

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

B.Tech-7 Semester (CS/IT)

COURSE CODE (CREDITS): 18B1WC1734

MAX. MARKS: 15

COURSE NAME: Cryptography and Network Security

COURSE INSTRUCTORS: Dr Pankaj Dhiman

MAX. TIME: 1 Hour

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

Q1. Discuss the ethical Concepts in information security and the prevention to illegal and unethical behaviors? [CO-1] [3 Marks]

Q2. Find out the plain text corresponding to cipher text "DOCKER" if Vigenere Cipher is used with keyword as "HELLO"? [CO-2] [2 Marks]

Q3. If the plain text is "QUANTAM" with keyword as "SECRET" (assuming j is combined with i), find out the cipher text using Playfair Cipher Algorithm [CO-2] [2 Marks]

Q4. Use the Caesar cipher to encrypt and decrypt the message "CLASSMATE," and the key (shift) value of this message is 2. [CO-2] [2Marks]

Q5. Suppose that everyone in a group of N people wants to communicate secretly with the N-1 others using symmetric key cryptographic system. The communication between any two persons should not be decodable by the others in the group. The number of keys required in the system as a whole to satisfy the confidentiality requirement is ? [CO-1] [2 Marks]

- a)  $2N$
- b)  $N(N-1)$
- c)  $N(N-1)/2$
- d)  $(N-1)$

Q6. Use the Rail Fence cipher to encrypt and decrypt the message "All the best for exams" and the depth value of this message is 2. [CO-2] [2 Marks]

Q7. Explain Dos and DDOS attack. [CO-1] [2 Marks]