Sl. No.

B5.3-R4 : NETWORK MANAGEMENT & INFORMATION SECURITY

NOTE :
1. **Question 1 is compulsory and attempt any FOUR from questions 2 to 7.**
2. **Parts of the same question should be answered together and in the same sequence.**

Time : 3 Hours **Total Marks : 100**

1. (a) What is the difference between authentication and authorization ?
   (b) Which are the key differences between brute force attack and dictionary attack ?
   (c) Which techniques are used to avoid guessable passwords ?
   (d) What is the difference between confusion and diffusion ?
   (e) Explain configuration management in Network Management.
   (f) What is Bio-metric authentication ? How it works ?
   (g) Explain Multipurpose Internet Mail Extensions (MIME) in brief. **(7x4)**

2. (a) List the classes of intruders. Explain each in brief.
   (b) What is Kerberos ? List the requirements for designing the Kerberos environment.
   (c) Define : Viruses, Worms and Trojan Horses. **(6+6+6)**

3. (a) What is Message Digest 5 (MD5) algorithm ? Explain MD5 in brief.
   (b) What is firewall ? Explain any three types of firewall.
   (c) Mention key differences between Symmetric and Asymmetric Encryption. **(7+7+4)**

4. (a) Which is the process of risk analysis in security ?
   (b) Explain triple DES algorithm in detail with block diagram of Triple-DES. **(8+10)**

5. (a) Define Public-Key Infrastructure. List the requirements for the user in the public-key certificate scheme.
   (b) Explain SNMP architecture in detail with diagram.
   (c) Write a short note on Network Performance Management. **(6+6+6)**

6. (a) What is ARP (Address Resolution Protocol) ? What is the difference between ARP and RARP ?
   (b) What do you mean by digital signature ? Explain Digital Signature Standard (DSS).
   (c) What is IP spoofing ? How it works ? Which are the steps to avoid spoofing ? **(4+6+8)**

7. Write short notes on the following :
   (a) Pretty-Good-Privacy (PCP)
   (b) Indian Cyber IT Act 2000
   (c) Virtual Private Networks (VPN) **(6+6+6)**

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