17518

15162

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : *(1)* ***All*** *questions are* ***compulsory****.*
(2) Answer ***each*** *next main question on a* ***new*** *page.*
(3) Illustrate your answers with neat sketches ***wherever*** *necessary.*
(4) Figures to the ***right*** *indicate* ***full*** *marks.*
(5) Assume suitable data, if ***necessary****.*
(6) Use of Non-programmable Electronic Pocket Calculator is ***permissible****.*
(7) Mobile Phone, Pager and any other Electronic Communication devices are ***not*** *permissible in Examination Hall.*

Marks

1. A) Attempt **any three :** **(3×4=12)**

a) Define the following terms :
   1) Plain text
   2) Cipher text
   3) Cryptography
   4) Cryptanalysis.

b) Define the following terms :
   1) Interruption
   2) Interception
   3) Fabrication
   4) Modification.

c) List down three pillars of information security. Describe any one in detail with neat labelled diagram.

d) Define following terms with example :
   1) Hacking
   2) Cracking.

B) Attempt **any one** : **(1×6=6)**

a) Differentiate between symmetric and asymmetric key cryptography.

b) Describe IT Act 2000.

P.T.O.

Marks

2. Attempt **any two** : **(2×8=16)**

a) Explain TCB (Trusted Computing Base) with respect to Information Security.

b) Discuss Access Control ? List types of access control and describe any two in brief.

c) Consider a Plain Text "INFORMATION SECURITY" convert given plain text into cipher text using single columnar transposition cryptography using following data :

No. of columns = 6

Encryption Key = 326154

3. Attempt **any four** : **(4×4=16)**

a) Explain in detail biometric authentication.

b) Explain one time PAD cryptography for encryption.

c) Define information. State need and importance of information.

d) How to evaluate information security ? Write down any two criterias to evaluate information security.

e) Explain the following terms :

1) Authorization

2) Authentication.

4. A) Attempt **any three** : **(3×4=12)**

a) How to recover the data if the file is deleted ?

b) Define term integrity. Explain integrity model with an example.

c) Explain term "Kerberos" with an example.

d) Define security. State the needs of security.

B) Answer **any one** : **(6×1=6)**

a) Describe following with respect to cyber crime.

1) Intellectual property theft

2) Mail Bombs

3) Bug exploits.

b) Tell what is COBIT framework ? List any four services provided by COBIT. What are the benefits after implementing COBIT framework ?

Marks

5. Attempt **any two**: **(2×8=16)**

a) Consider a plain text "My name isAtul" convert given plain text into cipher text using "Playfair" cipher cryptography using Key - Playfair cipher example.

b) Describe following with respect to information security.

1) Risk Management
2) Security and Policies
3) Standards and guidelines.

c) Define Virus. List four phases of viruses and how to deal with viruses.

6. Attempt **any four**: **(4×4=16)**

a) List the various steps to create digital certificates.

b) Explain the concepts of system security assurance.

c) Describe confidentiality model of information security.

d) Elaborate what is information classification ? Describe any two criterias for the information classification.

e) List any four authentication protocols. Explain any one authentication protocol.