

Hall Ticket Number:

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Code No. : 18632 (B) N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. (I.T.) VIII-Semester Main & Backlog Examinations, May-2023

Block Chain (PE-VI)

Time: 3 hours

Max. Marks: 60

Note: Answer all questions from Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	What are the contents of Header of a block in Blockchain.	2	1	1	1
2.	What are various types of Blockchains and where are they useful?	2	1	1	1
3.	Name some Public Key Cryptography systems.	2	1	2	1
4.	How secret keys are used in Bitcoin network?	2	3	2	2
5.	Name some consensus algorithms used in permissioned Blockchains.	2	1	3	1
6.	Compare POS and POW?	2	2	3	1
7.	What is smart contract? Which languages are commonly used for smart contract development?	2	1	4	1
8.	What is a channel? Can a peer or node be a part of many channels?	2	1	4	2
9.	If you are asked to manage your college data using Blockchain, which type is your best choice?	2	4	5	2
10.	What are advantages or disadvantage in using public blockchain for invoice management?	2	4	5	2
Part-B (5 × 8 = 40 Marks)					
11. a)	Compare distributed ledger and blockchain.	4	2	1	1
b)	Identify the issues of digital currency that can be addressed by Cryptocurrency.	4	3	1	2
12. a)	What is meant by a transaction in Blockchains. How they are different from database transactions.	4	1	2	1
b)	Give an example of transaction consisting of multiple inputs and multiple outputs.	4	3	2	2
13. a)	Explain about Byzantine generals' problem. Draw the diagram for three and four generals.	4	2	3	1
b)	Which is more suitable for use in blockchains Paxos or RAFT or PBFT? Justify?	4	3	3	2
14. a)	Give a diagram for hyperledger fabric basic transaction flow and describe about any 4 major components of fabric.	4	3	4	2
b)	Write a simple smart contract for reading and writing to a state variable.	4	3	4	2

Contd... 2

15. a)	Write a short note on use of blockchain in capital markets.	4	2	5	1
b)	How Blockchains play a role in implementing KYC.	4	2	5	1
16. a)	Identify the components of Blockchain can help us in addressing Privacy issues?	4	3	1	2
b)	Analyse the role of Blockchain (Bitcoin) puzzle in achieving consensus.	4	4	2	2
17.	Answer any <i>two</i> of the following:				
a)	Write about two phase commit protocol.	4	2	3	1
b)	What differences you observed between Ethereum and Hyperledger Fabric?	4	2	4	1
c)	How can you use Blockchains in Supply chain Management?	4	2	5	1

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level - 1	20%
ii)	Blooms Taxonomy Level - 2	40%
iii)	Blooms Taxonomy Level - 3 & 4	40%

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