

THE CHARUTAR VIDYA MANDAL UNIVERSITY
B.TECH. – SEMESTER 5
NOVEMBER 2024 REGULAR EXAMINATION

Course Title: Cyber Security

Course Code: 202045607

Total Printed Pages: 02

Date: 05/12/2024 **Time:** 10.00 am to 12.30 pm **Maximum Marks:** 50

Instructions:

- Attempt all questions.
- Numbers to the right indicate full marks for each question.
- Make suitable assumptions if required, do specify the same.

Q: 1 (A) Answer the Following. (Each question carries one marks). [10]

- (i) What are the main phases of ethical hacking?
- (ii) What is the purpose of a VPN?
- (iii) What does CSRF stand for?
- (iv) Mention one example of a global cybercrime.
- (v) Mention one way hackers cover their tracks.
- (vi) Name any one component of critical infrastructure that requires cybersecurity.
- (vii) Define identity theft.
- (viii) Mention one target of social engineering attacks
- (ix) What is the primary function of a virus?
- (x) What is the difference between a hacker and a cracker?

Q: 2 (A) Compare and contrast worms, trojans, and viruses. How do these forms of malware differ in their methods of infection and impact on systems? [04]

(B) How do nations prepare for and defend against cyber warfare? Evaluate the effectiveness of these strategies in the current global landscape [04]

Q: 3 (A) Explain the different types of hackers. How do their motivations and methods differ, and what impact do they have on the cybersecurity landscape [04]

(B) Differentiate between vulnerability assessment and penetration testing [04]

OR

(B) What are the mechanisms through which backdoors are installed and exploited? Discuss the implications of backdoors on system security [04]

Q: 4 (A) Briefly explain any two OWASP Top 10 vulnerabilities and their impact on web applications [04]

(B) Briefly explain the Indian Information Technology Act (IT Act) 2000 and its relevance to cybercrimes. [04]

OR

- (B)** Describe how an Intrusion Detection System (IDS) works and its importance in cybersecurity. [04]

Q: 5 (A) Define cybercrime and classify its main types with examples [04]

- (B)** Explain how honeypots can be used to analyze attacker behavior and improve security defenses [04]

OR

- (B)** Explain the role of packet filtering in firewalls and how it enhances network security. [04]

Q: 6 (A) Differentiate between cyber terrorism and cyber espionage. [04]

- (B)** What are some key challenges in enforcing cybercrime laws on a global scale? [04]

OR

- (B)** Explain Cross-Site Scripting (XSS) and how it impacts web application security. [04]
