1. With Amazon Relational Database Service, your database instance automatically scales on demand
    a. True
    b. False
2. You are using a multi-AZ deployment with your Amazon Relational Database Service and setup has a primary and standby instance.
    With this setup what is the possible behavior that you will observe?
    a. Any slowness in standby system will increase transaction time
    b. Primary and Standby are disconnected and any slowness with standby will not impact primary
    c. Transactions take the same time as a single instance deployment

3. An Application uses RDS as backend and has a RDS managed read replica to handle analytics queries and reporting queries.
    If the read replica experiences slowness due to heavy load on the EC2 compute instance, what would be the impact to primary DB instance?
    a. Any slowness in read-replica will increase transaction time in primary
    b. Transactions in primary are not impacted
    c. Transactions in primary are impacted only if Read Replica is configured to use Synchronous replication
4. When you use a Read-Replica and a Standby instance in RDS, what behavior can you observe?
    a. Both allow READ only queries
    b. Only Standby allows READ only queries
    c. Only Standby allows WRITE queries
    d. Only Read-Replica allows READ only Queries
5. You are developing an online transaction processing system with very heavy writes and reads. Reads require most up-to-date data for processing. You are noticing throughput issues with the current system.
    Can you use Read Replica to offload READ traffic in this situation?
    a. Yes
    b. No
6. Can you use IAM user account to connect to an RDS DB Instance and query the tables?
    a. Yes
    b. No
7. You are noticing that the RDS DB Instance is running slow and you would like to view logs to analyze the root cause
    What capability can you use to do this?

     a. RDS does not provide access to database logs. You need to use CloudWatch metrics to troubleshoot issues

     b. You would need to connect to the underlying RDS server and access database logs

     c. You can access the database logs through RDS APIs, Command Line and Management Console

8. You have an inhouse Oracle database that you are planning to migrate over to Amazon Relational Database Service. Your team has invested in home grown tools to directly gather key performance metrics from Oracle Database Server and send out alerts when issues are detected.

When migrating to AWS RDS service, you would like to take advantage of existing investment that you have made.

Which one of these options is NOT possible?

     a. You can use the same scripts and configure them to run in RDS Server

     b. RDS standardizes metrics collection using CloudWatch. Better option is to develop alarms using cloudwatch metrics

     c. You can download database log files using RDS APIs and publish your application specific metrics to CloudWatch

9. You have standard configuration policies defined for your AWS resources.

How can you ensure that those policies are followed by your development and support team?

     a. Use AWS Config capability to continously audit your infrastructure and flag discrepancies

     b. Use RDS template feature to ensure your db instances can be launched from templates

     c. Use IAM Action policies to control what customer defined RDS templates can be used by the users belonging to an account

Answers:

1. B – You must provision appropriate instance class and storage including provisioned IOPS.

2. A - Multi-AZ Deployment uses synchronous replication technology and transactions are recorded in both the primary and standby systems. Any slowness in standby would impact primary.

3. B - RDS Read replica is created based on asynchronous replication technology and does not impact primary db transactions. Read-replica may see a backlog build up if there are momentary interruptions

4. D - Standby is for increasing fault tolerance of your database instance and does not allow READ queries. READ replica is for offloading read traffic from your primary instance
5. B – No. Read Replica can lag behind primary due to asynchronous nature of replication. If application cannot handle stale data, it needs to query from primary instance
6. B – No. IAM account can perform control plane operations like creating RDS cluster, taking manual snapshot, restoring backup and so forth. For connecting and querying a database, RDS DB Instances require DB Engine specific user accounts
7. C - Database log files – View, download, or watch database log files using the Amazon RDS console or Amazon RDS APIs or CLI. You can also query some database log files that are loaded into database tables
8. A – It is a negative question. RDS is a managed service and it does not allow access to underlying physical server. You can either use metrics already published by RDS to CloudWatch or download log files using API/CLI and publish your metrics to CloudWatch for effective monitoring.
9. A - AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations