

Roll No.: _____

Dr. Henry

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- February 2019

B.Tech VIII Semester

COURSE CODE: 18B1WCI836

MAX. MARKS: 15

COURSE NAME: Block Chain Technologies

COURSE CREDITS: 3

MAX. TIME: 1 Hrs

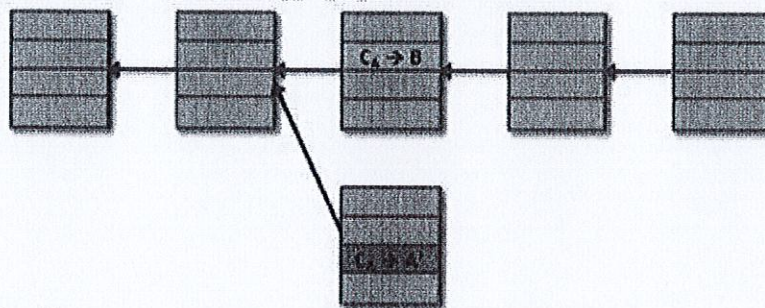
Note: All questions are compulsory and carrying equal marks. Carrying of mobile phone during examinations will be treated as case of unfair means.

Que.1: [3 Marks; CO1] What is hash function? Explain it's usage in Block Chain. Also, provide its security properties with appropriate explanation.

Que.2: [3 Marks; CO1] Explain how distributed consensus decentralized ScroogeCoin? Provide step by step process for the same.

Que.3: [3 Marks; CO1] Why incentives are important in Block Chain like Bitcoin? Explain it's different methods with detailed elaborations.

Que.4: [3 Marks; CO2] Consider Bob the merchant deciding whether or not to accept the $C_A \rightarrow B$ transaction. What Bob is really interested in is whether or not the other chain will catch up. Why, then, does he simply check how many confirmations $C_A \rightarrow B$ has received, instead of computing the difference in length between the two chains?



Que.5: [3 Marks; CO2] One problem with green addresses is that there is no punishment against double-spending within the Bitcoin system itself. To solve this, you decide to design an altcoin called "GreenCoin" that has built-in support for green addresses. Any attempt at double spending from addresses (or transaction outputs) that have been designated as "green" must incur a financial penalty in a way that can be enforced by miners. Propose a possible design for GreenCoin.