SL Unit 3 – Networks
Quiz 2

Question 1			
Objectives:	3.1.1, 3.1.10	Exam Reference:	Nov-14 9

  1. (a) Outline the differences between a LAN and a VLAN.   [3]

> Award [1 mark] for identifying one difference between a LAN and a VLAN and [1 mark] for further development of that idea or identifying another difference up to [3 marks max].
>
> A LAN is a physical, local area network defined by cables, and networking hardware whereas;
>
> A VLAN is a virtual LAN defined by software parameters programmed into the networking hardware;

        (b) Identify **two** factors that should be considered when selecting transmission media.   [2]

> *Award **[1 mark]** for each factor identified up to **[2 marks max]**.*
> Cost;
> Speed;
> Security;
> Reliability;

Question 2			
Objectives:	3.1.15	Exam Reference:	May-17 12.a

A multinational business requires secure communication between its offices in different countries. The business's salesforce also needs secure remote access, as they travel the world.

    (a) (i)   Identify **two** different types of network that can be combined to use the internet
              to address the above requirements.   [2]

> WAN/GAN (global area network)
> VPN;
> Do not accept LAN or MAN or VLAN

(ii) For **one** of the networks identified in part (a)(i), describe the security
characteristics that are particular to this network. [3]

Award [3 max] for one of the networks:

(WAN/GAN)
A secure authentication process;
That involves login, passwords and security questions *(response should include at least two of these)*;
One-time pads;
Encryption;

(VPN)
Authentication;
Tunnelling;
Which is a packet within a packet;
(Each layer) encrypted;
Location and IP of user masked;
Give follow through for wrong answer in (i) including answers of wireless/cabled

Question 3			
Objectives:	3.1.1	Exam Reference:	Nov-15 2

By making direct reference to the technologies used, explain how a virtual private network
(VPN) allows a travelling salesperson to connect securely to their company's network. [4]

up to [4 max].

Tunnelling protocols;
Allows the data to be encapsulated/hidden whilst travelling across the internet;

Encryption protocols (IPSEC);
If hacked it will not be understandable;

The use of gateways;
Allows the salesperson to connect with the company's server;

Question 4

Objectives:	3.1.1	Exam Reference:	May-14 8

Identify **two** key features of a peer-to-peer (P2P) network. [2]

Award up to [2 marks max].
Examples of features:
No central server;
Resources are more widely available (storage, bandwidth, computing power);
Redundancy/recovery;
Supports file sharing for collaborative work;