



**SIDDHARTH INSTITUTE OF ENGINEERING &  
TECHNOLOGY:: PUTTUR  
(AUTONOMOUS)**

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**QUESTION BANK (DESCRIPTIVE)**

**Subject with Code:** CryptoCurrency& Introduction to Blockchain Technology (20CS1011)

**Course & Branch:** B.Tech - CIC

**Year &Sem:** III-B.Tech& I-Sem

**Regulation:** R20

**UNIT –I  
BASICS-DISTRIBUTED DATABASE & CRYPTOGRAPHY**

1	(a)Define Distributed Database?Explain it types.	[L1][CO1]	[6M]
	(b) Write short notes on Turing Complete.	[L3][CO1]	[6M]
2	Distinguish between Centralized Database and Distributed Database.	[L4][CO1]	[12M]
3	(a)Explain about Byzantine General Problem.	[L5][CO1]	[6M]
	(b)Discuss about Byzantine Fault Tolerance.	[L6][CO1]	[6M]
4	Explain Hadoop Distributed File System.	[L5][CO1]	[12M]
5	(a)What is Distributed Hash Table?	[L2][CO1]	[6M]
	(b)Write about ASIC resistance.	[L3][CO1]	[6M]
6	What is Hash Function in cryptography?Write Features of Hashfunctions.	[L2][CO1]	[12M]
7	Write about ECDSA digital signature in detail.	[L3][CO1]	[12M]
8	Describe Applications of Hash Functions.	[L6][CO1]	[12M]
9	Explain Popular Hash Functions in detail.	[L5][CO1]	[12M]
10	Explain about Zero Knowledge Proof.	[L5][CO1]	[12M]

**UNIT –II**  
**BLOCKCHAIN**

<b>1</b>	What is Blockchain? Explain.	[L2][CO2]	[12M]
<b>2</b>	(a) Explain about the need of block chain.	[L5][CO2]	[6M]
	(b) Describe the gas limit concept in detail	[L6][CO2]	[6M]
<b>3</b>	(a) Distinguish between Bitcoin blockchain and Ethereum blockchain?	[L4][CO2]	[6M]
	(b) List the key features of blockchain?	[L4][CO2]	[6M]
<b>4</b>	Explain the different types of Blockchains.	[L5][CO2]	[12M]
<b>5</b>	Distinguish between blockchain and database?	[L4][CO2]	[12M]
<b>6</b>	(a) Describe the benefits of blockchain.	[L6][CO2]	[6M]
	(b) What type of records can be kept in the Blockchain? Is there any restriction on the same?	[L2][CO2]	[6M]
<b>7</b>	Explain the features of private and public block chain.	[L6][CO2]	[12M]
<b>8</b>	Define Merkle trees. What is its importance in blockchain?	[L1][CO2]	[12M]
<b>9</b>	What are the limitations of using blockchain?	[L2][CO2]	[12M]
<b>10</b>	(a) How does Blockchain differ from relational databases?	[L1][CO2]	[6M]
	(b) Compare public and private blockchain?	[L3][CO2]	[6M]

**UNIT –III  
DISTRIBUTED CONSENSUS**

<b>1</b>	Compare Proof-of-work and Proof-of-stake?	[L3][CO3]	[12M]
<b>2</b>	(a) Explain Consensus algorithm?	[L2][CO3]	[6M]
	(b) List out and explain the types of consensus algorithms?	[L4][CO3]	[6M]
<b>3</b>	Explain Sybil attack with examples.	[L2][CO3]	[12M]
<b>4</b>	(a) How the Bitcoin network prevents sybil attack?	[L1][CO3]	[6M]
	(b) What are the ways to prevent sybil attack?	[L1][CO3]	[6M]
<b>5</b>	(a) Explain the model used in the Sybil Attack.	[L2][CO3]	[6M]
	(b) What are the Types of sybil attack?	[L1][CO3]	[6M]
<b>6</b>	Explain Nakamoto consensus algorithm.	[L5][CO3]	[12M]
<b>7</b>	Explain Proof-of-Work in detail	[L5][CO3]	[12M]
<b>8</b>	Explain Proof-of-Burn in detail	[L2][CO3]	[12M]
<b>9</b>	Explain Energy Utilization in detail.	[L2][CO3]	[12M]
<b>10</b>	Explain the proof of stake in detail	[L3][CO3]	[12M]

**UNIT –IV**  
**CRYPTOCURRENCY**

1	Define Cryptocurrency.Explain the features of cryptocurrency	[L1][CO4]	[12M]
2	Explain the construction of Ethereum.	[L2][CO4]	[12M]
3	(a)What are the attacks in cryptocurrency?	[L1][CO4]	[6M]
	(b)Write a short notes on sidechain and namecoin.	[L3][CO4]	[6M]
4	Write in detail about GHOST.	[L3][CO4]	[6M]
5	Examine Bitcoins protocols in detail.	[L4][CO4]	[6M]
6	(a)What is Bitcoin?Give examples.	[L1][CO4]	[5M]
	(b)How can you convert Bitcoin into Fiat currencies?	[L1][CO4]	[7M]
7	Compare the features of Bitcoin and Blockchain?	[L3][CO4]	[12M]
8	(a)What is a Bitcoin wallet?	[L1][CO4]	[5M]
	(b)How can you choose a Bitcoin wallet?	[L5][CO4]	[7M]
9	Discuss DAO in detail.	[L6][CO4]	[12M]
10	What are the advantages and disadvantages of bitcoin?	[L1][CO4]	[12M]

**UNIT –V**  
**CRYPTOCURRENCY REGULATION & BLOCKCHAIN APPLICATIONS**

1	Write in detail about Cryptocurrency Regulation	[L3][CO5]	[12M]
2	Explain stake holders in Cryptocurrency?	[L2][CO5]	[12M]
3	Explain about roots of Bitcoin.	[L2][CO5]	[12M]
4	Explain Black Market and Global Economy in detail.	[L2][CO5]	[12M]
5	What are the legal aspects in cryptocurrency?Explain.	[L1][CO5]	[12M]
6	Explain in detail about any one Blockchain application.	[L5][CO5]	[12M]
7	(a)Explain future of Blockchain in detail.	[L2][CO5]	[6M]
	(b) Write about digital currency Exchange.	[L3][CO5]	[6M]
8	Explain in detail about DNS.	[L4][CO5]	[12M]
9	Explain Blockchain applications.	[L5][CO5]	[12M]
10	Discuss about Cryptocurrency Exchange.	[L6][CO5]	[12M]

**Prepared by:**

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