END TERM EXAMINATION

THIRD SEMESTER [MCA] JANUARY 2024

Paper Code: MCA-223   Subject: Cloud Computing

Time: 3 Hours   Maximum Marks: 75

Note: Attempt five questions in all including Q.No.1 which is compulsory. Select one question from each unit.

1. Answer all the following questions briefly: -   **(2.5x10=25)**
   (a) Enlist the varied features of Cloud Computing.

   (b) Contrast between cloud computing and grid computing.

   (c) You need to install multiple guest on the top of single hardware. The hardware resources shared by all mounted guest OS. The facility of sharing the resource may be provided by the host OS. Discuss the appropriate term which can resolve such issues.

   (d) Elaborate the major characteristics of platform-as-a-service solution.

   (e) Compare authentication and authorization.

   (f) List some examples of CRM and ERP implementation based on computing technologies.

   (g) Describe the basic features of Amazon EC2 and its basic features.

   (h) Discuss the objective of cloud information security.

   (i) Elaborate the use of hypervisor in Cloud Computing.

   (j) Describe the fundamentals of cloud security design.

UNIT – I

2. (a) Contrast between IaaS, PaaS and SaaS.
                                                                   (6.5)
   (b) Discuss the Map-Reduce Algorithm in detail. List certain cases where we can apply the same.   **(6)**

3. (a) Through appropriate examples discuss in detail the different types of Cloud architecture to the users.   **(6.5)**

   (b) Discuss the varied cloud deployment models.
                                                                   (6)

UNIT – II

4. (a) Discuss atleast two hardware virtualization techniques.
                                                                   (6.5)
   (b) Contrast between Hypervisor-I, Hypervisor-II and KVM with respect to their advantages, applications and limitations.   **(6)**

5. (a) Explain the term Middleware wrt support for Virtualization.

   (b) Compare Virtual LAN and Virtual SAN alongwith their benefits.
                                                                   (6.5)

                                                                   (6)

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UNIT – III

6. (a) Suppose you have to design and develop the data center for Amazon. Discuss the constraints and technologies to be considered as a technology expert. **(6.5)**

   (b) Describe the varied trust issues in cloud with respect to Industry direction and Operational Phasing. **(6)**

7. (a) You are working as a Cloud Architect in your organization. You are requested to give an appropriate solution for the following constraints: **(6.5)**

   a. Multiple users may simultaneously interact with the web application.

   b. Cost should be optimized as compared to any other platform.

   c. Migration of servers should be done without interrupting the web application services.
   Analyse and discuss the detailed information of your solution.

   (b) Explain the term privacy and trust with respect to cloud computing. **(6)**

UNIT – IV

8. (a) Discuss the cloud solution for any cloud requirements. Discuss the best practices for the cloud services in detail. **(6.5)**

   (b) Define web services. Elaborate the different types of web services. **(6)**

9. (a) Analyze the risks posed by foreign mapping and the solution adopted by Xoar. List the security risk posed by XenStore. **(6.5)**

   (b) Identify the main security threats for the SaaS cloud delivery model on a public cloud. Discuss the different aspects of these threats on a public cloud vis-à-vis the threats posed to similar services provided by a traditional service-oriented architecture running on a private infrastructure. **(6**

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