JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Test-1 EXAMINATIONS: Feb-2023

B.Tech-VIII Semester (BT/BI)

COURSE CODE: 19B1WCI839   MAX. MARKS: 15

COURSE NAME: Foundation of Blockchain

COURSE CREDITS: MAX. TIME: 1 Hour

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

[3]

Q1.
CO-1
Differentiate the centralized and decentralized systems by considering all perspectives to with suitable real-life examples.

Q2. CO-1	I.	As you know blockchain follows a layered approach to have communication between nodes, so give a look of layered blockchain at the high-level	[2x3]
	II.	In the DES, how expansion and compression of bits is performed and assume if something is required during intermediate steps.	
	III.	If you want to encrypt a message with AES-128, then what are the various operations performed in each round and draw a suitable diagram corresponding to each.	

[2x3]

Q3. CO-2	I.	Consider a scenario in which the Internet is capable to provide trust among different parties to get eliminate the third party. What sort of limitations of centralized systems makes the blockchain popular?
	II.	Note down the difference between diffusion and confusion and why these concepts are important in cryptography and mention the techniques that are actually used to achieve these parameters.
	III.	Is Message authentication code is very important and how it can be achieved. What are the desirable properties?