## Seventh Semester B.E. Degree Examination, July/August 2021 Information and Network Security

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full question.

1	a.	Compare and interpret	
•		:) Cryptagraphy and Cryptanalysis ii) Substitution and Transposition Cipilei	(00 N/ l)
		iii) Block and Stream Cipher iv) Symmetric and Asymmetric Cipher	(08 Marks)
	b.	Explain one time pad with its cryptanalysis	
		Letter e h i k l r s t	
		hinary 000 001 010 011 100 101 110 111	
		Key 111 101 110 101 111 100 000 101 110 000	
		Message: heilhitler	(08 Marks)
		Wicssage . Helimitely	
		Simplify the Kerckhoff's principle in the context of Cryptography.	(08 Marks)
2	a.	Rephrase the properties of Cryptographic hash function.	(08 Marks)
	b.	Reputase the properties of Cryptograp	
		To the Arian detail	(08 Marks)
3	a.	Explain Tiger hash in detail.	(08 Marks)
	b.	Illustrate Birthday attack with an example.	
		1 Di it 1 moternating techniques used to	hide the
4	a.	Explain how Steganography and Digital watermarking techniques used to	(08 Marks)
		information.	(08 Marks)
	b.	Illustrate HMAC algorithm with its structure.	,
			(08 Marks)
5	a.	Illustrate the dynamic passward Scheme based on challenge response.	(08 Marks)
	b.	Explain the clock based and sequence numbers freshness mechanisms.	(08 Marks)
6	a.	Explain the stages in protocol design and its challenges.	(08 Marks)
U	a. b.	Illustrate Authentication and key establishment protocols.	(08 Marks)
	υ.	Thustrate Transaction	
_		Explain the scope of key management with its key lifecycle diagram.	(08 Marks)
7	a.	Explain the scope of key management with its key intervene diagram.  Illustrate the key generation processes for symmetric and public key cryptography	(08 Marks)
	b.	mustrate the key generation processes 14-27	
	G		
		in a least management techniques	(08 Marks)
8	, a.	Interpret the Governing key management techniques.	(08 Marks)
	b.		
9	a.	Summarize the following applications  Cryptography for mobile telecommunications.	(08 Marks)
_		County graphy on the internet ii) Cryntography for mobile telecollinumeations.	(00 11141 170)

i) Cryptography on the internet ii) Cryptography for mobile telecommunications. (08 Marks)

Illustrate the main significance of Cryptography in wireless local area networks.

Outline how Cryptography will provide security for payment card transactions, explain in 10 a. detail.

Illustrate the following Cryptographic applications:

i) Video broadcasting ii) Home users.

(08 Marks)

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8=50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.