   3   3

26. How do you configure CloudWatch to recover an EC2 instance?    4   3   4

27. Write down the functions AWS Shield.    4   1   5

## Part - C (5 × 12 Marks = 60 Marks)
### Answer All Questions

| | | Marks | BL | CO |
|---|---|---|---|---|

28. a. Explain in detail the following    12   3   1
    - i. AWS Lambda
    - ii. AWS Fargate
    - iii. Elastic Load Balancing

    **(OR)**

    b. A company 'XYZ' wants to utilize the various services of AWS DynamoDB and Amazon RDS. How these services will be satisfied their requirements?

29. a. Elaborate in detail on the following services of CloudTrail    12   3   2
    - i. Workflow
    - ii. Supported Regions
    - iii. Services and Integrations

    **(OR)**

    b. Describe about the services offered by AWS Backup and AWS Resource Access Manager in detail.

30. a. Mary used Amazon Route 53 and CloudFront for her project and she got success with it in terms of infrastructure needs. Can you identify what would be her need and why dis she used the above services?    12   4   3

    **(OR)**

    b. Differentiate in detail about the services provided by AWS Snowball and AWS Server Migration Service.