K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Subject Code: CEDLC7043   Subject Name: Blockchain   Date 8/12/22

		Max. Marks	CO	BT level
	Nov – Dec 2022 (B.Tech) Program: Computer Engineering Examination: TY Semester: VII Course Code: CEDLC7043 and Course Name: Blockchain			
	Duration: 2.5 Hours Max. Marks: 60			
	Instructions: (1)All questions are compulsory. (2)Draw neat diagrams wherever applicable. (3)Assume suitable data, if necessary.			
Q 1	**Solve any six questions out of eight:**	**12**		
i)	List different components of Blockchain.	2	CO1	BT1
ii)	Explain the concept-fork and its types.	2	CO2	BT2
iii)	What is Blooms filter.	2	CO3	BT2
iv)	How bitcoin transaction works.	2	CO3	BT2
v)	List different types of accounts in Ethereum. Give the structure of account.	2	CO4	BT2
vi)	Write short note on Dapp architecture.	2	CO5	BT2
vii)	Enlist Benefits and risk of smart contracts.	2	CO5	BT1
viii)	List applications where blockchain can be integrated.	2	CO6	BT1
Q.2	**Solve any four questions out of six.**	**16**		
i)	Which concept of the data structure provides the immutability characteristics of blockchain? Justify your answer	4	CO1	BT2
ii)	How mining difficulty can be calculated.	4	CO2	BT2
iii)	Explain SPV in detail.	4	CO3	BT2
iv)	Compare and contrast swarm and whisper.	4	CO4	BT4
v)	Differentiate between ERC20 & ERC721.	4	CO5	BT4
vi)	Describe in detail how blockchain is used in AI.	4	CO6	BT2
Q.3	**Solve any two questions out of three.**	**16**		
i)	Explain Block in blockchain in detail.	8	CO1	BT2
ii)	Explain Ethereum architecture. State the function s of its components in	8	CO4	BT2

K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)
Subject Code: CEDLC7043   Subject Name: Blockchain   Date:8/12/22

	detail.			
iii)	Explain the steps connecting meta mask and solidity. Write the solidity code to transfer ether from one account to other.	8	CO5	BT3
Q.4	**Solve any two questions out of three.**	16		
i)	Describe in detail Byzantine General's Problem.	8	CO2	BT2
ii)	Explain different types of nodes on the extended bitcoin network.	8	CO3	BT2
iii)	How IoT Fits into Blockchain Technology	8	CO6	BT2

****