Name:
Enrolment No:

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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Course: Blockchain components & Architecture **Semester: V**
Program: B. Tech-CS-BT **Time: 03 hrs.**
Course Code: CSBL3003 **Max. Marks: 100**

SECTION A

Each Question will carry 4 Marks

S. No	Questions	CO
Q 1	What is the role of the hash function in Blockchain?	CO1
Q 2	What is the Hyperledger cactus?	CO2
Q 3	Define the Hyperledger cello?	CO2
Q 4	What is the first step of building up the Hyperledger fabric network?	CO4
Q 5	Differentiate lifecycle chaincode and application chaincode.	CO4

SECTION B

Each question will carry 10 marks.

S. No	Questions	CO
Q 6	Compare PoW, PoS, PBFT and PoET.	CO1
Q 7	Explain stage 5 in transaction flow in fabric.	CO2
Q 8	Explain blockchain network as different organizations.	CO4
Q 9	Explain the following key points in the context of smart contracts: a) Self-execution b) Self-enforcing c) Being very secure d) Being understandable by computers and humans. **OR**	CO3
Q 10	Develop a smart contract for payments in a Blockchain environment.	

SECTION-C

1. Each Question carries 20 Marks.
2. Instruction: Write a long answer

S. No	Question	CO
Q11	Explain the following: a) Consortium Blockchain b) Membership service provider (MSP) c) Ethereum d) Certificate signing request	CO3
Q12	Explain the Hyperledger Composer in detail. Using the concept of IBM Hyperledger playground setting up a business network and complete the following activities. a) Define assets. b) Create some participants c) Submit transactions to change the ownership of the asset. **OR**	CO5
Q13	Develop a client application that interacts with a blockchain network.	