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**MSE-031**

**MASTER OF SCIENCE  
(INFORMATION SECURITY)**

**(MSCIS)**

**Term-End Examination**

**December, 2025**

**MSE-031 : CYBER SECURITY USING PYTHON**

*Time : 3 Hours*

*Maximum Marks : 100*

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**Note :** *Question No. 7 is compulsory. Attempt any four questions from the rest of six questions.*

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1. (a) What do you understand by IDE.  
Briefly describe commonly used IDEs. 2+8=10  
(b) What is Topology ? Explain its types. 2+8=10
2. (a) What is the significance of indentation  
in Python ? Explain the rules with the  
help of example. 10

- (b) Define packet sniffing. List some of the sniffing protocols. 10
3. (a) Explain graphical user interface, Tkinter a Python module. 10
- (b) What are the consequences of Cyber Crime ? Describe the Python libraries used for cyber security. 3+7
4. (a) What is the significance of Hash Function ? State Hash function requirements. 10
- (b) List the various characteristics of TCP and UDP (*five* each). 5+5
5. (a) Write a program using Python to create a simple chat program between sender (server) program takes the message as input from the user and send it to receiver (client), which further takes the reply message as input from the user and send it back to the sender as an acknowledgment. 10

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- (b) What is ARP Spoofing ? Which library is used to perform ARP spoof attack ? Write code to spoof target IP saying that we are the host IP. 10
6. (a) Explain the importance of network log analysis. 10
- (b) Describe the functioning of web scrapping tool of Python. 10
7. Write short notes on any *four* of the following in about **150** words each :  $4 \times 5 = 20$
- (a) Application of Network Traffic Analysis (NTA)
- (b) Types of Logs to Monitor
- (c) SQL Injection Attack
- (d) Online services to track user names on social media
- (e) Python Dictionary

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