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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech II Semester Examinations, October/November 2011
NETWORK SECURITY AND CRYPTOGRAPHY
(COMPUTER SCIENCE & ENGINEERING)

Time: 3hours   Max. Marks: 60
Answer any five questions
All questions carry equal marks
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1.a)   Draw a Model for Network security and explain the function of each component.
  b)   With the help of mathematical expressions explain Hill cipher system.   [12]

2.a)   Describe Encryption and Decreption procedure in DES algorithm.
  b)   List out the characteristics of advanced symmetric block ciphers.   [12]

3.a)   Explain RSA algorithm with suitable example.
  b)   Discuss Diffie-Hellman key exchange algorithm.   [12]

4.a)   State and prove Fermat's and Euler's theorems.
  b)   What are the basic uses of Hash functions?   [12]

5.a)   Explain Secure Hash algorithm.
  b)   What are the requirements of Digital signature? What are the demerits of Direct
       digital signature?   [12]

6.a)   Compare Kerberos version 4 & version 5.
  b)   Describe the operation of PGP.   [12]

7.a)   Explain IPSEC benefits, Documents and Services.
  b)   Discuss SSL architecture.   [12]

8.   Write a brief note on:
      a) Viruses   b) Fire walls   [12]

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