EPCET LIBRARY BANGALORE-49

CBCS SCHEME

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BAD703

Seventh Semester B.E./B.Tech. Degree Examination, June / July 2026
Data Security and Privacy

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 Caesar Cipher with suitable example.	10	L2	CO1
	b.	Discuss Fiestal encryption and decryption algorithm with neat diagram.	10	L2	CO1
		OR			
Q.2	a.	Explain Playfair Cipher Algorithm and apply its rules for the following example : Key = "MONARCHY" . Plaintext = "ATTACK" to get the cipher text.	10	L2	CO1
	b.	Describe the working of DES encryption algorithm with neat diagram.	10	L2	CO1
		Module – 2			
Q.3	a.	Explain the description of RSA algorithm. Assume 2 prime numbers as p = 3 and q = 11, encryption key e = 7. Apply RSA algorithm and find cipher text for the plaintext m = 31 and decrypt the cipher text to obtain plain text.	10	L2	CO2
	b.	Define Pseudorandom Number Generator. List and explain two types of pseudorandom number generators with example.	10	L2	CO2
		OR			
Q.4	a.	Explain the Diffie – Hellman Key exchange algorithm with an example and diagram.	10	L2	CO2
	b.	Briefly explain Elliptic Curve Cryptography algorithm.	10	L2	CO2
		Module – 3			
Q.5	a.	Describe the different stages involved in key lifecycle and fundamentals of key management requirements.	10	L2	CO3
	b.	Explain different key establishment techniques.	10	L2	CO3
		OR			
Q.6	a.	Explain public key management with certification process.	10	L2	CO3
	b.	Describe alternative approaches to public –key management.	10	L2	CO3
		Module – 4			
Q.7	a.	Explain Authentication Header (AH) and Encapsulating Security Ployload [ESP] .	10	L2	CO4
	b.	Describe the main elements of IP security architecture.	10	L2	CO4
		OR			
Q.8	a.	Explain Internet Key Exchange [IKE] phase in detail.	10	L2	CO4
	b.	Describe transport layer security mechanisms.	10	L2	CO4
		Module – 5			
Q.9	a.	Explain data hiding techniques in text in detail.	10	L2	CO5
	b.	Briefly explain Digital Watermarking Methods and applications.	10	L2	CO5
		OR			
Q.10	a.	Discuss Image Steganography using LSB encoding.	10	L2	CO5
	b.	Explain BPCS Steganography with neat illustration.	10	L2	CO5

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