MAY-24-0562

CS-704 (Cloud Computing)

B.Tech-7th (CBCS)

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note: Attempt five questions in all, selecting one question each from Section A, B, C and D. Q. No.9 is compulsory.

SECTION-A

1. Discuss the key features of cloud computing architecture. What are the different types of cloud computing architectures, and how do they differ from each other? (10)

2. Describe the concept of storage virtualization in cloud computing. What are the benefits of storage virtualization, and how does it help organizations manage their data more efficiently? (10)

SECTION-B

3. Identify the barriers that prevent organizations from adopting cloud computing. What steps can organizations take to overcome these barriers and successfully transition to the cloud? Explain. (10)

4. Explain the importance of application-level security in the cloud. What are the key elements of application-level security that organizations need to consider when deploying cloud services? (10)

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SECTION-C

5. (a) Describe the differences between SaaS, PaaS, and IaaS in terms of availability management.

   (b) Explain the importance of privacy considerations at each stage of the data life cycle. (5+5=10)

6. Explain the following IAM protocols:
   (i) SAML
   (ii) OAuth
   (iii) OpenID Connect (10)

SECTION-D

7. Provide an overview of the Cloud Security Alliance (CSA) and its role in promoting best practices for securing cloud computing environments. (10)

8. What are some key privacy concerns related to cloud computing? Explain the role of cloud service providers in protecting the privacy of their customers. (10)

SECTION-E (Compulsory)

9. Answer the following questions in brief:
   (a) What is CPU virtualization?
   (b) What are the different cloud services delivery models?
   (c) Define a hybrid cloud strategy.
   (d) Define network-level security in the cloud.
   (e) What is infrastructure security in the cloud?
   (f) What is role-based access control in cloud IAM?
   (g) What is cloud authorization management?
   (h) Define availability management.
   (i) List common challenges faced in security management in the cloud?
   (j) What are some common U.S. privacy laws and regulations? (10×2=20)