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NED UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI
FINAL YEAR (COMPUTER SCIENCE AND INFORMATION TECHNOLOGY)
ANNUAL EXAMINATION 2007
BATCH 2003-04

Time: 3 Hours

Dated: 10-11-2007
Max. Marks: 80

NETWORK SECURITY & CONTROLS
(CT-457)

NOTE: QUESTION-01 IS COMPULSORY, ATTEMPT FIVE QUESTIONS IN ALL.

- Q.01) a) What are the primary functions of the following commands? (03)
1. Ping 2. NSLOOKUP 3. Tracert
- b) What does the following command mean? (02)
C:\> telnet neduet.edu.pk
C:\> telnet neduet.edu.pk 25
- c) Name two protocols from the applications layer of the TCP/IP suite. (02)
- d) The security policy is a _____, communicated, set of _____ that all employees, customers, or vendors are required to adhere to and observe. (02)
- e) The Site Security Handbook also known as _____. (01)
- f) The most popular catalog of vulnerabilities is the _____. (01)
- g) _____ is the term generally used for traffic monitoring within the network. (01)
- h) There are _____ sub-layers in Data Link. (01)
- i) A packet sniffer is hard to detect because it operates _____. (01)
- j) _____ usually kill logging services and monitor the keystrokes of system users looking for passwords and other useful information.. (01)
- k) Packets labeled with MAC: 11-11-11-11-11-11 are known as _____ packets. (01)
- l) PGP stands for: _____. (01)
- m) Write any two computer networks related website addresses. (01)
- n) The main purpose of the _____ is to give the company the same capabilities as private leased lines at much lower _____ by using the shared public infrastructure. (02)
- Q.02) a) How many types of communication standards use by the industry? Explain with atleast one example each. (04)
- b) Write down the basic functionality of data link layer? (04)
- c) Write down the summary that shows the processing performed by an end system in an IP network. It is assumed that the system is connected to an Ethernet network? (07)
- Q.03) a) What is Ethernet? Define following Ethernet field: (03)
DSAP & FCS
- b) What do you understand with Connection-oriented and Connection-less mode of communication? (04)
- c) Write down the summary that shows the processing performed by an end system in an IP network. It is assumed that the system is connected to an Ethernet network? (08)
- Q.04) a) What are the six security goals of Cisco SAFE? (06)

P.T.O

- b) **Superior Services (Pvt.) Limited** – SS is an international systems consulting company providing a broad portfolio of technology and business solutions to help its clients worldwide improve their business performance. SCS provides consulting through a pragmatic, realistic approach in addressing client needs. It provides “end-to-end” services and solutions, ranging from IT strategy development through to enterprise solutions and technology decisions. Through innovative and established techniques we can transform the complete enterprise architecture into a single, seamless business system. Company is also providing financial solution for banking sector specially. (06)
- Propose your own Network Security Model for Superior Services consisting 5-8 points that must be consider in your opinion like explained in different standard Security Models in course book.
- c) Following your proposed Network Security Model, write Security Policies for the below department: (03)
1. LAN (Local Systems, Switches etc.)
- Q.05) a) Write the four specific security requirements within the context of any application to application communication? (04)
- b) What is PKC? Address basic issues of keys and give examples of algorithms? (04)
- c) Explain Trust Model in brief and support your answer with at-least three examples of trust services? (07)
- Q.06) a) What is Wi-Fi? Define following terms: (04)
1. ISM Band
 2. UNII Band
 3. Hotspot and Access Point
- b) What are the different types of Wireless Computer Networks? Explain with help of examples and diagrams? (06)
- c) What is SSID? Write two different scenarios in which SSID should be broadcast? (05)
- Q.07) a) What is the difference between Sniffing and Port Scanning? (04)
- b) Define Rootkit? Write down the purpose of Rootkit? (04)
- c) Explain with the help of diagram process of DDoS attack? (07)
- Q.08) Write short note on any two: (15)
- a) IPv6 Packet Headers and Fields
 - b) Trusted VPN
 - c) Viruses and Worms

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