**R09**

**Code No: D6108, D3808, D7008, D5510, D6508**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**
**M.Tech II - Semester Examinations, March/April 2011**
**NETWORK SECURITY AND CRYPTOGRAPHY**
**(COMMON TO COMMUNICATION SYSTEMS, DIGITAL ELECTRONICS & COMMUNICATION SYSTEMS, ELECTRONICS & COMMUNICATION, EMBEDDED SYSTEMS, WIRELESS & MOBILE COMMUNICATIONS)**

**Time: 3hours** **Max. Marks: 60**

**Answer any five questions**
**All questions carry equal marks**
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1. a. Distinguish between cryptography and steganography.
   b. Explain the security services?
   c. Describe the Internet work security model. [12]

2. Explain the working of RC5 algorithm. [12]

3. a. Explain the characteristics of advanced symmetric block ciphers.
   b. Discuss the block cipher modes of operation.

4. a. Explain the different approaches of key management in public key cryptography. [12]
   b. How the keys are exchanged using Diffie-Hellman key exchange algorithm? Explain. [12]

5. a. Discuss about discrete logarithms.
   b. Explain the security of hash functions and MACs. [12]

6. List and explain the sequence of steps followed in RIPEMD – 160 algorithm. [12]

7. a. Explain the operation of Kerberoes.
   b. Explain S/MIME. [12]

8. Write short notes on:
   a. Secure electronic transaction(SET)
   b. Viruses and related threats [12]

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