

**MASTER OF SCIENCE (INFORMATION
SECURITY) (MSCIS)**

Term-End Examination

December, 2022

MSE-031 : CYBER SECURITY USING PYTHON

Time : 3 hours

Maximum Marks : 100

Note : Attempt any **four** questions from the **six** questions.
Question no. 7 is compulsory.

1. (a) What is a web vulnerability ? Write and explain any four web vulnerabilities. 10
- (b) Define the concept of information gathering and its different approaches. 10
2. (a) With reference to cyber security, why is Python programming important for security experts ? Explain with an example. 10
- (b) Write and explain any five standard operating procedures used in cyber security. 10
3. (a) Explain the purpose and concepts of Cryptography. 10
- (b) Discuss the operating system modules in Python. 10

4. (a) Differentiate between OSI and TCP/IP models. 10
- (b) Briefly explain Socket programming in Python, with an example. 10
5. (a) How will you create a simple chat programme consisting of two files – sender.py and receiver.py. 10
- (b) Describe the procedure to install Python-Pcap to capture network packets. 10
6. (a) What do you mean by injection attacks and its purpose ? Explain with an example. 10
- (b) Describe the steps for setup of OS and Web applications to gather information. Give an example with a case. 10
7. Write a short note on any **four** of the following in about 150 words each. $4 \times 5 = 20$
- (a) Linux Terminal 5
- (b) Unique Web Vulnerabilities 5
- (c) Content Optimization 5
- (d) Network Scanning 5
- (e) Network Log Analysis 5
- (f) Packet Sniffing using Scapy 5
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