Name:

Enrollment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Sem Examination, May 2021

Course: Blockchain for Business Programme: B.Tech. CSE BAO Time: 03 hrs. Semester: VI Course Code: CSBL3001 Max. Marks: 100

SECTION A

Q. No.		Marks	CO
Q 1	Define on chain and off chain blockchain.	5	CO1
Q 2	 a) Which of the following statements is NOT true about nonce It is an integer value Value is decided mutually by the nodes in P2P network prevents double spending random value b) Which of the following statement is NOT true about Smart contract stored in blockchain 	5	CO1
	ii. digital codeiii. can only be used onceiv. has features similar to Object oriented programming		
Q 3	 a) node stores complete ledger into its own system . b) The process of reducing the rewards of mining bitcoin after each set of 210,000 blocks is known as 	5	CO2
Q 4	List out any 5 advantages of blockchain over relational databases.	5	CO2
Q 5	Define the following terms: a) 51% attack b) Fork	5	CO2
Q 6	List out 2 use cases each of the public and private blockchain.	5	CO3
	SECTION B		
Q 7	How the process of mining is done in bitcoin?	10	CO1
Q 8	Explain any five consensus protocols used in blockchain.	10	CO1
Q 9	What is Merkle tree structure? Discuss the benefits of using Merkle tree in Blockchain?	5+5	CO2
Q 10	Discuss any five use cases of hashing function.	10	CO2
	OR		
	Define important requirements for hash algorithm.	10	CO2
Q 11	Explain the use of smart contracts in Blockchain. How smart contracts are different from paper contracts?	5+5	CO3
	Section C		
Q 12	 a) Design a blockchain for voting in India with important components clearly stating the mining process, consensus mechanism, block and transaction information, type of blockchain used, and data storage technique. b) Discuss the process of voting and counting in the designed blockchain and compare its advantages over the conventional voting mechanism. 	10+10	CO3