ASSESSMENT BOOKLET

Concepts in Networks and the Internet
(ICT-DES-5003-1.1)

SUBMISSION OF WRITTEN ASSIGNMENT

Candidate's Full Name as per NRIC/FIN	
Trainer/Assessor Name	
Submission Date	
Class Code	
TSC Code and Name	Concepts in Networks and the Internet ICT-DES-5003-1.1

Candidate's Declaration

1.   I declare that I fully understand the whole assessment process as briefed by the Trainer/Assessor on this date.

2.   I hereby declare that I am the sole author to the answers provided and there is no involvement to any plagiarism.

3.   I have not allowed, and will not allow, anyone to copy any of my answers with the intention of passing it off as his or her own work.

4.   I understand that if I have been found to be untrue in my declaration, I will be considered as Not-Yet-Competent (NYC) in this module.

Feedback for Candidate

Assessment Results	☐ Competent (C)		☐ Not-Yet-Competent (NYC)	
Candidate's Name		**Candidate's Signature & Date**		
Assessor's Name		**Assessor's Signature & Date**		

Written Assignment

Remember to provide appropriate reasoning for the choices you make as well as the pros and cons between the choices you made and those not selected.
This is an open book test and learners are allowed to search online for additional information.

Your company has recently opened an office in Singapore to manufacture vaccines.

Due to global ransomware attacks that have disrupted global supply chains, the management is very concerned and wants to mitigate this and other cybersecurity issues. They want to make sure the network is as secure as possible and can recover from any disruptions.

The current infrastructure is as follows:
- Cisco Router Connected to Singtel 1 Gb/s speed
- Cisco L3 Switches (1 per department)
- Cisco L2 switches
- Multiple Access Points (WPA1 Personal)
- 1 Microsoft Server 2012 R1 Active Directory
- 2 IIS Web Servers (1 for Intranet, 1 for Internet)
- 1 SQL Server
- 1 Microsoft Server 2012 R1 File Server used to store and share documents
- Departments are Accounting, HR,IT,Management, Legal, Marketing, Sales,Shipping.
- All computers are Dell laptops running Windows 7 Professional & Windows 8.1 Professional

You are to write up a plan for a network and the plan must consists of the following:

1. The network components involved
2. How the network will communicate
3. What protocol layers are involved
4. What kinds of attacks is it prone to
5. What are its applications
6. How the TCP or UDP is involved
7. The types of protocol in the network layer
8. The usage of the Internet Protocol
9. The protocols involved in the Interface layer
10. Review current technical setup and review if there needs to be any changes in regard to Availability, Disaster Recovery (DR) planning and Security vulnerabilities.
11. Network diagrams of 1) current network and 2) proposed network changes.