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MSEI-023

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

**P. G. DIPLOMA IN INFORMATION
SECURITY (MSCIS/PGDIS)**

Term-End Examination

December, 2025

MSEI-023 : CYBER SECURITY

Time : 2 Hours

Maximum Marks : 50

Note : (i) *Question No. 1 is compulsory.*

(ii) *Attempt any **three** questions from
Q. Nos. 2 to 5.*

1. Write short notes on the following : 4×5=20

- (i) Types of Malware (e.g. viruses, worms, trojans)

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- (ii) Importance of VPNs in network security
 - (iii) Concept of Zero-Day Vulnerabilities
with examples
 - (iv) Concept of Zero Trust in Information
Security
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- 2. Explain the principle of least privilege in access control systems. How does it enhance cyber security ? 10
 - 3. Discuss the steps involved in conducting a Vulnerability Assessment and Penetration Testing (VAPT). Provide examples where VAPT is critical for organisations. 10
 - 4. Describe the lifecycle of a ransomware attacks from initial infection to encryption and ransom demands. What measures can organisations take to prevent such attacks ? 10

[3]

5. What are social engineering attacks ?

Explain its different types with examples and discuss how individuals and organizations can mitigate such attacks effectively.

10

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