DEPARTMENT OF IT & CSE
QUESTION BANK

Subject Code/Name: 23CSX507_Cloud Computing and Virtualization
Year/ Semester: III / VI

UNIT II– CLOUD ARCHITECTURE, SERVICES AND APPLICATIONS

Exploring the Cloud Computing Stack - Connecting to the Cloud, Infrastructure as a Service, Platform as a Service, Using PaaS Application Frameworks, Software as a Service, Identity as a Service, Compliance as a Service.

PART - A

1.	Define Cloud Computing.	K1
2.	What is meant by the Cloud Computing Stack?	K1
3.	List any two characteristics of cloud computing.	K2
4.	What is Infrastructure as a Service (IaaS)?	K1
5.	State two advantages of IaaS.	K2
6.	What is the role of virtualization in cloud computing?	K1
7.	Define Platform as a Service (PaaS).	K1
8.	Mention any two services provided by PaaS.	K2
9.	What is Software as a Service (SaaS)?	K1
10.	Give two examples of SaaS applications.	K2
11.	What is meant by Business Process Outsourcing (BPO)?	K1
12.	Define Connecting to the Cloud.	K1
13.	List any two methods of accessing cloud services.	K2
14.	What is a Virtual Private Network (VPN)?	K1
15.	Name any two protocols used in cloud communication.	K2
16.	What is pay-per-use billing model in cloud computing?	K1
17.	Define load balancer.	K1
18.	What is meant by scalability in cloud services?	K1
19.	Define Identity as a Service (IDaaS).	K1
20.	What is Single Sign-On (SSO)?	K1
21.	Mention any two benefits of SSO.	K2
22.	What is Multi-Factor Authentication (MFA)?	K1
23.	Define Federated Identity Management (FIDM).	K1
24.	What is meant by Compliance as a Service (CaaS)?	K1
25.	State any two objectives of Compliance as a Service.	K2
26.	What is Cloud Governance?	K1
27.	Mention any two key features of Compliance as a Service.	K2
28.	What is meant by multi-tenancy in SaaS?	K1
29.	List any two advantages of SaaS.	K2
30.	Name any two major cloud service providers.	K2

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PART - B

1. (i) Explain the Cloud Computing Stack with neat diagrams and discuss the role of IaaS, PaaS, SaaS, and BPO in detail. — K2 (8)

   (ii) Describe the methods of connecting to the cloud, explaining network connectivity, access methods, security considerations, and authentication mechanisms. — K2 (8)

2. A medium-sized e-commerce company plans to migrate its IT infrastructure to the cloud. Apply the concept of Infrastructure as a Service (IaaS) to this scenario. Explain its working mechanism, identify the types of IaaS resources required, evaluate its advantages and disadvantages for the company, and suggest suitable major IaaS providers. — K3 (16)

3. A startup wants rapid application development without managing servers. Justify the adoption of PaaS with suitable architecture and benefits. — K4 (16)

4. Analyze the working of PaaS application frameworks. Break down their core components, examine the workflow involved in application development and deployment, and compare popular PaaS frameworks with suitable examples. — K4 (16)

5. A small business plans to adopt a cloud-based software solution to manage its accounting, customer relationships, and internal communication. Apply the concept of Software as a Service (SaaS) to this scenario. Explain how SaaS works in this context, discuss its key features, and analyze its advantages and disadvantages for the organization. — K3 (16)

6. An organization struggles with managing multiple user credentials. Explain how IDaaS with SSO and MFA can solve this problem. — K3 (16)

7. Analyze the differences between IaaS, PaaS, and SaaS in terms of control, responsibility, scalability, and business impact. — K4 (16)

8. Describe Cloud Governance and Compliance as a Service, highlighting their importance in ensuring security, regulatory adherence, and risk management in cloud computing. — K2 (16)

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