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| Question Paper Code | 13547 |
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**B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025**

Fifth Semester

**Computer Science and Engineering (Cyber Security)**

**20SCPC503 – CYBER ATTACKS**

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

**PART - A (MCQ) (10 × 1 = 10 Marks)**

Answer ALL Questions

- |  | <i>Marks</i> | <i>K – Level</i> | <i>CO</i> |
|--|--------------|------------------|-----------|
| 1. Which of the following is an example of a DoS attack?<br>(a) Phishing                      (b) Port scanning              (c) Email spoofing              (d) SYN flood   | 1            | K1               | CO1       |
| 2. What is the primary goal of cyber terrorism?<br>(a) Financial gain                      (b) Intellectual property theft<br>(c) Disruption for political motives              (d) Surveillance                                       | 1            | K1               | CO1       |
| 3. In social engineering, which attack involves pretending to be someone trustworthy to get information?<br>(a) Tailgating                      (b) Quid Pro Quo              (c) Pretexting                      (d) Shoulder Surfing | 1            | K1               | CO2       |
| 4. What is "Quid Pro Quo" in the context of social engineering?<br>(a) Gaining access via phishing<br>(b) Offering something in exchange for information<br>(c) Following someone into a secure area<br>(d) Faking an identity online  | 1            | K1               | CO2       |
| 5. Which OSINT tool specializes in discovering open ports and services exposed to the internet?<br>(a) Shodan                      (b) Harvester                      (c) Wireshark                      (d) Nessus                    | 1            | K1               | CO3       |
| 6. What is the main purpose of Maltego in OSINT?<br>(a) Malware analysis                      (b) Social network mapping<br>(c) Virus detection                      (d) Phishing prevention   | 1            | K1               | CO3       |
| 7. Which type of malware hides its existence from detection software?<br>(a) Ransomware              (b) Rootkit              (c) Trojan              (d) Worm   | 1            | K1               | CO4       |
| 8. What distinguishes fileless malware from traditional malware?<br>(a) It is larger in size                      (b) It doesn't require internet<br>(c) It runs in memory only              (d) It is a form of spyware               | 1            | K1               | CO4       |
| 9. Which scanning method helps to identify open ports on a networked system?<br>(a) Vulnerability scanning              (b) Port scanning              (c) Enumeration              (d) Spoofing                                       | 1            | K1               | CO5       |
| 10. What is the goal of a brute force attack?<br>(a) Prevent access to a website                      (b) Steal source code<br>(c) Crack passwords                      (d) Redirect traffic   | 1            | K1               | CO6       |

**PART - B (12 × 2 = 24 Marks)**

Answer ALL Questions

- |   |   |    |     |
|---|---|----|-----|
| 11. Define cyber stalking.                              | 2 | K2 | CO1 |
| 12. Differentiate between DoS and spoofing attacks.     | 2 | K2 | CO1 |
| 13. List the major types of social engineering attacks. | 2 | K2 | CO2 |
| 14. Explain the term impersonation with an example.     | 2 | K2 | CO2 |
| 15. Define OSINT and mention two of its applications.   | 2 | K2 | CO3 |
| 16. List two features of Shodan as an OSINT tool.       | 2 | K2 | CO3 |
| 17. Explain the malware lifecycle.                      | 2 | K2 | CO4 |

*K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create*

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|   |   |    |     |
|---|---|----|-----|
| 18. State any two characteristics of ransom ware.                   | 2 | K2 | CO4 |
| 19. Mention any two common network vulnerabilities.                 | 2 | K2 | CO5 |
| 20. Differentiate between port scanning and vulnerability scanning. | 2 | K2 | CO5 |
| 21. What is clickjacking?   | 2 | K2 | CO6 |
| 22. How does directory traversal exploit web servers?               | 2 | K2 | CO6 |

**PART - C (6 × 11 = 66 Marks)**

Answer ALL Questions

|  |    |    |     |
|--|----|----|-----|
| 23. a) (i) Explain the different types of cybercrimes with suitable examples.  | 11 | K2 | CO1 |
| (ii) Describe various types of cyber-attacks and their impacts on organizations.                                       | 11 | K2 | CO1 |
| <b>OR</b>  |    |    |     |
| b) (i) Showcase phishing and spoofing techniques used in modern cyber threats.   | 11 | K2 | CO1 |
| (ii) Differentiate between software piracy and cyber terrorism with examples.  | 11 | K2 | CO1 |
| 24. a) Explain the social engineering life cycle and discuss common human-based Social Engineering attacks.            | 11 | K2 | CO2 |
| <b>OR</b>  |    |    |     |
| b) Discuss phishing techniques and suggest ways to mitigate impersonation attacks in enterprises.                      | 11 | K2 | CO2 |
| 25. a) Illustrate the methodologies used in OSINT and compare the applications of Maltego and Shodan.                  | 11 | K2 | CO3 |
| <b>OR</b>  |    |    |     |
| b) Analyze the application of The Harvester and Shodan in cyber reconnaissance.  | 11 | K2 | CO3 |
| 26. a) Describe the lifecycle of malware and analyze the impact of zero-day exploits with real-world examples.         | 11 | K2 | CO4 |
| <b>OR</b>  |    |    |     |
| b) Compare and contrast the characteristics of viruses, trojans, and worms.  | 11 | K2 | CO4 |
| 27. a) Explain various network scanning methods and discuss the use of vulnerability scanners in security assessments. | 11 | K2 | CO5 |
| <b>OR</b>  |    |    |     |
| b) Briefly discuss common network vulnerabilities and suggest mitigation strategies.                                   | 11 | K2 | CO5 |
| 28. a) Identify and evaluate different types of web application attacks with their preventive measures.                | 11 | K2 | CO6 |
| <b>OR</b>  |    |    |     |
| b) Explain Cross-Site Scripting (XSS) and Cross-Site Request Forgery (CSRF) attacks with practical examples.           | 11 | K2 | CO6 |