National University of Computer and Emerging Sciences, Lahore Campus

Course:	Intro to Cloud Computing	Course Code:	CS-4037
Program:	BS (Computer Science)	Semester:	Spring 2023
Duration:	20 Minutes	Total Marks:	15
Paper Date:	06-Apr-23	Weight	02%
Section:	BCS (6A)	Page(s):	02
Exam:	Quiz 3	Roll No.	

Name:

Attempt all questions on the question paper. Rough sheets can be used but it should not be attached. If you think some information is missing then assume it and mention it clearly.

Question # 1: [4 marks, CLO # 2]

For what purpose, Amazon Route 53 service and Amazon CloudFront service are used?

Amazon Route 53:

- **Highly available and scalable Domain Name System (DNS) web service.**
- **Used to route end users to internet applications by translating names (like www.example.com) into numeric IP addresses (like 192.0.2.1) that computers use to connect to each other.**

Amazon CloudFront:

- **Fast, global, and secure Content Delivery Network service.**
- **Available with the help of global network of edge locations and Regional edge caches.**

Question # 2: [4 marks, CLO # 2]

Differentiate between Virtual Private Cloud and Subnet.

Virtual Private Cloud:

- **Logically isolated from other VPCs**
- **Dedicated to your AWS account**
- **Belong to a single AWS Region and can span multiple Availability Zones**

Subnet:

- **Range of IP addresses that divide a VPC**
- **Belong to a single Availability Zone**
- **Classified as public or private**
    - **Public subnets have direct access to the internet, but private subnets do not.**

Question # 3: [7 marks, CLO # 2]

Write down the seven layers (along with their function) of the Open System Interconnection model.

Layer	Number	Function	Protocol/Address
Application	7	Means for an application to access a computer network	HTTP(S), FTP, DHCP, LDAP
Presentation	6	• Ensures that the application layer can read the data • Encryption	ASCI, ICA
Session	5	Enables orderly exchange of data	NetBIOS, RPC
Transport	4	Provides protocols to support host-to-host communication	TCP, UDP
Network	3	Routing and packet forwarding (routers)	IP
Data link	2	Transfer data in the same LAN network (hubs and switches)	MAC
Physical	1	Transmission and reception of raw bitstreams over a physical medium	Signals (1s and 0s)