

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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Fifth Semester B.E. Degree Examinations, September / October 2024

CYBER SECURITY

(Common to CSE & AIML)

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions choosing ONE full Question from each Module.
2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO:PI)</u>
<u>Module-1</u>			
1.	<p>a. You receive the following email from the Help Desk:</p> <p><i>Dear Email User,</i> <i>Beginning next week, we will be deleting all inactive email accounts in order to create space for more users. You are required to send the following Information in order to continue using your email account. If we do not receive the following information from you by the end of the week, your email account will be closed.</i> <i>*Name (first and last):</i> <i>*Email Login:</i> <i>*Password:</i> <i>*Date of birth:</i> <i>*Alternate email:</i></p> <p>Identify and explain the cybercrime involved in the above scenario. Suggest a suitable remedy against the crime?</p>	10	(2 :1 : 1.2.1)
	<p>b. Explain the following cybercrimes</p> <p>(i) Spamming (ii) Salami attack (iii) Hacking</p> <p style="text-align: center;">(OR)</p>	10	(2 :1 : 1.2.1)
2.	<p>a. In an organization, the computer users got a number of complaints that one of their organization computers was sending out spam. When investigated the reports were true, a hacker had installed a program on the computer that made it automatically send out tons of spam emails without the computer owner's knowledge. What is the crime here? How do you think the hacker got into the computer to set up this? Suggest a remedy for the crime identified.</p>	10	(2 :1 : 1.2.1)
	<p>b. What is a cybercrime? Briefly explain Type1, Type2, Type3 cybercriminals.</p>	10	(2 :1 : 1.2.1)
<u>Module-2</u>			
3.	<p>a. Briefly discuss any four different types of human-based social engineering.</p>	10	(2 :2 : 1.2.1)
	<p>b. What are Botnets? "Botnets are the fuel for cybercrimes". Justify. Suggest different ways to secure the systems against Botnets.</p> <p style="text-align: center;">(OR)</p>	10	(2 :2 : 1.2.1)

4. a. What is computer based social engineering? Explain briefly any three types of the same. **10** (2 :2 : 1.2.1)
- b. In a situation, when a user wants to visit a cybercafé to surf, explain the tips for safety and security while using the computer in cybercafe. **10** (2 :2 : 1.2.1)

Module-3

5. a. Briefly explain the basic stages of a network attack. **10** (2 :3 : 1.2.1)
- b. Explain different types of key loggers. **10** (2 :3 : 1.2.1)

(OR)

6. a. Explain the following types of viruses. **10** (2 :3 : 1.2.1)
(i) Boot sector virus (ii)Stealth virus (iii) Polymorphic virus
- b. Consider an organization that maintains a large number of smaller websites. A suspicious activity had been reported from one of the smaller websites. The attackers had extracted the contents of the database, and then uploaded tools to the web server to attack the internal network for password extraction. Using these tools, the attackers comprised an account with domain administrator privileges, credit card details and other sensitive details. Identify and describe the crime involved. Suggest preventive measures against the crimes. **10** (2 :3 : 1.2.1)

Module-4

7. a. Discuss any three methods of phishing. **10** (2 :4 : 1.2.1)
- b. Briefly explain financial identity theft and criminal identity theft. **10** (2 :4 : 1.2.1)

(OR)

8. a. Discuss briefly the following type of phishing scams. **10** (2 :4 : 1.2.1)
(i) Deceptive Phishing (ii)In-session Phishing (iii) Data theft
(iv) Man-in-the-middle phishing
- b. Discuss various computer-based techniques of identity theft. **10** (2 :4 : 1.2.1)

Module-5

9. a. Discuss the following phases in digital forensics life cycle. **10** (2 :5 : 1.2.1)
(i) Collection and Recording (ii) Storing and Transporting
- b. Briefly explain network forensics. **05** (2 :5 : 1.2.1)
- c. What is computer forensics and digital forensics? **05** (2 :5 : 1.2.1)

(OR)

- 10 a. Explain digital forensic process. **10** (2 :5 : 1.2.1)
- b. Briefly discuss the following types of digital analysis: **06** (2 :5 : 1.2.1)
(i) Network analysis (ii) Image analysis (iii) Video analysis.
- c. Discuss briefly the concept of chain of custody. **04** (2 :5 : 1.2.1)

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