Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Blockchain Applications for Cognitive — **Semester :** 6th
Program: B.Tech(Hons.)(CSE-Blockchain Technology) — **Time :** 03 hrs.
Course Code: CSBL3006 — **Max. Marks:** 100

Instructions: Attempt all questions. All questions are compulsory.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	(a) Which is NOT part of asymmetric encryption? a) Hashing b) Public key c) Passphrase d) Private key (b) The _____ is known only to the owner and it is used to sign a transaction. (c) _____are lines of code that are stored on a blockchain and execute on external triggers (Outside blockchain or by other smart contracts). (d) True or False: EVM stands for Ethereum Virtual Machine.	1+1+1+1=4	CO1
Q.2	(a) What is a sidechain? a) Any mechanism that allows tokens to be securely transferred from one blockchain to another blockchain b) The copy of all the nodes of a blockchain in a parallel blockchain for security reason c) The name of the new blockchain generated by the fork of an existing blockchain d) None of the above (b) _____ client is an implementation of the Ethereum protocol. (c) A _____refers to something that makes a transaction from one state to another based on the input.	1+1+1+1=4	CO2

	(d) A _____, in the most general sense, is a way of hashing a large number of "chunks."		
Q.3	(a) What is the name of the language used within Ethereum to implement smart contracts? a) Python b) Solidity c) Java d) Algol 68 (b) If the _____is sufficient enough to run the contract, state transitions as directed by smart contract. (c) The related _____ is included in the block and is then broadcasted in the network. (d) True or False: If the gas is not sufficient, it throws an error.	**1+1+1+1=4**	**CO3**
Q.4	(a) When a record is in a chain, who can access it? a) Nobody b) Everybody c) One person at a time d) Only the people involved in the transaction (b) _____: For an externally owned account, this number represents the number of transactions sent from the account's address. (c) For a _____the nonce is the number of contracts created by the account. (d) _____ :The number of Wei owned by this address.	**1+1+1+1=4**	**CO4**
Q.5	(a) The "_____" of a block is used to enforce consistency in the time it takes to validate blocks. (b) If a _____is validated more quickly than the previous block, the Ethereum protocol increases that block's difficulty. (c) If a _____takes more time than the previous block, the Ethereum protocol decreases that block's difficulty. (d) A predefined cost of _____for executing the transaction.	**1+1+1+1=4**	**CO4**
SECTION B			

(4Qx10M= 40 Marks)			
Q.6	*Blockchains are a new form of information technology that could have several important future applications. One is blockchain thinking, formulating thinking as a blockchain process. This could have benefits for both artificial intelligence and human enhancement, and their potential integration.* Based on the above: Discuss how Neuro science and enhancement are related to blockchain.	**10**	**CO1**
Q.7	As a blockchain engineer, draw a light on the **Vision of Block chain Thinking**. What various level you would have for its accomplishment?	**10**	**CO2**
Q.8	As a blockchain engineer, what benefits you see in creating a DAPP rather than a normal application? What is Block stack?	**10**	**CO3**
Q.9	Draw and discuss EMRs with Blockchain. Discuss how clinical data and health records would be kept with security aspect using a blockchain in a healthcare system. OR Cloud computing and blockchain technology are the two on-demand technologies that are booming in the modern market and are being used by enterprises worldwide. Discuss, as a blockchain engineer, few applications with suitable examples of Blockchain based Cloud computing.	**10**	**CO4**
SECTION-C **(2Qx20M=40 Marks)**			
Q.10	Draw and discuss various Blockchain applications for Machine learning. Take a suitable example at least for three such application supported by suitable software code.	**20**	**CO1**
Q.11	Discuss various issues involved in the integration of Blockchain and Artificial Intelligence with respect to: (a) Sharing applications (b) Secure content storage based on consortium blockchain (c) Security applications (d) Transaction applications OR Draw and discuss Blockchain applications using deep learning. Take a suitable example at least for three such application supported by suitable software code.	**20**	**CO2/ CO3**