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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2023

B.Tech-I Semester (CSE/IT)

COURSE CODE(CREDITS): 18B1WCI734 (2)

MAX. MARKS: 15

COURSE NAME: Cryptography and Network Security

COURSE INSTRUCTORS: Dr. Pankaj Dhiman & Dr. Prateek Thakral

MAX. TIME: 1 Hour

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*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

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Q1. If the plain text is “Allows user to send a file” with keyword as “Component”, find out the cipher text using Play-fair Cipher Algorithm. [CO-1] [3 Marks]

Q2. Why the attacker is not able to recognize the actual sender of the message in encrypted tunnels ? [CO-1] [2 Marks]

Q3. Use the Rail Fence cipher to encrypt and decrypt the message "All the best for your exams" and the depth value of this message is 4. [CO-2] [3 Marks]

Q4. What is the property in the DES construction which helps to increase the key length by performing such composition? [CO-2] [4 Marks]

Q5. Encrypt the text “DONE” using Hill Cipher with the key  $\begin{bmatrix} 9 & 4 \\ 5 & 7 \end{bmatrix}$ ? [CO-2] [3 Marks]