SRI KRISHNA INSTITUTE OF TECHNOLOGY

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#29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bengaluru- 560090

Department of Artificial Intelligence and Machine Learning

Subject Name: Blockchain Technology

Subject Code: 21CS734

SEM: VII A

Faculty: Ms. Ramya H

MODULE 1

SL No	Question Bank	CO	Level	Marks	Module
1.	Define Blockchain	CO1	L1	2	1
2.	What is a Bitcoin?	CO1	L1	2	1
3.	What is Double Spending in Blockchain?	CO1	L1	5	1
4.	Explain the concept of Distributed system. Discuss Byzantine Generals problem	CO1	L2	7	1
5.	Write a note on: a) Distributed Ledger b) Distributed Ledger Technology c) Public blockchain d) Private blockchain e) Side chains f) Permissioned ledger g) Consensus	CO1	L1	14	1
6.	With a neat diagram explain the generic structure of a block	CO1	L1	10	1
7.	Explain the generic elements and structure of a blockchain	CO1	L2	10	1
8.	Explain how blockchain accumulates blocks	CO1	L2	5	1
9.	Explain the benefits and limitations of blockchain technology	CO1	L2	10	1
10.	Explain the tiers of blockchain technology	CO1	L2	5	1
11.	Briefly explain the features of a blockchain	CO1	L2	8	1
12.	List and explain the consensus algorithms.	CO1	L1	10	1
13.	Write a note on CAP theorem	CO1	L1	7	1
14.	Explain in detail: (i) Proof of Work (ii) Proof of Stake (iii)Proof of Burn. (iv). Proof of Elapsed Time.	CO1	L2	10	1
15.	Summarize the Solutions to achieve Byzantine Fault Tolerance.	CO1	L2	10	1
16.	Write a note on a) Decentralized System b) Distributed System c) Centralized system	CO1	L1	7	1
17.	How to achieve complete decentralization and necessary elements to achieve decentralization	CO1	L1	10	1
18.	Write a note on 1) DO 2) DAO 3) DAC 4) DAS 5) DApps	CO1	L1	8	1
19.	Discuss the requirements and operations of a Decentralized applications.	CO1	L2	7	1

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MODULE 2

SL No	Question Bank	CO	Level	Marks	Module
1.	Explain briefly cryptographic hash functions and its properties in detail	CO2	L2	10	2
2.	Explain collision resistance property of cryptographic hash function and its application	CO2	L2	10	2
3.	Explain hiding property of cryptographic hash function and its application	CO2	L2	10	2
4.	Write a note on commitment scheme	CO2	L1	8	2
5.	Explain the concept of SHA-256	CO2	L1	5	2
6.	Write a note on hash pointers and implementation of Data structures in it	CO2	L1	10	2
7.	Briefly explain the concept of Merkle tree Data structure	CO2	L2	10	2
8.	Explain about Digital signature cryptographic primitive.		L2	10	2
9.	Briefly explain the concept of public keys as identifier	CO2	L2	10	2
10.	Write a note on Goofy coin	CO2	L1	5	2
11.	Write a note on Scrooge coin	CO2	L1	10	2

Faculty Signature