

Total No. of Questions : 8]

SEAT No. :

**PB2245**

[Total No. of Pages : 2

**[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 (IoT).[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 metamask 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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