



SURNAME: Thomas

FORENAME(S): William

12 Pages

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right, fold over and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners can refuse to mark answers in illegible script or have it typed and the expense of typing charged to the candidate.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. **Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.**

List the numbers of the questions you have attempted	Office Use
2	10
3	5
4	8
Total	23

(Gweler yr ochr arall am y fersiwn Cymraeg)



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

12 Tüdalen

Cyfarwyddiadau i Ymgeiswyr

1. Rhwch yr holl wybodaeth y gofynnir amdani yn y blychau isod.
2. Rhwch eich enw yn y lle a ddarparwyd ar y dde, plynwch et a'i selio i lawr (gan ddefnyddio'r label a ddarparwyd) i guddio'ch enw.

1. Rhaid i'r atebion fod mewn llawysgriften ddarllenadwy. Gall yr Arholwyr naill ai anwybyddu sgrïpt annarllenadwy, neu drefnu iddi gael ei theipio a chael yr ymgeisydd i dalu.
2. Ysgriftennwch eich atebion mewn inc.
3. Dechreuwch bob ateb ar dudalen newydd. Gwnewch unrhyw fras nodiadau yn y llyfr atebion a thynnu llinell drwyddynt.
4. Ni ddylid rhwngo unrhyw ran o'r llyfr hwn; rhaid ei gyflwyno yn gyfan.
5. Os defnyddir mwy nag un llyfr, rhwymwch hwy gyda'i gilydd gan ddefnyddio'r tagiau sydd ar gael oddi wrth y gwyllwrr/gwylwyr.
6. Rhaid dychwelyd pob llyfr. Ni chaniateir mynd â llyfrau atebion, wedi eu defnyddio neu heb eu defnyddio, allan o'r lleoliad arholi o dan unrhyw amgylchriadau.

(See the other side for English version)

1	Rhif Myfyriwr	
2	Teitl y Papur Arholiad	
3	Cod y Modwl	
4	Dyddiad ac Amser yr Archoliad	
5	Lleoliad yr Arholiad	
6	Rhif Sedd	
7	Nifer y Llyfrau Atebion a gyflwynwyd	

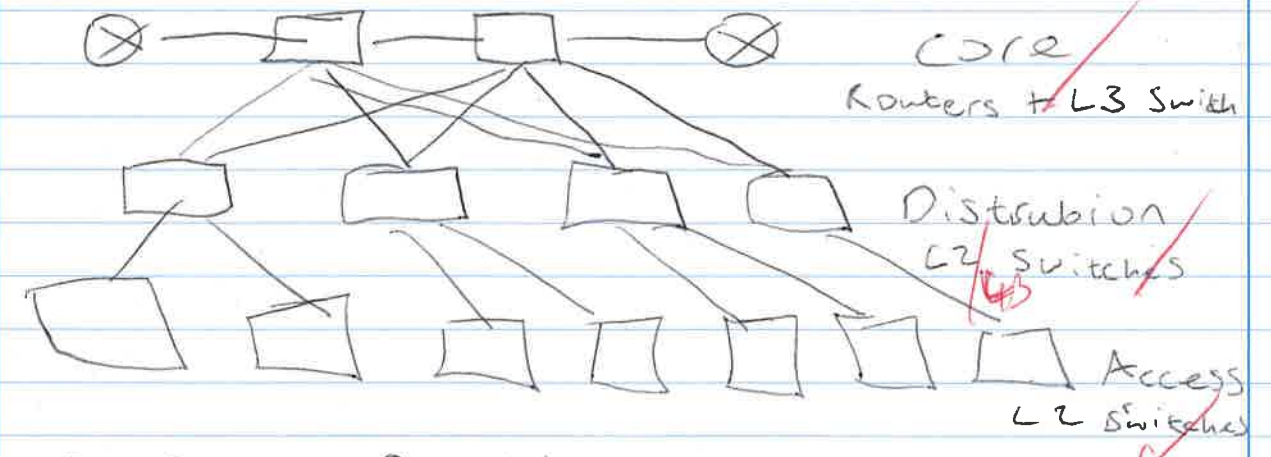
[illegible]

Llenwch, plynwch a seliwch
(gweler nodyn 2 isod)

CYFENN:

ENW(AU) CYNTAF:



2a
i

ii

Core - Backbone

The core can be setup by either using routers or Layer 3 switches. The core supports routing protocols and allows internet connectivity to the network.

