PAPER ID-310495

Roll No:

B TECH
(SEM-VII) THEORY EXAMINATION 2020-21
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 are the different types of Blockchains?
b. Define Cryptocurrency.
c. What is a genesis block?
d. What are Merkle trees? How important are Merkle trees in Blockchains?
e. Differentiate between Blockchain and Hyperledger.
f. What are the properties of Blockchain?
g. What are the different types of tokens?

SECTION B

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

a. How will you handle the risk management when it comes to securing the transactions records?
b. Explain the key principles in Blockchain that are helpful in eliminating the security threats that needs to be followed?
c. What is the difference between off-chain transactions and on-chain transactions?
d. Explain the major elements of the Blockchain ecosystem in detail?
e. What are the different types of Blockchains? Also Explain why a blockchain needs tokens to operate.

SECTION C

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

(a) How is Blockchain distributed ledger different from a traditional ledger?
(b) What is a Dapp and how is it different from a normal application?

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

(a) Explain the steps that are involved in the Blockchain project implementation.
(b) What are function modifiers in Solidity? Mention the most widely used modifiers.

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

(a) List and explain the parts of EVM memory.
(b) Explain Blockchain Architecture in detail.

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

(a) What is Consensus algorithm? Explain the types of Consensus algorithm.
(b) What is the difference between Blockchain and database?

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

(a) What are the limitations of blockchain? Explain in detail.
(b) Which cryptographic algorithm is used in Blockchain? Explain in detail.

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