

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 4953 E  
Unique Paper Code : 62347627 (Old Course: CBCS)  
Name of the Paper : Information Security and  
Cyber Laws  
Name of the Course : B.A. (Prog.) Computer  
Applications  
Semester : VI  
Duration : 3 Hours Maximum Marks : 75

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. The paper has two Sections. Section A is compulsory. Attempt any five questions from Section B.
3. Parts of a question must be answered together.

**SECTION A (Compulsory)**

1. (a) What is the role of proxy server in information security? (2)  
(b) Name three password cracking tools. (2)

P.T.O.

- (c) What are viruses? Name any three. (3)
- (d) Briefly describe DFIR. (3)
- (e) Explain Caesar cipher with the help of suitable example. (3)
- (f) What is access control? Briefly describe its different approaches. (4)
- (g) List four guidelines of password selection. (4)
- (h) Define the terms - spoofing and phishing. (4)

### SECTION B

2. (a) Describe the five main components of information security. (5)
- (b) Explain transposition cipher with the help of suitable example. (5)
3. (a) What are firewalls? Briefly describe four types of firewalls. (6)
- (b) What do you understand by Hackers? Give classification of hackers. (4)

4. (a) What are IDS and IPS? Differentiate between the two. (6)
- (b) Briefly describe the security issues in an operating system. (4)
5. (a) Describe Steganography. List four different types of Steganography techniques. (3)
- (b) Explain the concept of digital signatures. How is it different from digital Certificate? (5)
- (c) What do you understand by scanning tools? (2)
6. (a) What is risk analysis? List the steps involved in risk analysis. (4)
- (b) What is the difference between DoS and DDoS? (3)
- (c) Briefly describe cyber forensics and its importance. (3)
7. (a) Differentiate between : (5)
- (i) Active and Passive attacks
- (ii) Virus and Trojan Horse



- (b) What is TCP session hijacking? (3)
- (c) Name four malicious codes. (2)
8. (a) What is a substitution cipher? Obtain the encrypted message for the plaintext UNIVERSITY using Caesar cipher with key 3. Also, decrypt the cipher text VHFXULWB that has been encrypted using a rail fence cipher with key 3. What is the primary advantage of Caesar cipher? Also give one disadvantage of Caesar cipher. (6)
- (b) Give the full form of CIA-triad. For each of the following examples, identify which part of the CIA-triad is compromised and how: (4)
- (i) Alice is working on her university application online but the website crashes and she is unable to submit her application on time.
- (ii) Vijay, a class XII student, accesses the CBSE website to check his marks but he was also able to view all the personal details of the students of his school.
- (iii) Alice received a bill of ₹ 80 and accidentally she spilled ink on the bill and the bill shows ₹ 8.