

B.Tech DEGREE EXAMINATION, NOVEMBER 2023

Fifth Semester

18CSE334T - BLOCKCHAIN USING CRYPTOGRAPHY*(For the candidates admitted during the academic year 2020 - 2021 & 2021 - 2022)***Note:**

- i. **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
- ii. **Part - B** and **Part - C** should be answered in answer booklet.

Time: 3 Hours**Max. Marks: 100****PART - A (20 × 1 = 20 Marks)**

Answer all Questions

Marks BL CO

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|---|---|---|---|---|
| 1. Which technology is used in bitcoin?
(A) Information Technology
(C) Blockchain Technology | (B) Business Technology
(D) Medical Technology | 1 | 2 | 1 |
| 2. What does P2P rely on?
(A) Peer to Peer
(C) Password to Password | (B) Product to Product
(D) None of the above | 1 | 1 | 1 |
| 3. Blockchain was invented in _____.
(A) 2007
(C) 2006 | (B) 2008
(D) 2009 | 1 | 2 | 1 |
| 4. From the following which of the one comes under blockchain network?
(A) Open Blockchain network
(C) Constraint Blockchain network | (B) Private Blockchain network
(D) Restricted Blockchain network | 1 | 1 | 1 |
| 5. Where does a hash function takes an input string with?
(A) Only Numbers
(C) Numbers, Text, Audio, Video | (B) Only Text
(D) Only Audio | 1 | 2 | 2 |
| 6. SHA-256 Hashing algorithm was developed in the year 2001 by _____.
(A) DFA
(C) ZSA | (B) CSA
(D) NSA | 1 | 1 | 2 |
| 7. At the point when a hash function is utilized to give message authentication, the hash function value is known to as _____.
(A) Message Field
(C) Message Digest | (B) Message Score
(D) Message Leap | 1 | 1 | 2 |
| 8. The other name of Hash tree is _____.
(A) Merkle tree
(C) Hash table | (B) T -tree
(D) Bx-tree | 1 | 2 | 2 |
| 9. Hash value of SHA-1 is _____.
(A) 256 bits
(C) 180 bits | (B) 160 bits
(D) 128 bits | 1 | 2 | 3 |
| 10. What's the motivation behind the Bitcoin organization?
(A) P2P money transfer
(C) P2P Skype calling | (B) P2P private communication
(D) P2P cryptokitties | 1 | 1 | 3 |
| 11. The most un-safe place to keep your crypto currency is _____.
(A) On an exchange
(C) Floppy disk | (B) In your pocket
(D) Compact Disk | 1 | 1 | 3 |

12. How are blocks linked in Blockchain?	1	2	3
(A) Forward to the next block			
(B) Not linked with each other			
(C) Backward to the previous block			
(D) Both (a) and (b)			
13. The original copyright infringement P2P network is _____.	1	2	4
(A) Pirate Bay			
(B) Napster			
(C) Spotify			
(D) IRC			
14. In which year Bitcoin was invented.	1	2	4
(A) 2007			
(B) 2008			
(C) 2006			
(D) 2009			
15. This distributed ledger works on _____ rules which are agreed upon by all the participating nodes (the peers) in the network.	1	1	4
(A) Pre-defined			
(B) Post-defined			
(C) Both a and b			
(D) Not defined			
16. The _____ aims to help business in the finance sector.	1	2	4
(A) Corda			
(B) Quorum			
(C) Enterprise Ethereum			
(D) Multichain			
17. When a record is on a blockchain, who can access it?	1	1	5
(A) Multiple people simultaneously			
(B) One person at a time			
(C) Only the people involved in the transaction			
(D) Only the person who created the record			
18. Which is/are the applications of Blockchain?	1	1	5
(A) Cross-border payments			
(B) Anti-money laundering tracking system			
(C) Both Cross-border payments and Anti-money laundering tracking system			
(D) The application of the blockchain is not listed			
19. What is an example of the use of cryptography in a blockchain?	1	2	5
(A) Accessing private or hybrid blockchains by using a private key			
(B) Creating cryptocurrency as a reward for mining nodes			
(C) Keeping blockchains secure from 51% attacks by corrupt nodes			
(D) Securing transfers of cryptocurrency between recipients			
20. Ripple is an example of _____.	1	2	5
(A) Public Blockchain			
(B) Federated Blockchain			
(C) Private Blockchain			
(D) Consortium Blockchain			

PART - B (5 × 4 = 20 Marks)

Answer **any 5** Questions

21. How does blockchain work? Explain with example.	4	2	1
22. Describe about mining.	4	1	2
23. Which set of features of Blockchain ensures business network trust?	4	2	2
24. How do smart contracts work? Name a few smart contract platforms you have used.	4	2	4
25. What is cryptography? Explain with examples.	4	2	3
26. Differentiate Hashing and Encryption.	4	3	4
27. What is a P2P Network architecture? How does a P2P network work?	4	3	3

PART - C (5 × 12 = 60 Marks)

Answer **all** Questions

Marks BL CO

Marks BL CO

28. (a) In general, companies may choose to take advantage of blockchain technology while not giving up their competitive advantage to third parties. What kind of blockchain is preferred in this situation. Enumerate briefly how it works in the companies with advantages and disadvantages. 12 2 1
- (OR)
- (b) Explain briefly about the working of financial systems. How the blockchain plays an important role in these systems with neat diagram
29. (a) Cryptocurrencies do not have centralized gatekeepers to verify the accuracy of new transactions and data that are added to the blockchain. Instead, they rely on a distributed network of participants to validate incoming transactions and add them as new blocks on the chain. Analyse the scenario briefly and identify which technology is used to add a new block with suitable diagram. 12 3 2
- (OR)
- (b) How Digital Signature in Blockchain Technology Can Replace the Current E-signature Market. Explain in detail.
30. (a) Identify a decentralized network communications model that consists of a group of devices (nodes) that collectively store and share files where each node acts as an individual peer. Draw and explain with suitable pros and cons. 12 2 3
- (OR)
- (b) i) Briefly Discuss some of the measures that are used to keep the P2P network secure. (6 marks)
ii) Discuss the P2P Network working procedure with suitable diagram. (6 marks)
31. (a) A software giant is enabling a city with smart parking, using real-time information captured by sensors on the vehicle and sensors in parking lots. When the vehicle leaves, data can be shared between the vehicle and parking system which will prompt a payment from the driver's payment device stored in their account. How would the use of blockchain to store this data help reduce potential risks? 12 3 4
- (OR)
- (b) Smart contracts allow developers to build a wide variety of decentralized apps and tokens. What makes smart contracts "smart,". Mention the importance of smart contract with working procedure.
32. (a) Analyse any one use case that Both AI and Blockchain plays a major role. 12 2 5
- (OR)
- (b) Discuss about the working of Ethereum Smart Contracts with neat diagram.

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