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**NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA**  
(An Autonomous Institute Affiliated to AKTU, Lucknow)

**M.Tech**

**SEM: I - THEORY EXAMINATION (2025 - 2026)**

**Subject: Cloud Computing**

**Time: 3 Hours**

**Max. Marks: 70**

**General Instructions:**

**IMP:** Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

**SECTION-A**

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1. Attempt all parts:-

- 1-a. \_\_\_\_\_ enables batch processing, which greatly speeds up high-processing applications. (CO1, K1) 1
- (a) Scalability
- (b) Reliability
- (c) Elasticity
- (d) Utility
- 1-b. It is an architecture which is built on top of a SOA.(CO2,K1) 1
- (a) The Application Architecture
- (b) The Service Architecture
- (c) The Component Architecture
- (d) None of the mentioned
- 1-c. Open source software used in a SaaS is called \_\_\_\_\_ SaaS. (CO3, K1) 1
- (a) closed
- (b) free
- (c) open
- (d) all of the mentioned
- 1-d. VM security is based on: (CO4, K1) 1
- (a) Trusted computing base
- (b) Platform security
- (c) Software security
- (d) Cloud computing services

- 1-e. Amazon \_\_\_\_\_ provides developers the tools to build failure resilient applications and isolate themselves from common failure scenarios.(CO5,K5) 1
- (a) EC2
  - (b) EC3
  - (c) EC4
  - (d) All of the mentioned

2. Attempt all parts:-

- 2.a. Define platform as a service. (CO1, K1) 2
- 2.b. Explain CPU virtualization. (CO2, K2) 2
- 2.c. Name the service that works as Man- in – middle. (CO3, K2) 2
- 2.d. List some challenges in cloud security. (CO4, K1) 2
- 2.e. Define “Instance” in terms of Amazon EC2. (CO5, K1) 2

### **SECTION-B**

20

3. Attempt all parts:-

3.a. Answer any one of the following:-

- 3.a.(i) Discuss the phases of Evolution. (CO1, K2) 4
- 3.a.(ii) Explain Cloud Computing Applications.(CO1,K2) 4

3.b. Answer any one of the following:-

- 3.b.(i) Classify the types of load balancing techniques. (CO2, K2) 4
- 3.b.(ii) Distinguish type1 and type2 hypervisor. (CO2, K4) 4

3.c. Answer any one of the following:-

- 3.c.(i) Define firmware and name the cloud offering that delivers this service. (CO3,K1) 4
- 3.c.(ii) Examine need and responsibilities of cloud carrier. (CO3, K2) 4

3.d. Answer any one of the following:-

- 3.d.(i) Specify how cloud security leads to reliability. (CO4, K2) 4
- 3.d.(ii) Give the meaning of strategic management in terms of cloud security. (CO4,K2) 4

3.e. Answer any one of the following:-

- 3.e.(i) Discuss relation between Google app engine and Google compute engine. (CO5, K2) 4
- 3.e.(ii) Review fog computing and list its differences with cloud computing. (CO5, K3) 4

### **SECTION-C**

35

4. Answer any one of the following:-

- 4-a. Justify Grid computing as a Distributed Computing. (CO1, K3) 7
- 4-b. Describe the types of cloud with advantages and disadvantages. (CO1, K2) 7

5. Answer any one of the following:-

- 5-a. Explain the ways in which cloud enterprise effectively manages the workload of various resources. Also write various techniques involved in it. (CO2, K2) 7
- 5-b. Explain in detail various levels of implementing virtualization. (CO2,K1) 7

6. Answer any one of the following:-

- 6-a. In terms of cost effectiveness, discuss about each services that cloud computing offers. (CO3, K2) 7
- 6-b. Explain role of cloud auditor and how SLA leads the working of cloud auditor. (CO3,K2) 7
7. Answer any one of the following:-
- 7-a. Discuss multi- factor authentication. State its features, advantages and limitations too. (CO4, K2) 7
- 7-b. “Cloud security helps to know organisation’s risks and their business impact”, clarify the statement in detail. (CO4,K2) 7
8. Answer any one of the following:-
- 8-a. Write the detailed difference between EC2 and S3 with the services they offer. (CO5, K3) 7
- 8-b. Draw your focus on limitations of following technologies: Google App Engine, Amazon EC2, Microsoft Azure. (CO5,K2) 7

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