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

Autonomous Institute Affiliated to VTU

May / June 2025 Semester End Main Examinations

Programme: B.E. **Semester: VIII**

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

Course Code: 22ET8PE4BS **Max Marks: 100**

Course: Block Chain and Cyber Security

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

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

			UNIT - I	*CO*	*PO*	Marks
1	a)		Explain the Merkle-Damgård transform for the SHA 256 hash function using a diagram.	*CO1*	-	**08**
	b)		Explain the two properties of distributed consensus protocol	*CO1*	-	**04**
	c)		What are the steps involved in transferring coins using Goofy coin	*CO2*	*PO1*	**08**
			OR			
2	a)		With relevant expression derive a digital signature scheme	*CO2*	*PO1*	**07**
	b)		Explain Distributed Ledger and Transaction Pool	*CO1*	-	**06**
	c)		Explain the steps involved in the transaction of Scrooge's coin	*CO2*	*PO1*	**07**
			UNIT - II			
3	a)		With relevant example explain transaction based ledger	*CO1*	-	**07**
	b)		What are the new feature of Bitcoin protocol	*CO1*	-	**06**
	c)		With schematic diagram explain hierarchical wallets	*CO1*	-	**07**
			OR			
4	a)		Explain with relevant expression market behaviour model for bitcoins	*CO1*	-	**07**
	b)		Explain the following i. Escrow transaction ii. Green address	*CO1*	-	**06**
	c)		Explain in detail the execution of the Bitcoin script with relevant diagram	*CO1*	-	**07**

			UNIT - III			
	5	a)	With relevant diagram explain cyber security policy	*CO1*	-	**07**
		b)	With diagram explain cyberspace in mid 1980s	*CO1*	-	**06**
		c)	Explain different security measures required for network	*CO1*	-	**07**
			OR			
	6	a)	Explain SSL protocol features	*CO1*	-	**07**
		b)	Explain the following (each on can be asked for 4M) i. Demilitarized Zone (DMZ) Network Architecture ii. Blacklist and Web Proxy Servers	*CO1*	-	**06**
		c)	With diagram explain cyber security management cycle	*CO1*	-	**07**
			UNIT - IV			
	7	a)	With diagram explain layered-Defense System Security	*CO1*	-	**07**
		b)	Explain purpose of E-Commerce systems	*CO1*	-	**06**
		c)	With diagram explain mobile device system frame work	*CO1*	-	**07**
			OR			
	8	a)	With diagram explain Security systemigram mainstay and its fields	*CO1*	-	**07**
		b)	Explain the mobile personal device security validation and its metrics	*CO1*	-	**06**
		c)	Explain cyber security policies as project with relevant gant chart	*CO1*	-	**07**
			UNIT - V			
	9	a)	Explain DNSSEC with message sequence diagram	*CO1*	-	**07**
		b)	Explain the following policy statement issues concerning net neutrality: 'The operation of the DNS root server system shall be performed under contract with some entity or entities'	*CO1*	-	**06**
		c)	With an example explain email server communication protocol	*CO2*	*PO1*	**07**
			OR			
	10	a)	Explain BotNet attack path with diagram	*CO1*	-	**07**
		b)	Explain the following policy statement issues concerning cybercrime: 'The internet shall not be used to incentivize violence against person or property'	*CO1*	-	**06**
		c)	Explain internet impersonation and identity theft in detail	*CO1*	-	**07**

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