

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

00152

**Term-End Examination**

**June, 2014**

**MSEI-022 : NETWORK SECURITY**

*Time : 2 hours*

*Maximum Marks : 50*

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- Note :** *Section A - Attempt all objective questions.*  
*Section B - Attempt all the very short answer type questions.*  
*Section C - Attempt any two out of three short answer type questions*  
*Section D - Attempt any two out of three long type questions.*
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**SECTION - A**

(Attempt all the questions)

1. Write True or False :
- (a) DES uses pair of keys for encryption. 1
  - (b) Embedding function is secure part of watermarking life cycle process. 1
  - (c) The value of TTL in IP datagram starts with zero and then increases. 1
  - (d) The Hash function is a transformation that takes an input of fixed length and produces output of variable length. 1
  - (e) Decryption process converts ciphertext to plaintext. 1

2. Fill in the blanks :
- (a) For a Govt. organisation, the recommended key size for public key is \_\_\_\_\_ bits. 1
  - (b) The US Govt. certifies DES every \_\_\_\_\_ years. 1
  - (c) The email users typically download email from mail servers using \_\_\_\_\_ protocol. 1
  - (d) \_\_\_\_\_ is a type of Packet Switching that uses short fixed sized packets for transfer of information. 1
  - (e) A computer used as trap set to detect or deflect unauthorised use is known as \_\_\_\_\_. 1

### SECTION - B

(Attempt **all** the questions)

3. Write short notes on the following : **2x5=10**
- (a) IP Datagram
  - (b) Functions of the Firewall.
  - (c) Steganography
  - (d) Symmetric Cryptography
  - (e) Hash function

### SECTION - C

(Attempt **any two** out of **three** short type questions)

- 4. How does a NAT firewall function ? 5
- 5. Explain the use of mobile device forensics. 5
- 6. List and briefly explain various stages of cryptography. 5

## SECTION - D

(Attempt any **two** out of **three** long type questions)

7. What are various threats that exists for current networks ? Explain at least four such threats, which according to you is most difficult to handle and why ? **10**
  8. Explain various types of symmetric ciphers with suitable examples of each. **10**
  9. Explain how electronic signature technology works. Explain the process of its creation and verification. **10**
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