

Reg.No.:

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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 60034

M.E. / M.Tech. DEGREE END-SEMESTER EXAMINATIONS – FEB. 2025

First Semester

Information Technology

P23ITE05 - CRYPTOCURRENCY FUNDAMENTALS

(Regulation 2023)

Time : Three Hours

Maximum : 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	What is a blockchain?	2	K1	CO1
2.	What is the Consensus mechanism in Blockchain?	2	K1	CO1
3.	Differentiate between Bitcoin and blockchain.	2	K2	CO2
4.	Who founded Bitcoin?	2	K3	CO2
5.	List the types of Ethereum accounts.	2	K2	CO3
6.	How is a smart contract useful?	2	K2	CO3
7.	What are two types of nodes in Hyperledger fabric?	2	K3	CO4
8.	Mention the use of solidity.	2	K2	CO4
9.	How does blockchain support data privacy?	2	K3	CO5
10.	Why are altcoins risky?	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Discuss in detail about the objectives and the challenges of a Blockchain.	13	K1	CO1

(OR)

	b)	With diagrams and examples, explain the need for digital signatures in Public key cryptosystems.	13	K2	CO1
12.	a)	What is bitcoin mining? Explain its working.	13	K2	CO2
		(OR)			
	b)	What is an Ethereum Virtual Machine and how does it work? Explain its architectural features.	13	K5	CO2
13.	a)	Discuss in brief about the characteristics, working, applications and drawbacks of Ethereum.	13	K3	CO3
		(OR)			
	b)	Given an overview of the account structure of the Ethereum accounts. Explain how can they be created and managed.	13	K3	CO3
14.	a)	What are the various functional units in a Hyper ledger architecture? Explain with a neat diagram.	13	K4	CO4
		(OR)			
	b)	How to use GANACHE Truffle Suite to Deploy a Smart Contract in Solidity (Blockchain)?	13	K4	CO4
15.	a)	Discuss in brief about the use of Blockchain technology in medical record management system.	13	K4	CO5
		(OR)			
	b)	i. How would Blockchains help DNS?	7	K4	CO5
		ii. Enumerate the features of any FIVE blockchain DNS software.	6	K4	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16.	a) With appropriate diagrams, explain the working of blockchain technology highlighting its benefits and applications.	15	K4	CO1
				(OR)
	b) What is Distributed Ledger Technology? With diagrams, explain its types, features, advantages and applications .	15	K4	CO4