

IMSc (CSF) (NEP) Sem.-3 Examination

DSC-C-ICSF-233T

Social Engineering and O.S.I.N.T.

Time : 2-00 Hours]

November-2025

[Max. Marks : 50

Question 1: Answer the following questions:

- i. Describe various methods of OSINT collection with suitable examples. 5 Marks
- ii. Discuss any seven major OSINT tools and explain how each supports intelligence collection and analysis. 5 Marks

OR

- i. A cybersecurity researcher needs to identify whether sensitive government documents are publicly accessible online. Explain how advanced Google search operators and ethical considerations can be applied to discover and responsibly report such findings. 5 Marks
- ii. What are the main ethical challenges faced by OSINT practitioners, and how can they ensure responsible data collection while maintaining effectiveness? 5 Marks

Question 2: Answer the following questions:

- i. You are asked to collect pricing data from 500 e-commerce sites for market analysis. Outline the web-scraping process, mention programming tools, and describe best practices to remain within legal and ethical limits. 5 Marks
- ii. Describe the role of network analysis in OSINT. How can correlation of network and open-source data help identify threat actors, vulnerabilities, and incidents? 5 Marks

OR

- i. Discuss the role of geospatial intelligence (GEOINT) in OSINT. Explain its workflow with an example of mapping protest locations or natural-disaster impact using satellite and social-media data. 5 Marks
- ii. Why is metadata considered "hidden intelligence"? 5 Marks

Question 3: Answer the following questions:

- i. Describe the process of investigating an email address using OSINT. Include data collection methods, header analysis, and verification of authentication records. 5 Marks
- ii. A suspect uses multiple aliases online. Explain how username correlation and cross-platform analysis can link these aliases to a single individual. Describe the tools and reasoning process. 5 Marks

OR E1373-2

- i. What is a reverse image search, and how can it be used to expose fake profiles or verify the authenticity of online images? 5 Marks
- ii. Describe the types of data collected from social media platforms for OSINT purposes. Explain how posts, connections, and multimedia content are analyzed to derive intelligence. 5 Marks

Question 4: Answer the following questions:

- i. What is Business OSINT, and how can it be used for competitive intelligence and corporate risk assessment? 5 Marks
- ii. How does OSINT differentiate between the surface web, deep web, and dark web, and why is this classification important for investigators? 5 Marks

OR

- i. What are the essential steps in preparing and presenting an OSINT report, and how should data integrity and confidentiality be maintained? 5 Marks
- ii. You are hired by a multinational firm to evaluate a new overseas supplier. Describe how you would conduct a Business OSINT investigation to assess financial stability, reputation, and legal history. 5 Marks

Question 5: Attempt any Ten out of Twelve.

10 Marks

1. Which U.S. intelligence service first institutionalized the concept of open-source monitoring during World War II?
2. Which OSINT tool specializes in visual link analysis between people, domains, and organizations?
3. The "intext:" operator in Google Dorking restricts results to document titles. (True/False)
4. What is the function of a User-Agent string in web-scraping requests?
5. Wireless OSINT relies exclusively on active network interference to capture packets. (True/False)
6. "Publicly accessible" automatically implies "legally usable" in OSINT. (True/False)
7. DMARC operates independently of SPF and DKIM validation. (True/False)
8. What does the DKIM digital signature ensure about an email's content?
9. Name two common indicators that can be derived from a Twitter investigation.
10. What is the primary legitimate purpose of using the Dark Web for journalists or researchers?
11. What is the significance of patent and trademark databases in Business OSINT?
12. What can social-media sentiment analysis reveal about a target company?

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