

IMSc IT CAD Sem.-7 Examination  
MSCCAD-702

Security Fundamentals for Cloud Application

Time : 2.30 Hours]

December-2025

[Max.Marks : 70

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Do not write anything on the question paper.

**Section- A: Answer the below questions in descriptive way. (30)**  
(Each Answers is 15 marks)

1. Why has cloud security become a core priority for modern organizations, and what risks arise when it is ignored? What is Multi-Factor Authentication (MFA) and why is it important?
2. Why is the Shared Responsibility Model essential in cloud governance, and how does misunderstanding it led to security failures?

OR

1. How does the CIA Triad guide the design of secure cloud systems, and what challenges arise in maintaining its principles in distributed environments?
2. How do cloud-native technologies (containers, serverless, and microservices) reshape the security landscape?

**Section- B: Give Answers in descriptive. (30)**  
(Each Answers is 10 marks)

1. How does the principle of least privilege reduce attack surface in cloud ecosystems?
2. How do authentication and authorization differ, and why must both be tightly integrated?
3. What role does a Virtual Private Cloud (VPC) play in securing cloud workloads and how should it be designed?

OR

1. What are common cloud network misconfigurations attackers exploit, and how can automation help?

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2. Explain how GDPR affects cloud architecture, particularly regarding data subject rights and breach reporting.
3. For PCI DSS, how do cloud services affect scope and what controls reduce PCI scope?

**Section- C: Give Answers in descriptive (10)**  
**(Each Answers is 10 marks)**

1. How does cloud elasticity impact threat exposure and incident response planning?

**OR**

1. What is a Web Application Firewall (WAF) and where in the cloud stack is it most effective?

