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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

September / October 2023 Supplementary Examinations

Programme: B.E **Semester: VI**

Branch: Electronics and Telecommunication Engineering **Duration: 3 hrs.**

Course Code: 19ET6PE3NS **Max Marks: 100**

Course: Network Security **Date: 22.09.2023**

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1 a) Describe the Generic model of Digital signature. **05**

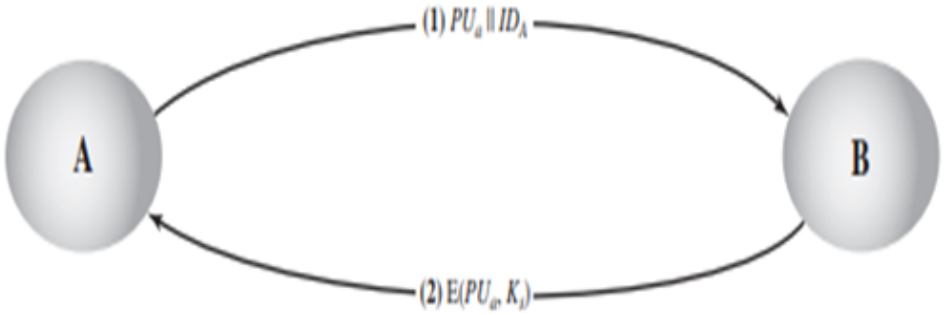
b) Arrive at the equations for signature verification process of Schnorr Digital Signature Scheme. Clearly specify all the steps involved. **07**

c) Verify the digital signature using Elgamal digital signature scheme given the prime field GF (19) with a primitive root of 10 and private key as 16. **08**

UNIT - II

2 a) Obtain the flow diagram for a key distribution scenario where each user shares a unique master key with the Key Distribution Center. Specify the steps involved in detail. **05**

b) Identify the key distribution and encryption technique for the given diagram. Arrive at the modified version by incorporating confidentiality and authentication for the same. Give detail Justification with interpretation **10**



c) Describe the web security considerations **05**

OR

3 a) Describe the various ways of public key distribution in detail. **10**

b) Describe the different phases of SSL handshake protocol **10**

UNIT - III

4	a)	What are the three service models of NIST? Briefly describe them.	**10**
	b)	Describe the different authentication methods of EAP?	**10**

OR

5	a)	Describe the cloud computing reference architecture. List the objectives of the architecture	**08**
	b)	What are the different categories of service identified by CSA? Describe them.	**08**
	c)	Differentiate between Multi-tenant model and Multi-instance model	**04**

UNIT - IV

6	a)	What is a Block chain? Differentiate between private and public block chain.	**10**
	b)	What is Cryptocurrency? How does it works? Explain with an examples	**10**

UNIT - V

7	a)	Describe the proof of work based consensus mechanism	**10**
	b)	Explain the verifiable random functions and zero knowledge systems	**10**

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