



PAPER ID-410540

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Subject Code: KCS714

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B. TECH
(SEM VII) THEORY EXAMINATION 2021-22
BLOCKCHAIN ARCHITECTURE DESIGN

Time: 3 Hours**Total Marks: 70****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief. 2 x 7 = 14

- a. What is the principle on which Blockchain technology is based on?
- b. Why is Blockchain a trusted approach?
- c. Name the two types of records that are present in the Blockchain database?
- d. Differentiate between the term Hyper ledger and Blockchain.
- e. What are Encryption in Blockchaining and its role in Blockchain?
- f. What are the different types of tokens used in Blockchains?
- g. What are the application Block identifiers in Blockchaining?

SECTION B

2. Attempt any three of the following: 7 x 3 = 21

- a. What type of records can be kept in a Blockchain? Is there any restriction on same?
- b. Explain the major elements of the Blockchain ecosystem in detail?
- c. Mention the difference State difference between proof-of-work & proof-of-stake in Blockchaining.
- d. What are the key principles in Blockchain that are helpful in eliminating the security threats that needs to be followed?
- e. What is the application of Merkle trees? Write use of Merkle trees in Blockchains?

SECTION C

3. Attempt any one part of the following: 7 x 1 = 7

- (a) What are function modifiers in Solidity? How is Blockchain distributed ledger different from a traditional ledger?
- (b) What is the concept of Double Spending? What is a DAPPS in Blockchain?

4. Attempt any one part of the following: 7 x 1 = 7

- (a) Write and explain the Blockchain Architecture in depth. What are the primary benefits of immutability in Blockchaining?
- (b) Explain the steps that are in the Blockchain project implementation. Mention the significance of blind signature and how it is useful?

5. Attempt any one part of the following: 7 x 1 = 7

- (a) What are the key principles in Blockchain that are helpful in eliminating the security threats that needs to be followed
- (b) Mention and list the parts of EVM memory in Blockchaining.

6. Attempt any one part of the following: 7 x 1 = 7

- (a) Name organizations that can use Blockchain technology. What is the difference between Blockchain and database?
- (b) What is the concept of executive accounting? Does Blockchain support the same?

7. Attempt any one part of the following: 7 x 1 = 7

- (a) Which cryptographic algorithm is used in Blockchain? Explain in detail.
- (b) Mention various limitations of Blockchaining in detail with proper representation.