Distribution -

The middle section of the hierarchical design. VLAN traffic can be setup here using VTP. Distribution offers scalability, traffic management and it offers redundancy on the network, multiple traffic paths.

Access - End-devices

Access involves layer 2 switches which are connected to the end devices on the network such as computers, printers and access points.

iii

The access layer supports VLANs, VTP, Etherchannels and STP. The access layer is connected to end devices which then is forwarded to the distribution layer.

b SNMP is Setup at the Distribution and Access layers. It allows the network topology to form and map out the network. SNMP allows Trunking Information to be shared across the network and VLANs.

3a A VLAN Trunk is a connection made between two ~~devices~~ ^{switches} that ~~that~~ have been set on the ~~same~~ ^{same} VLAN and set in Trunking mode. VLAN Information is shared between the VLAN Trunks.

b ~~Access~~
DynamicAuto - This is Not set at a certain DTP Setting. This detects the connection and decides on becoming a Access or Trunk DTP. This could be considered as auto Switching.

~~Dynamic desirable~~
Dynamic desirable - This ~~allows~~ ^{permits} ~~layer 3~~ ^{not} switches ~~to be configured into either Access or Trunks.~~

Nonnegotiate - Does not receive Trunking Information.

Trunk - ~~The device~~ ^{Interface} is now ~~from~~ a Trunk, which can share Trunking and VLAN information to the ~~other~~ ^{other} An Access/Trunk.
Access - This can Access Trunks and VLAN information.

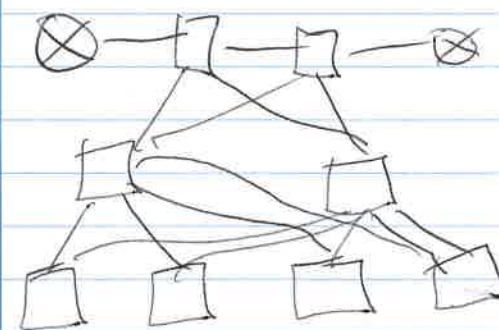
C VSS can be set in either one of these types, ~~Server~~ ^{Server}, Client and Transparent. VSS offers a solution to Allow Trunking and VLAN ~~updates~~ ^{updates} to be shared across the network.

4

Four new buildings, wired and wireless, 20,000 users, needs SAN, ~~QoS~~ and security.

↑
Information from question

Each building will be setup using the Hierarchical approach which is Core, Distribution and Access. Each building will either be connected via the core or distribution layer. The wireless Access points will be connected to a layer 2 switch on the access layer. Wired connections are also on the access layer. End to End Vlan's will be setup, which allows Vlan Traffic across the whole campus and the other campuses. Benefits would be redundancy, ~~QoS~~ and Security.



Core - Routers and L3 Switches

Distribution - Layer 3 or L2 Switches

~~Access~~ Access - Layer 2 Switches

Each device would be Cisco to ensure compatibility of the design and network. VLANs would be setup to split ~~traffic~~ the traffic on the network. Next-hop redundancy would be used for the network.

This is done by using the same Layer 2 Mac addresses on the routers.

Partial answer

What about security redundancy? or is it caused by redundancy and how is it?

