



BT - 029

VII Semester B.Tech. (ISE) Degree Examination, January 2022
(CBCS Scheme)

18ISPE74D : BLOCK CHAIN TECHNOLOGY

Time : 3 Hours

Max. Marks : 100

Instruction : Q1 compulsory, Q2, Q3 compulsory, Q4 or Q5, Q6 or Q7, Q8 or Q9.

1. Answer the multiple choice.

(1×15=15)

- 1) Each block of a Blockchain consists of which of the following ?
 - a) Hash pointer to the previous block
 - b) Timestamp
 - c) List of transactions
 - d) All the above
- 2) Bitcoin is based on _____ blockchain.
 - a) Private
 - b) Public
 - c) Public Permissioned
 - d) Permissioned
- 3) Ethereum is
 - a) open-source supply chain networks
 - b) open-source blockchain networks
 - c) licensed version
 - d) open-source world wide web networks
- 4) In which programming language is Ethereum written ?
 - a) kotlin
 - b) tcl/tk
 - c) solidity
 - d) python
- 5) Blockchains store data in the form of
 - a) line
 - b) block
 - c) circle
 - d) rhombus
- 6) Which of the following is asymmetric encryption algorithm ?
 - a) Blowfish
 - b) Twofish
 - c) RSA
 - d) Tripple DEA
- 7) Which data structure is used to record the canonical order of transactions and then hashed into a fingerprint ?
 - a) Red black trees
 - b) AVL trees
 - c) Hash tree
 - d) Merkle trees

P.T.O.

- 8) In which programming language is Smart Contracts written ?
a) Kotlin b) tcl/tkc c) solidity d) python
- 9) Proof of Stake is
a) A transaction and block verification protocol
b) A certificate required to use the blockchain
c) Both a and b
d) None of the above
- 10) Miner is
a) cryptographic algorithm
b) secured distributed ledger
c) person doing calculation
d) computers that validate and process blockchain transactions
- 11) dApp is a
a) A mobil application
b) A kind of public blockchain
c) A decentralized application
d) A type of smart contract
- 12) Blockchain can be stored as which of the following ?
a) Flat file
b) Database
c) Both of the above
d) None of the above
- 13) UTXO stands for
a) Unspent Transaction Office
b) United Transaction Office
c) United Transaction Output
d) Unspent Transaction Output
- 14) The process of creating new bitcoins is known as
a) Financing b) Sourcing
c) Mining d) None of the above
- 15) Blockchain was invented in which year ?
a) 2006 b) 2007 c) 2008 d) 2009



2. a) What is a Blockchain ? Explain with a use case. 8
b) What is crypto currency ? How is it different from digital currency ? 9
3. a) Describe Bitcoins. How a blockchain is used in representing Bitcoins ? 8
b) Illustrate with an example, how a transaction is verified independently by a node in a blockchain. 9
4. a) Define Smart Contract. With suitable examples explain how smart contract code executes. 9
b) Discuss the advantages of creating DApps. 8

OR

5. a) Differentiate between Externally Owned Accounts (EOAs) and contract type of accounts. 9
b) Discuss design philosophy of Ethereum. 8
6. a) Discuss applications interacting with the bitcoin blockchain using the block explorer. 9
b) How DApp interacts with blockchain ? 8

OR

7. a) Write a note on bitcoin transaction in blockchain. 9
b) How to create Smart Contracts programmatically using Ethereum ? 8
8. a) How DApp connects to local node and public node ? 8
b) Illustrate Ethereum account setup with geth. 9

OR

9. a) How to setup a private Ethereum network ? 9
b) How to deploy the smart Contract to the private Network ? 8
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