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Second Semester MCA Degree Examination, June/July 2024
Cryptography and Network Security

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Explain Computer Security concepts.	10	L2	CO1
	b.	What is OSI Security Architecture?	10	L2	CO1
OR					
Q.2	a.	What are different types of Security attacks?	10	L2	CO1
	b.	Explain the model for Network Security.	10	L2	CO1
Module – 2					
Q.3	a.	Explain Stream Cipher using Algorithmic bit – stream generator.	10	L2	CO2
	b.	Explain General depiction of DES Encryption Algorithm.	10	L2	CO2
OR					
Q.4	a.	Through an example, explain DES Encryption and its implications.	10	L2	CO2
	b.	What are the block Cipher Design Principles?	10	L2	CO2
Module – 3					
Q.5	a.	Explain with flowchart Euclidian Algorithm.	10	L2	CO3
	b.	Explain Fermat's and Euler's theorem.	10	L2	CO3
OR					
Q.6	a.	Explain Miller and Rabin theorem.	10	L2	CO3
	b.	Explain the description of RSA Algorithm.	10	L2	CO3
Module – 4					
Q.7	a.	What is Cryptographic Hash Function?	10	L2	CO4
	b.	What are the applications of Hash Function?	10	L2	CO4
OR					
Q.8	a.	What are the requirements of Cryptographic Hash Function H?	10	L2	CO4
	b.	What are Message Authentication Functions?	10	L2	CO4

Module – 5					
Q.9	a.	What are the properties and requirements of Digital signatures?	10	L2	CO5
	b.	Explain Elgamal Digital Signature.	10	L2	CO5
OR					
Q.10	a.	What is Schnorr Digital Signature?	10	L2	CO5
	b.	Illustrate the usage of a Key Hierarchy.	10	L2	CO5