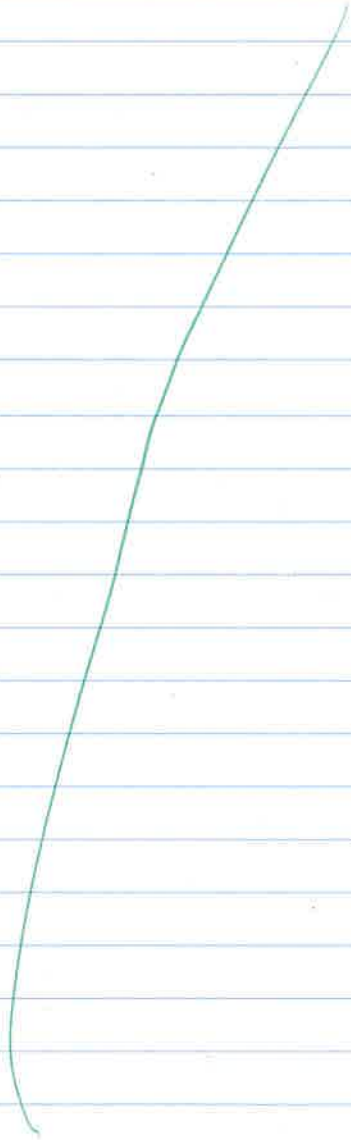
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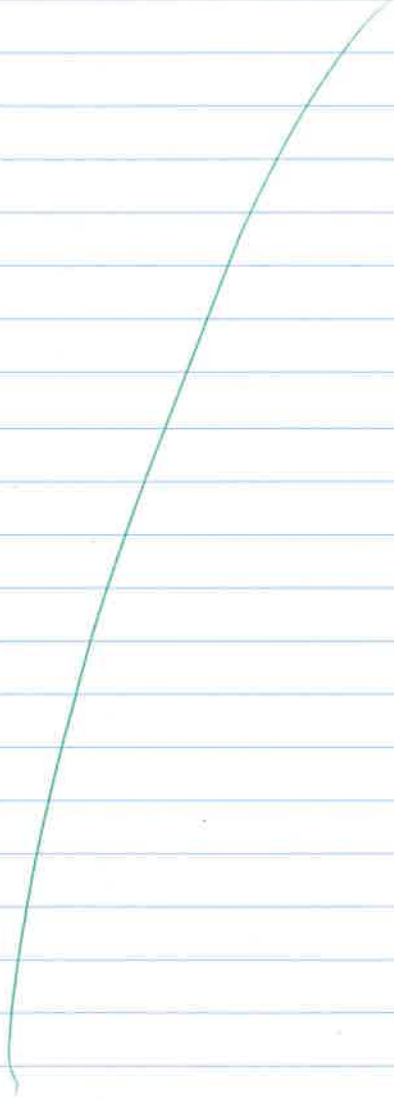
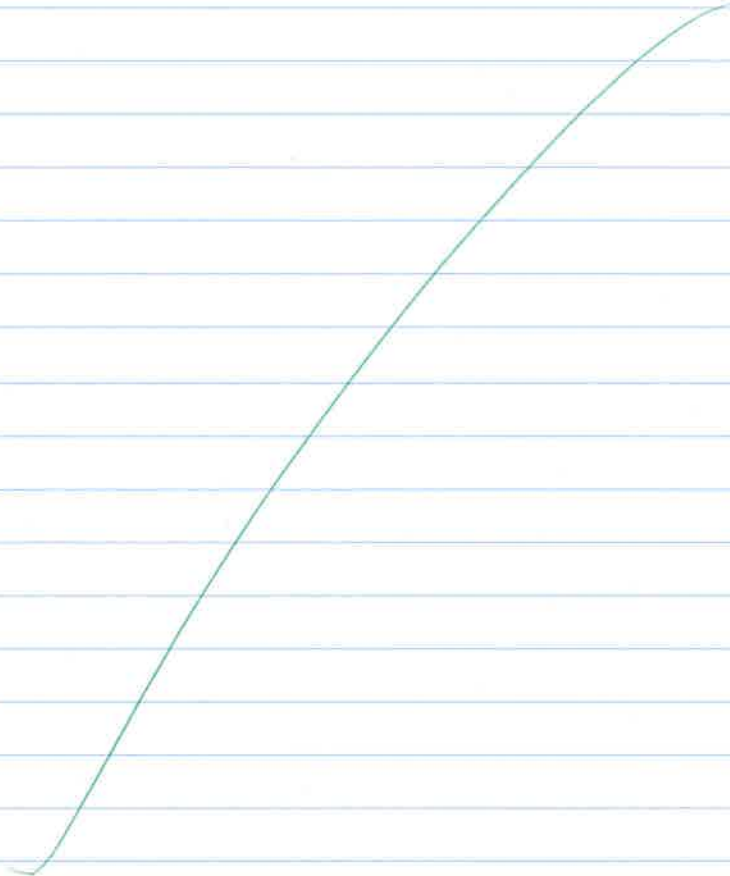
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Arholwr yn unig

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Rhif y Cwestiwn

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