

A-1275

Total Pages : 4

Roll No.

MIT (CS)-101/CEGCS-01

(MCA/MSCCS/CEGCS)

Fundamentals of Information Security

Examination February, 2026

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

(Long Answer Type Questions) (2×19=38)

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

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(1)

P.T.O.

1. Answer the following :
 - (a) Explain the history of the Internet, how it works, and the addressing schemes of IPv4 and IPv6. (10)
 - (b) Discuss the structure and functioning of the Domain Name System (DNS). (09)

2. Answer the following :
 - (a) Describe the Models of E-Governance including Broadcasting, Critical Flow E-Advocacy, Comparative Analysis, and Interactive Service Models. (10)
 - (b) Explain the Digital India Programme, its major services, and its contribution to good governance. (09)

3. Answer the following :
 - (a) What is E-Commerce ? Discuss E-Commerce business models and the National Information Infrastructure. (10)
 - (b) Explain different electronic payment systems such as EFT, Digital Cash, Credit Card Payments, and Google Wallet. (09)

4. Answer the following :
- (a) Discuss various Cyber Crimes including cyberstalking, phishing, cyber terrorism, webjacking, and denial-of-service attacks. (10)
 - (b) Explain the major provisions of the IT Act, 2000/2008, including definitions, exceptions, responsibilities of companies, and punishments for cyber offences. (09)
5. Answer the following :
- (a) Explain the Parkerian Hexad and compare it with the CIA Triad. (10)
 - (b) Discuss Threats, Vulnerabilities, Risk, and Impact, and outline the Defense-in-Depth approach with examples. (09)

Section–B

(Short Answer Type Questions) (4×8=32)

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What is E-Readiness ? Explain the readiness of technology, legal, and institutional infrastructure.

2. Define Malware. Write short notes on any three :
Adware, Spyware, Trojan Horse, Worms, Scareware.
3. Write a note on Cyber Crime Case Studies. Explain any one :
Cyberstalking, Hansom ware, Silk Road, or 419 Scam.
4. Explain Asset Identification and Risk Assessment in an Information Security Management System (ISMS).
5. Describe the use of Digital Signatures in secure electronic transactions.
6. What is Antivirus Software ? Explain signature-based detection, heuristic detection, and rootkit detection.
7. Discuss any four ethical issues in Information Security, such as hacking-ethics, privacy concerns, cyber warfare, or responsibilities of security professionals.
8. Define Firewall. Explain any two types of firewalls or filtering techniques used for network security.
