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CSE314

Enrol. No. ....202

[ET]

END SEMESTER EXAMINATION : APRIL-MAY 2022

## CLOUD COMPUTING PRACTITIONER

Time : 3 Hrs.

Maximum Marks : 60

Note: Attempt questions from all sections as directed.

### SECTION - A (24 Marks)

Attempt any four questions out of five.

Each question carries 06 marks.

- 1✓ Bring out the relation between availability zone, regions and edge locations in AWS cloud environment.
- 2✓ Explain shared responsibility model and differentiate between security credentials and role of IAM groups.
3. You are trying to provide a service in a particular region, but you do not see the service in that region. Why is this happening, and how do you fix it?
- 4✓ How do you set up a system to monitor website metrics in real-time in AWS?

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5. State the security laws which are implemented to secure data in a cloud and whether they are essential or not.

### SECTION - B (20 Marks)

*Attempt any two questions out of three.*

*Each question carries 10 marks.*

6. You have deployed multiple EC2 instances across multiple availability zones to run your website. You have also deployed a Multi-AZ RDS MySQL Extra Large DB Instance. The site performs a high number of small read and write operations per second. After some time, you observed that there is read contention on RDS MySQL. What would be your approach to resolve the contention and optimize your website?  
Justify your answer.

7. If I'm using Amazon CloudFront, can I use Direct Connect to transfer objects from my own data center?  
If yes then how is it possible

8. Explain when to use AWS Compute Optimizer and when to use AWS Cost Explorer? Justify your answer.

**SECTION - C**      (16 Marks)  
*(Compulsory)*

9. (a) Your organization is using DynamoDB for its application. This application collects data from its users every 10 minutes and stores it in DynamoDB. Then every day, after a particular time interval, the data (respective to each user) is extracted from DynamoDB and sent to S3. Then, the application visualizes this data to the users. You are asked to propose a solution to help optimize the backend of the application for latency at lower cost. What would you recommend and how? (8)

(b) Robots have been around for a long time. Detroit has used robots for four decades to build cars, and manufacturers of all kinds of goods use some form of robotics to achieve efficiencies and productivity. But until iRobot brought its battery-powered vacuum cleaner to the market, no one had successfully used robots in the home as an appliance. The issue was not whether it was possible to use robots in the home, but could they be produced at price customers would pay. Until

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the introduction of Roomba, iRobot's intelligent vacuum cleaner, robots for the home cost tens of thousands of dollars. A Roomba's price point of \$199, it was now possible for the average consumer to afford to have a robot clean the house. That in itself is an interesting story, but even more interesting is the entrepreneurial journey of Colin Angle and his company, iRobot.

- (i) Evaluate iRobot's approach to the consumer market. Was it effective? Would you have done anything differently?
- (ii) How will iRobot maintain its lead in the consumer market? (8)

(300)