

M.Sc Sem-3 Examination**504****Forensic Science****November-2024****Time : 2-30 Hours]****[Max. Marks : 70****Ques.1 Answer the following questions:**

- i. Describe the various Windows System Artifacts such as the Registry, Event Logs, and Alternate Data Streams (ADS) and their significance in forensic analysis. 7Marks
- ii. Compare the Linux File System with Mac OS X artifacts in terms of Ownership, Permissions and System Logs. 7Marks

OR

- i. Explain the different forms of Cyber Crime, particularly focusing on crimes related to social media, ATM and Banking Frauds. 7Marks
- ii. Discuss the Procedure for Search and Seizure of both Volatile and Non-volatile digital evidence and the importance of each in digital forensics. 7Marks

Ques.2 Answer the following questions:

- i. Compare the OSI model with the TCP/IP protocol suite, highlighting their similarities and differences in terms of architecture, layer functions, and real-world applications. 7Marks
- ii. Explain the difference between LAN, WAN and MAN in terms of size, purpose, and data transmission capabilities, using real-world examples to highlight their applications and limitations. 7Marks

OR

- i. Explain the different types of IP addresses. Discuss the key characteristics and use cases for each type. 7Marks
- ii. Explain the differences between analog and digital signalling methods in computer networking and discuss the advantages and disadvantages of each in terms of noise resistance, signal degradation and data transmission efficiency. 7Marks

Ques.3 Answer the following questions:

- i. How do containers contribute to cloud computing? Discuss their key features. 7Marks
- ii. During a password spray attack investigation, how would you filter event logs to identify suspicious login attempts spread across many accounts? What will be the procedure? 7Marks

OR

- i. Briefly explain the differences between public, private and hybrid cloud in terms of security, cost, performance and maintenance. 7Marks
- ii. Explain Cloud Computing along with its characteristics. 7Marks

Ques.4 Answer the following questions:

- i. List seven difference between AES and DES.
- ii. Explain RSA with Example.

7Marks

7Marks

OR

- i. List seven differences between Encryption and Hash function.
- ii. What is cryptography? Explain in detail the process of encryption and decryption.

7Marks

7Marks

Ques.5 Attempt any seven out of twelve.

14Marks

1. Define Cyber Crime and give two examples of Internal and External Attacks.
2. What is the purpose of Imaging Digital Evidence? Why is it essential for forensic investigations?
3. Briefly describe the role of a First Responder in handling digital evidence.
4. In what situations would a company choose to implement a MAN over a LAN?
5. What are the key benefits of using a WAN for global business operations?
6. Why is a LAN typically used in home or small office environments?
7. Define Container along with its two features.
8. How can Splunk be used for security incident detection and response?
9. Explain SQL Injection attack.
10. Explain one key difference between encryption and a hash function in terms of reversibility.
11. Mention one difference between encryption and hash functions in terms of output size.
12. What is the key advantage of using dynamic routing protocols like OSPF or EIGRP over static routing?
