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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech II Semester Examinations, October/November 2011
INFORMATION SECURITY
(SOFTWARE ENGINEERING)

Time: 3hours   Max. Marks: 60

Answer any five questions
All questions carry equal marks

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1.a)   What are the different types of security mechanisms available? Explain.
  b)   Briefly explain Buffer Overflow and format string vulnerabilities.   [6+6]

2.a)   Briefly explain monoalphabetic cipher.
  b)   List any four block cipher modes of operation and explain the same.   [6+6]

3.a)   Define digital signature. What are the uses of digital signature?
  b)   Write notes on Kerberos.   [6+6]

4.a)   What is S / MIME? List the five header fields defined in MIME and Explain.
  b)   Give a brief account on S / MIME functionality.   [6+6]

5.a)   What services are provided by IPSec?
  b)   Explain the Encapsulation Security Payload with a neat diagram.   [6+6]

6.a)   List and briefly define the parameters that define an SSL session state.
  b)   What is a dual signature and what is it purpose? Give a brief account on payment
         processing.   [6+6]

7.a)   List and briefly define three classes of Intruders.
  b)   Write short notes on SNMPv3.   [6+6]

8.a)   What are the design goals of a firewall? Explain the packet-filtering router.
  b)   Give a brief account on Intrusion Detection Systems.   [6+6]

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