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MCA
(SEM I) THEORY EXAMINATION 2025-26
CYBER SECURITY

TIME: 3 HRS**M.MARKS: 70**

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A**1. Attempt all questions in brief.****02 x 7 = 14**

Q no.	Question	CO	Level
a.	Define Information Security and explain two challenges in securing Information Systems.	CO-1	K1
b.	Describe the need for information security in organizations.	CO-1	K1
c.	What is a Firewall and how does it help in network security?	CO-2	K1
d.	Define Malware. Mention two types and explain one briefly.	CO-2	K1
e.	What is Electronic Commerce? Mention one type of threat associated with it.	CO-3	K1
f.	State the purpose of Security Policies in organizations.	CO-4	K1
g.	Explain the concept of Risk Analysis in Information Systems.	CO-1	K1

SECTION B**2. Attempt any three of the following:****07 x 3 = 21**

Q no.	Question	CO	Level
a.	Explain different types of Information Systems and analyze inherent difficulties in securing them.	CO-1	K3
b.	Describe Security Threats such as viruses, worms, Trojan horses, bombs, and traps. Compare their impact.	CO-2	K3
c.	Explain Digital Signatures and their role in securing Electronic Commerce transactions.	CO-3	K3
d.	Discuss the process of developing Security Policies and their importance in organizations.	CO-4	K3
e.	Explain network security measures such as Virtual Private Networks and Intrusion Detection Systems.	CO-2	K3

SECTION C**3. Attempt any one part of the following:****07 x 1 = 07**

Q no.	Question	CO	Level
a.	Explain Confidentiality, Integrity, and Availability. Discuss their importance in Information Security.	CO-1	K3
b.	Analyze the threats to Information Systems and suggest countermeasures.	CO-1	K3

4. Attempt any one part of the following:**07 x 1 = 07**

Q no.	Question	CO	Level
a.	Explain data security considerations related to backup, archival storage, and disposal of data.	CO-2	K3
b.	Describe Security Technology such as Firewalls and VPNs, and explain how they prevent attacks.	CO-2	K3



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TIME: 3 HRS**M.MARKS: 70****5. Attempt any one part of the following:****07 x 1 = 07**

Q no.	Question	CO	Level
a.	Explain the threats to Electronic Commerce systems and how secure information systems can mitigate them.	CO-3	K3
b.	Describe application development security measures in Electronic Commerce.	CO-3	K3

6. Attempt any one part of the following:**07 x 1 = 07**

Q no.	Question	CO	Level
a.	Explain the types of Security Policies in organizations, such as email, corporate, and sample policies.	CO-4	K3
b.	Analyze the policy review and publication process in detail.	CO-4	K3

7. Attempt any one part of the following:**07 x 1 = 07**

Q no.	Question	CO	Level
a.	Explain the role of physical security and access control in securing IT assets.	CO-4	K3
b.	Discuss CCTV and backup security measures and their importance in organizational security.	CO-4	K3