1711E1303

Candidate's Seat No :_____

M.Sc. Sem.-3 Examination

504

Forensic Science

November-2025

Time : 2-30 Hours] **[Max. Marks : 70**

Ques.1 Answer the following questions:

i. Describe Windows and Linux system artifacts and their forensic importance. 7Marks

ii. Describe the procedure for examining concealed, erased, or modified files during cybercrime investigations. 7Marks

OR

i. Discuss the forensic relevance of web browsers, cookies, and cache data in criminal cases. 7Marks

ii. Explain the different types of cybercrimes, highlighting examples related to social media and online banking activities. 7Marks

Ques.2 Answer the following questions:

i. Explain wireless network attacks such as packet sniffing, fake hotspots, and WPA2 encryption issues. 7Marks

ii. Explain the idea of authentication methods and their use in ensuring network security. 7Marks

OR

i. Describe the OSI model and the TCP/IP protocol suite in detail, including their respective layers and the functions of each layer. 7Marks

ii. Describe different types of network attacks like spoofing, cross-site scripting, and ARP poisoning. 7Marks

Ques.3 Answer the following questions:

i. Describe the process of collecting and analyzing forensic evidence in cloud environments, including relevant examples 7Marks

ii. Discuss the role and challenges of monitoring computer networks in forensic investigations. 7Marks

OR

i. Explain the process of live packet capturing and analysis for detecting cyber-attacks. 7Marks

ii. Explain in detail the cloud computing models—Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS)—and discuss their implications for digital forensics. 7Marks

Ques.4 Answer the following questions:

i. Describe the concept of cryptanalysis and explain the different types of ciphers employed in encryption. 7Marks

ii. Compare and contrast AES, DES, and RSA encryption algorithms in terms of structure and use. 7Marks

OR

P.T.O

i. Explain the types of crimes and evidence collection methods available on social networking sites. 7Marks

ii. Explain symmetric and asymmetric cryptographic encryption methods, providing appropriate examples for each. 7Marks

Ques.5 Attempt any seven out of twelve. 14Marks

1. Write short notes on ATM and banking frauds related to cybercrime.
2. Differentiate between internal and external cyber-attacks with examples.
3. What is the role of hashing in maintaining the integrity of digital data?
4. What are subnet masks used for in IP addressing?
5. Explain the role of firewalls in network security.
6. What is eavesdropping in computer networks?
7. What is the significance of event log analysis in detecting attacks?
8. Differentiate between private and public cloud models.
9. What are the main components of secure cloud architecture?
10. What is the difference between direct and indirect methods of intelligence gathering?
11. Define "digital footprints" in the context of social media forensics.
12. What are the main security issues associated with social media?

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