MANIPAL UNIVERSITY JAIPUR
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Faculty of Engineering
School of Computer Science and Engineering
Department of CSE/AIML
VI SEM. B.Tech. CSE/AIML/IT
Even Semester Makeup Examination July-23
CS3241 CLOUD INFRASTRUCTURE AND SERVICES
Closed Book

Time: 2 Hours   **MAX.MARKS: 40**

Instructions to Candidates
•Attempt any full five questions.
•Missing or wrong data, if any, may be assumed suitably after duly mentioning at proper place.
•Calculator is not allowed.

Q. No.		Question Script	Marks	CO Mapping
1	a.	Identify and elaborate on when we should use traditional computing or cloud infrastructure. Compare in terms of the total cost of ownership parameters.	4	CO1
	b.	Identify the type of AWS services used and elaborate its configuration and functioning for the given use case scenario. a) The root user account should not be used. b) Role-based user accounts created. c) Role-based credentials are allocated. d) Billing alerts and budget management should be done. e) Three tier architecture is used, and database server is installed on an EC2 machine. f) Database server can only be accessed by application layer only. g) VPC and public IP are configured. h) Fixed public IP is assign to access web page.	4	CO2, CO3, CO4
2	a.	Explain the global infrastructure components of AWS. How is it used for disaster management?	4	CO2
	b.	Elaborate on how auto-scaling helps users to manage traffic or load bursts during peak time.	4	CO2
3	a.	Identify suitable AWS service type for the following cases: i) Big data analytics ii) Subnet based network configuration iii) NoSQL Database iv) Static web pages	4	CO3,CO4
	b.	On what basis we can identify whether we should use Amazon RDS or Amazon Aurora for databases?	4	CO3
4	a.	An organization requires a range of IP addresses to assign one to each		CO1, CO2

of its EC2 instances. The organization has created a VPC with network id 10.1.0.0/16. The organization wants to create subnets as per their uses.

Answer the following questions:

	i.	How many numbers of possible subnets with 1000 usable IP addresses in AWS?	2
	ii.	How many IP addresses get wasted in every subnet if only 1000 IP addresses are used?	2
4 b.	i.	How many numbers of possible usable IP addresses for 10.1.0.0/26 subnet?	2
	ii.	Elaborate use of elastic public IP in AWS services with an example.	2
5		Give the brief description for following Components of Amazon VPC:	8

a) Virtual Private Cloud (VPC)
b) Subnet
c) Internet Gateway
d) NAT Gateway
e) Hardware VPN Connection
f) Virtual Private Gateway
g) Peering Connection
h) VPC Endpoint

CO1,CO2,
CO3,CO4

6		Elaborate on the functioning of Amazon Route 53 with a proper diagram. State how the availability of your applications can be improved that run on AWS.	8	CO2