[6263]-83

B.E. (Computer Engineering)

BLOCKCHAIN TECHNOLOGY

(2019 Pattern) (Semester - VII) (410243)

Time : 2½ Hours]　　　　　　　　　　　　　　　　　　　　*[Max. Marks : 70*

Instructions to the candidates:

　　1)　Solve questions Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.

　　2)　Neat diagrams must be drawn wherever necessary.

　　3)　Figures to the right indicate full marks.

　　4)　Assume suitable data if necessary.

Q1) a)　Discuss following consensus algorithms used in blockchain technology.**[8]**

　　　　i)　　Proof of work

　　　　ii)　　Proof of activity

　　　　iii)　Proof of Burn

　　　　iv)　Proof of Stake

　　b)　Explain in detail　　　　　　　　　　　　　　　　　　　　　　　**[6]**

　　　　i)　　Bitcoin

　　　　ii)　　Ethereum

　　　　iii)　Hyperledger

　　c)　Explain the concept of Bitcoin in Blockchain Technology.　　　**[4]**

OR

Q2) a)　Discuss the difference between Bitcoin and Ethereum.　　　　**[4]**

　　b)　Explain the difference between a permissioned and permissionless consensus approach.　　　　　　　　　　　　　　　　　　　**[4]**

　　c)　Explain the Byzantine General Problem in the context of blockchain consensus.　　　　　　　　　　　　　　　　　　　　　　**[4]**

　　d)　Explain the role of IOTA in the context of the Internet of Things (loT).**[6]**

P.T.O.

Q3) a) What is Metamask, Illustrate in details. **[9]**

b) List and explain types of cryptocurrencies. **[8]**

OR

Q4) a) Compare and Contrast Coinbase and Binance. **[8]**

b) Differentiate between metmask and coinbase wallet. **[9]**

Q5) a) What is Ethereum? Explain in detail it differs from traditional cryptocurrencies. **[8]**

b) Identify two types of Ethereum networks and briefly explain the purpose of each. **[9]**

OR

Q6) a) Explain the concept of a smart contract with an example. **[8]**

b) How does Swarm contribute to decentralized storage in the Ethereum ecosystem? **[9]**

Q7) a) Describe the role of blockchain in financial sector. **[9]**

b) Describe the role of blockchain in Government. sector. **[9]**

OR

Q8) a) Explain role of blockchain in healthcare. **[9]**

b) Discuss potential challenges and benefits of implementing blockchain in Voting system. **[9]**

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