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Total Number of Pages: 02

B.Tech
FECE6404

8th Semester Regular / Back Examination 2016-17
NETWORK SECURITY AND CRYPTOGRAPHY

BRANCH(S): AEIE, EIE, IEE

Time: 3 Hours

Max Marks: 70

Q.CODE: Z111

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

- Q1 Answer the following questions: (2 x 10)**
- a) Specify the four categories of security threats..
 - b) Define confidentiality and authentication,.
 - c) Determine gcd (1970, 1066).
 - d) List the 3 classes of intruder?
 - e) Write the usefulness of Chinese Remainder Theorem.
 - f) What are the properties of Digital Signature?
 - g) What you meant by hash function?
 - h) What is the main service of secure socket layer?
 - i) What is meant by worms?
 - j) What are the limitations of firewall?
- Q2 a) Describe Public Key Cryptography. (5)**
- b) State Fermat's Theorem. Find $3^{201} \text{ mod } 11$ using Fermat's Theorem. (5)**
- Q3 a) Perform encryption and decryption using RSA Alg. for the following. (5)**
P=7; q=11; e=17.
- b) Explain the encryption and decryption techniques for AES with neat diagrams (5)**
- Q4 Explain Data Encryption Standard (DES) in detail. (10)**
- Q5 a) With suitable example explain the DIFFIE – HELLMAN algorithm. (5)**
- b) With suitable diagrams explain the SHA algorithm. (5)**
- Q6 a) Write and explain the Digital Signature Algorithm. (5)**
- b) What are viruses? Explain the virus related threats and the counter measures applied. (5)**

- Q7** a) Briefly explain about IP security and email security. (5)
- b) What is firewall? Explain the types of firewalls with neat diagram. (5)
- Q8** Write short notes on any two: (5 x 2)
- a) Pretty Good Privacy(PGP)
 - b) Transport Layer Security (TSL)
 - c) Intrusion Detection
 - d) Steganography