USN

Model Question Paper with effect from 2022-23 (CBCS Scheme)

Sixth Semester B.E. Degree Examination

Subject Title: Blockchain Technology

TIME: 03 Hours   **Max. Marks: 100**

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

		Module -1	***Bloom's Taxonomy Level**	**Marks**
Q.01	a	Define Blockchain. Explain the network view of Blockchain with a neat diagram.	L2	10
	b	List and explain the generic elements of Blockchain.	L2	10
		OR		
Q.02	a	Define Consensus. List the requirements and types of Consensus mechanism.	L2	8
	b	List and explain the Consensus Algorithms or mechanisms.	L2	8
	c	Explain benefits and limitations of blockchain.	L2	4
		Module-2		
Q. 03	a	What are the methods of decentralization? Discuss.	L2	6
	b	Give the different Platforms for decentralization.	L1	6
	c	Explain full ecosystem decentralization of blockchain with a neat diagram.	L2	8
		OR		
Q.04	a	Explain Asymmetric cryptography with suitable diagrams.	L2	10
	b	Explain Elliptic Curve Digital signature algorithm (ECDSA) with a practical example.	L3	10
		Module-3		
Q. 05	a	Define Bitcoin. Explain the generation of public key and private key in detail.	L2	10
	b	What is a Transaction? Explain the structure and life cycle of the transactions.	L2	10
		OR		
Q. 06	a	Explain a simplified model of an oracle interacting with smart contract on block chain.	L2	8
	b	Briefly discuss about smart contracts on a blockchain.	L2	6
	c	What is DAO? Discuss.	L2	6
		Module-4		

Q. 07	a	Explain the Ethereum Stack with a suitable diagram.	L2	6
	b	What is Ethereum Blockchain? Discuss with a state transition diagram.	L1	6
	c	Give the different types of Transactions in Ethereum and also explain the fields included in these transactions.	L2	8
OR				
Q. 08	a	Briefly discuss about the operation of Ethereum Virtual Machine (EVM) with the help of a neat diagram.	L2	10
	b	What are Contract creation transaction and Message call transaction? Explain with a suitable diagram.	L2	10
Module-5				
Q. 09	a	Give the architecture of Hyperledger as a protocol and explain.	L2	10
	b	Discuss about the organization and categories of Hyperledger fabric architecture.	L2	10
OR				
Q. 10	a	Define Sawtooth lake. Explain the novel concepts of Sawtooth lake.	L2	10
	b	What is Corda. List and explain the components of the Corda.	L2	10

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.