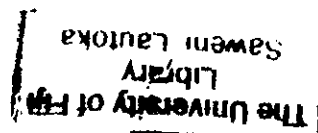




The University of Fiji

School of Science and Technology

Department of IT and Computer Science



ITC 263

Security and Support in IT

Semester II, 2011

Final Exam

Time Allowed: 3Hours
Total Marks: 100 Marks

Course Co-ordinator: Waseem Raza

Instructions

Date: 15-11-2011

- There are 5 sections. Section A consists of 10 multiple choice and Section B is Of One Mark each. Section C consists of 15, 2 Mark each questions, Section D Consists of 6, 5 Marks each questions and Section E 2 questions of 10Marks each.
- Write your statements clearly in Section C, D and E clearly to gain maximum marks.
- You may ask for extra sheets from the supervisors for your rough working.
- Do not forget to write your name and ID number on all the extra sheet(s) Attached.
- Hand in your Exam Booklet to the supervisor before you leave the Examination hall.
- This booklet contains **05** pages including this page.

Student Name:

Student Id:

GOOD LUCK!

Q1. TCP is a connectionless protocol

- a. True b. False

Q2. A MTA (Mail Transfer Agent) is a must in sending or receiving a mail

- a. True b. False

Q3. A cross over cable is used to connect two systems without the intervention of a switch or hub.

- a. True b. False

Q4. SMTP is a _____ layer protocol.

Q5. After creating subnets, the first IP address of the subnet is the broadcast address of each subnet.

- a. True b. False

Q6. A bridge breaks a subnet into LAN segments.

- a. True b. False

Q7. A firewall is inserted between a premises network and the internet.

- a. True b. False

Q8. The following range **128 to 193** of IP addresses belongs to the class B IP addressing scheme.

- a. True b. False

Q9. **Fedora** operating system is another flavor of UNIX operating system

- a. True b. False

Q10. Apache web server is the most popular of all the web servers used in the market.

- a. True b. False

Section B (1 Mark Each)

- Q1. What is a subnet?
- Q2. What are the three main topologies of a LAN?
- Q3. What are the two addressing schemes used by windows 2003 server Operating system (How many bits)?
- Q4. What is a Domain in windows?
- Q5. What is a DHCP scope, in Windows Server Operating Systems?
- Q6. What is Malware? Give an example.
- Q7. What is a shared folder on a network?
- Q8. What is the difference between a Virus and a Trojan Horse?
- Q9. Why do you use a DNS server?
- Q10. What is the main difference between a HUB and a SWITCH?

Section C (2 Marks Each) 30

- Q1. What is a VPN, and in points give its benefits?
- Q2. What is the aim of having Firewalls in a large Network?
- Q3. What are the benefits of assigning rights to groups rather than individual users?
- Q4. Name any four Network Monitoring Tools.

Q5. Name any four Network Administration tools inherent in **Windows Operating System**?

Q6. What are the 3 different types of Firewalls (main categories), name them?

Q7. What mail protocols are supported by a native Windows Server 2003 installation?

Q8. Name any four services that are included in the Windows Active Directory Services.

Q10. What is the difference between a right and policy in windows server?

Q11. What are the advantages of Switches over Hubs?

Q12. Give the two main reasons to subdivide a network.

Q13. What are the three main classes of Subnets, give their ranges?

Q14. What is LINUX?

Q15. What is **SAMBA**, and why is it used in Linux?

Section D (5 Marks Each)

30

Q1. What is the main difference between PAP and CHAP Protocol?

Q2. Name the inbuilt windows groups in Windows 2003 server.

Q3. What is an online attack? Name any two and explain each in brief.

Q4. What are the main advantages and disadvantages of Application Level Gateway type of a Firewall?

Q5. Name the three types of hijacking techniques used by online attackers, and explain any two of them.

Q6. What are the advantages of command line administration in Linux?

20

Section D (10 Marks Each)

Q1. Design a Class B IP addressing scheme such that each subnet has 62 Host IP addresses. Give a minimum of 10 subnets with their beginning and last IP address of each subnet. Clearly show the calculations and hence calculate the subnet Mask for this range.

Q2. Explain the RSA Algorithm in steps. Assume the value of $p = 3$ and $q = 5$, and hence find d and e . Also assume that you are assigning a numeric value to each alphabet beginning with $A = 1$ and ending with $Z = 26$.

Encrypt the Alphabet $D=4$ and hence prove the theorem.

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