

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2013

Subject code: 725103

Date: 03-06-2013

Subject Name: Information System and Network Security

Time: 10.30 am – 01.00 pm

Total Marks: 70

Instructions:

1. Attempt to question 1 is compulsory and answer any five questions from the rest.
2. Make suitable assumptions wherever necessary.
3. Figures mentioned on the right hand side of each question indicate marks.

Q. No. 1

[2 Marks X 10 = 20 Marks]

- a. Define Risk management?
- b. Define Authorization.
- c. What is Threads classification?
- d. What is repudiation attack?
- e. What is Steganography?
- f. Define threat agent.
- g. Explain known plain text attack.
- h. What is a preventive control?
- i. What is residual risk?
- j. Give any four uses of Hash functions?

Q. No. 2

- a. Describe an information system, types and how it helps organizations? [6 Marks]
- b. Explain digital signature and its use [4 Marks]

Q. No. 3

- a. Explain briefly the steps of DES encryption process? [6 Marks]
- b. Explain the difference between passive attacks and active attacks. [4 Marks]

Q. No. 4

- a. Explain cryptography and explain the three functions that characterize the cryptographic systems [6 Marks]
- b. Discuss different classical encryption techniques in detail. [4 Marks]

Q. No. 5

- a. List the important characteristics of Public key cryptosystems. Explain the essential steps to be followed in the Public key encryption Process with an example. [5 Marks]
- b. With an example explain RSA algorithm. [5 Marks]

Q. No. 6

- a. Brief on Message Authentication code? [6 Marks]
- b. Explain the Cipher-block chaining mode of operation used in block cipher? [4 Marks]

Q. No. 7

- a. Brief on Business continuity planning. [5 Marks]
- b. Brief on use of hash functions? [5 Marks]

Q. No. 8

- a. Explain the various risk mitigation methods with suitable examples? [10 Marks]
