Question Bank

Module 1

1. Describe Blockchain in detail.What are the limitations of blockchain?
2. Briefly explain key features of blockchain.
3. What are the benefits of the block chain?
4. Explain the Structure of a block and Transactions in blockchain.
5. What do you mean by Coinbase transaction?what is a genesis block
6. What is a Merkle Tree? Explain why it is important in blockchain.
7. Differentiate between centralized, decentralized and distributed systems.
8. What is a public ledger? What is the difference between a distributed ledger and a traditional ledger?
9. List and explain the types of block chain

Module 2

10. What are Cryptographic hash functions? Explain three properties of Cryptographic hash functions.
11. Explain the concept of Hash chain.
12. How hashing, cryptography and digital signatures are used in blockchain

Module 3

13. Explain about structure of block in Bitcoin. How are new coins minted in Bitcoin
14. What is double spending. How it is overcome in Bitcoin
15. Explain the process of mining in Bitcoin
16. What is the role of miners in Bitcoin.
17. Describe briefly about Bitcoin scripts
18. What do you mean by consensus. What is the significance of distributed consensus in blockchain
19. What are the objectives of consensus mechanisms
20. Describe briefly about any 4 consensus mechanisms in Bitcoin
21. Explain about proof of work and proof of stake. Also list out the pros and cons of both mechanisms
22. Describe PoET and PoB consensus mechanisms.
23. What is Sybil attack. How is it prevented in Bitcoin.
24. What is a 51% Attack?

Module 4

25. What are Smart Contracts? Explain with suitable examples in detail
26. Differentiate between permissioned and permissionless block chain
27. Explain Ethereum Mining process in detail
28. Explain Paxos algorithm in detail
29. What are the faults that can occur during distributed consensus.
30. Explain RAFT algorithm in detail
31. What is meant by a Byzantine node. Explain about Byzantine generals problem
32. Describe BFT in detail
33. Explain about PBFT algorithm

Module 5

34. Explain Ethereum Account types in detail

35. Explain Hyperledger Fabric and its features.
36. State the difference between Bitcoin blockchain and Ethereum blockchain
37. Explain Membership and Identity Management in Hyperledger Fabric.
38. Describe the architecture of Hyperledger Fabric
39. Explain about the features of Hyperledger
40. Write short notes on
41. Structure of a block in ethereum
42. Ether, gas and gas limit
43. Ethereum Virtual Machine
44. Solidity
45. Gossip protocol
46. Chaincode
47. What is the transaction flow in Hyperledger. Describe briefly.
48. What are types of nodes in Hyperledger. What are their functions.
49. What is an ordering service in Hyperledger. Explain the role of it
50. Explain about channels in Hyperledger.
51. What is a dApp and how is it different from Smart Contract?

Module 6

52. How blockchain can be used by the government.
53. Explain with an example how blockchain technology can be used in land registry.
54. How blockchain can be used in
55. Digital identity
56. SCM
57. Tax payment
58. Audit and compliance