

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Tech-3 Semester (CSE/IT)

COURSE CODE(CREDITS): L-24B11CI312 (2)

MAX. MARKS: 15

COURSE NAME: Information and Cyber Security Foundation

COURSE INSTRUCTORS: Aayush Sharma

MAX. TIME: 1 Hour

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

- Q1.** Provide a real-world example of a cybersecurity incident that primarily impacted the confidentiality of data. [Marks: 3] [CO1]
- Q2.** A software vulnerability in a widely-used operating system was discovered, but the vendor delayed releasing a patch. During this time, multiple organizations were attacked, and sensitive data was stolen. Discuss the implications of this delay and propose measures that organizations can take to mitigate the risks of unpatched vulnerabilities. [Marks: 3] [CO1]
- Q3.** You are a cybersecurity consultant tasked with testing the security of a company's internal network. Describe the steps you would take to identify vulnerabilities and attempt to gain unauthorized access to critical systems. Discuss the ethical considerations and the importance of obtaining proper authorization before proceeding with any tests. [Marks: 3] [CO1]
- Q4.** Describe the Dynamic Host Configuration Protocol (DHCP) using illustrative diagram in detail including following points:
a) The primary purpose and functionality of DHCP.
b) Key steps involved in DHCP implementation and role of DHCP server and
c) Challenges of DHCP and possible solutions to address these challenges. [Marks: 3] [CO2]
- Q5.** Explain DHCP Spoofing, ARP Spoofing and ARP Poisoning attacks also differentiate poisoning and spoofing attacks? [Marks: 3] [CO2]