JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-III Semester (CSE)

COURSE CODE (CREDITS): 24B11CI312 (3) MAX. MARKS: 15

COURSE NAME: INFORMATION AND CYBER SECURITY FOUNDATIONS

COURSE INSTRUCTORS: AAYUSH SHARMA MAX. TIME: 1 Hour

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

*(b) Calculator is allowed.*

| Q.No | Question | CO | Marks |
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| **Q1** | A hospital database system is hacked, and attackers change patients' medical reports without stealing data. Which part of the CIA triad is primarily violated, and why? | **[CO1]** | **[3]** |
| **Q2** | You join a café Wi-Fi and suddenly get assigned the same IP address as another user. Which protocol is failing, and what kind of attack could be happening? | **[CO1]** | **[3]** |
| **Q3.** | You received the following suspicious email. Carefully read both the email header information and the content to identify 3 clues that indicate this is a phishing attempt.<br>**Email Header Information (as seen in your inbox):**<br>From (Header): vivek.sehgal@juitsolan.in<br>Reply-To: cseoffice@juitsolan.in<br>**Email Content (what you see when you open it):**<br>From: vivek.sehgal@juitsolan.in<br>To: All@juitsolan.in<br>Subject: Urgent Notice – Class Suspension<br><br>Dear Students,<br>Due to a sudden land slide near Waknaghat, the university will remain closed for the next two days. All classes of the CSE Department stand cancelled immediately. Kindly do not report to the campus until further notice.<br>For further updates, click here: http://juitsolan-updates.org/cse/notice<br><br>Please note: Students who fail to comply with this advisory may face **attendance penalties**.<br><br>Regards,<br>**Dr. Vivek Sehgal**<br>Head of Department, CSE | **[CO2]** | **[1X3]** |
| **Q4.** | A student claims the following about OSI layers while explaining a file download:<br>"The encryption happens in the Transport layer."<br>"The router decides the best path at the Network layer."<br>"The browser renders HTML at the Application layer."<br>"The switch forwards packets at the Application layer."<br>Task: Identify the 3 statements that are incorrect and explain why. | **[CO1]** | **[1X3]** |
| **Q5** | You are working as a junior system administrator on a Linux server. Perform the | **[CO2]** | **[0.5X6]** |

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| | following tasks and write one Linux command for each step.<br>1. Connect to the remote server 172.16.1.50 with username student.<br>2. Move into the directory where system configuration files are usually stored.<br>3. List the files there and check if the file passwd exists.<br>4. From that passwd file, search for any line that mentions student.<br>5. Now move into the directory where most Linux system programs/commands are stored and verify that the ls command binary is present.<br>6. Finally, go back to the student's home directory, open a file called notes.txt for editing, and then remove it. | | |

All The Best ☺