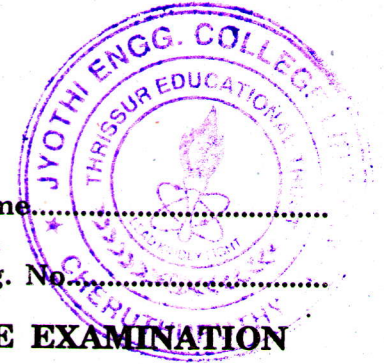


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Name.....

Reg. No.....



**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION  
APRIL 2017**

**EC/PTEC 09 804 L11—CRYPTOGRAPHY AND NETWORK SECURITY**

(2009 Admissions)

Time : Three Hours

Maximum : 70 Marks

**Part A**

*Answer all the questions.  
Each question carries 2 marks.*

- I. (a) Give any *four* names of substitution techniques.  
(b) How many bit keys are used in S-DES algorithm ?  
(c) Mention the advantages of elliptical curve cryptography.  
(d) Define Digital Signature.  
(e) What do you meant by Data compression ?

(5 × 2 = 10 marks)

**Part B**

*Answer any four questions.  
Each question carries 5 marks.*

- II. (a) What are the strengths of DES encryption ?  
(b) List the applications of Public-Key Cryptosystems.  
(c) Distinguish between symmetric and asymmetric encryption techniques.  
(d) Differentiate MAC and Hash function.  
(e) List the benefits of IP Security.  
(f) List and explain the different types of Security Attacks.

(4 × 5 = 20 marks)

**Part C**

*Answer all questions.*

- III. (A) (i) Explain the OSI Security Architecture ; and (ii) Explain Classical Encryption Techniques.

*Or*

- (B) Discuss in detail about Rotor machine and Steganography techniques.

Turn over

IV. (A) Explain the SHA-1 processing of a single 512-bit block and also give the single step operation.

*Or*

(B) Briefly explain the idea behind Elliptic Curve Cryptosystem.

V. (A) Describe about security of hash functions and MAC problems.

*Or*

(B) Write short notes on Message authentication codes and functions.

VI. (A) Give the format of the IP sec Authentication Header. Write short notes on authentication header and ESP.

*Or*

(B) Give an overview on S/MIME functionality.

(4 × 10 = 40 marks)