JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS- 2022

B.Tech-VIII Semester (CS/IT/BT/BI)

COURSE CODE: 19B1WCI839   MAX. MARKS: 25

COURSE NAME: Foundation of Blockchain

COURSE CREDITS: MAX. TIME: 1 Hour 30 Min

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1.		Suppose that you want to expand the AES key that significantly affects all the possible rounds which strategy is being used with suitable diagram also mention the main challenges that are associated with the Symmetric Key Cryptography.	[5]
Q2.	i.	How block chain nodes achieve the consensus so that all the nodes can easily maintain the consistent state of the distributed ledger throughout the network. And how it deals when an adversary is trying to propose a forgery block.	[5x2]
	ii.	Blockchain is a technology that has capability to change the way how we do business and social interactions by forming a decentralized network. Then mention some essential properties that make things happened in the network without any mess	
Q3.	i.	How you can define the state of Nash Equilibrium with proper example.	[3x2]
	ii.	Specify the main reasons for not having transaction-chain instead of blockchain	
	iii.	As it has been noted that the size of the blockchain is around 200GB so it will be very difficult for the miners/nodes to verify the transaction within the specified time to make network efficient. Then what is the common data structure to make this kind of verification easy and even partial node can do the same with a proper example.	
Q4.		Blockchain is designed to work with limited data due to huge computation requirements but we are also using it in many heavy loaded applications and that can create an issue of scalability. Now you will mention at least one approach to address the same.	[4]