



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 either ignore 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.**

1	Student Number	146671
2	Title of Examination Paper	IPSWICH HILLION
3	Module Code	107101696
4	Date and Time of Examination	12:00 PM 14/05/17
5	Examination Venue	310 IQ
6	Seat Number	064
7	Number of Answer Books handed in	1

(Gweler yr ochr arall am y fersiwn Cymraeg)

List the numbers of the questions you have attempted	Office Use
1	13
2	12
3	12
Total	37

SURNAME: Thomas

FORENAME(S): Simon Peter

[illegible]

(See the other side for English version)

1. Rhwch yr holl wybodaeth y gofynnir ar
2. Rhwch eich enw yn y lle a ddarparwyd i'w rhoi yn y tabl (gan ddefnyddio'r labellau a roddwyd i'w hysbysu)

Cyfarwyddiadau i Ymgeiswyr

12 Tüdalen

Llyfr Atebion Arholiadau



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

Llenwch, plygwrch a seliwrch
(gweler nodyn 2 isod)

CYFENW:

ENW(AU) CYNTAF:

- Rhaid i'r atebion fod mewn llawysgrifen ddarlennadwy. Gall yr Arholwyr naill ai anwybyddu sgrïpt annarllenadwy, neu drefnu iddi gael ei theipio a chael yr ymgeisydd i dalu.
- Ysgrifennwch eich atebion mewn inc.
- Ni ddylid rhwygo unrhyw ran o'r llyfr hwn; rhaid ei gyflwyno yn gyfan.
- Os defnyddir mwy nag un llyfr, rhwymwch hwy gyda'i gilydd gan ddefnyddio'r tagiau sydd ar gael oddi wrth y gwyllwyr/gwylwyr.
- 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 amgylchiadau.

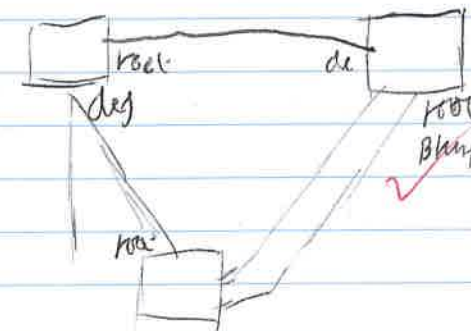
(a) Broadcast Storm - all the devices on the network sending packets to each other. With the scale of the network broadcast communication will flood and slow down the network performance and reliability.

packet looping - With so many possible routes from source to destination a packet can find themselves being sent and returned to a source device due to path not fully known by poor configuration. This creates duplicate traffic on the network, additional.

Packet loss - due to extra routes packets reach their within a defined path a packet can be dropped by forwarding device. This would be lowering efficiency of the network and performance due to packet needing to be resent.

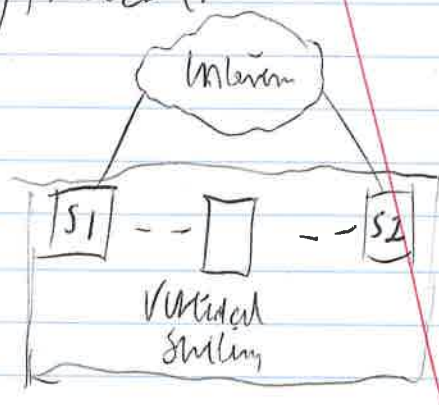
(a) Spanning Tree Protocol is used as a physical layer redundancy protocol as well as prevent packet looping. It does this by selecting one it is enabled on the switches STP will elect a root bridge within a network segment. This is done by choosing the one with the lowest priority that has been already assigned. ~~ports~~ Switch ports are then assigned as root port designated port or disabled. Root ports lead to root bridge and designated port are the opposite of the ports and other router with designated being port that are shut down.

First Hop

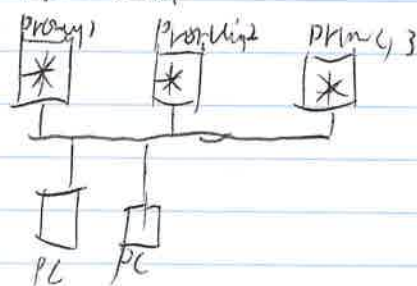


1a ii) First Hop Redundancy protocol is the Virtualisation of more than one switch to allow a primary and standby route for a network that has multiple switches for redundancy. There are three types of fhrp.

Hot Standby Redundancy protocol is a Cisco proprietary protocol that combines multiple switches into one virtual switch with its own IP address and configuration. It is this virtual switch that assigns route for packet for which redundancy allows for multiple routes. The open standard of this is Virtual Router Redundancy Protocol.



The last is Global Loadbalancing protocol which is used to not overload traffic on the network by assigning priority with IP addresses to the switches, allowing traffic to be sent equally over the network.



no need for this STP is enough

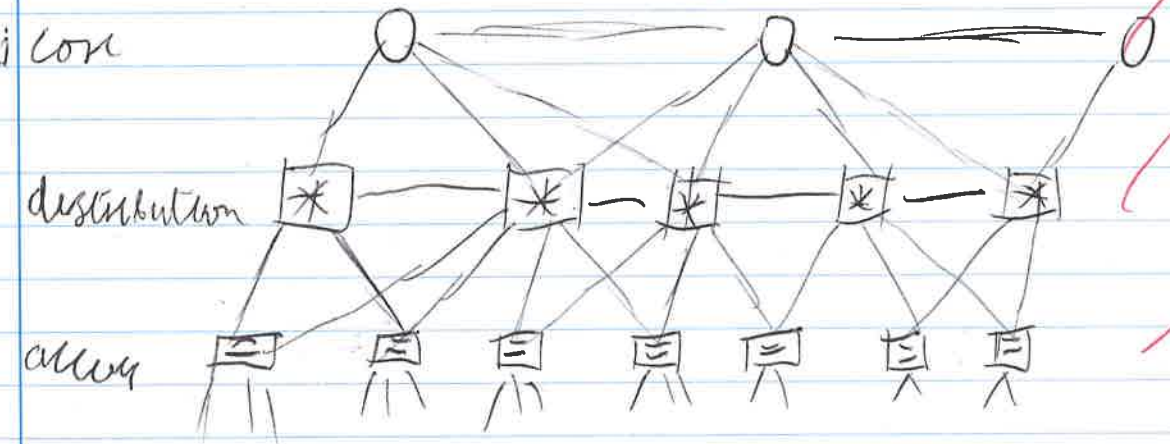
16. When channel ports must match end to end meaning must be set to same speed and duplex. The also must be the same standard of port aggregation protocol or link aggregation control protocol. And only up to 8 ports are supported.

When configuring port the interfaces need to be opened and bundled into a port-channel. Port end are assigned as auto/disable or active/passive depending on protocol. Port channel is created and then activated.

16. port security due to user not following any policy if ports are left open or insecure, unauthorised users are able to gain access to the network.

Non autorised
mac layer attack
attack on switches
any two is required

2ai core



- 2aii Core is the backbone of the network providing high performance at any time up to Fibre. It demand to have 100% uptime to ensure the network is active.

Distribution provides high performance at any time up to Gigabit speed and redundancy with policy based security and application management. Also VLAN support for multiple VLANs.

Access is the layer which is connected to the upper allowing users to connect devices and use net work resources. Provides accessibility, port security and VLAN support.

- 2a) Access layer typically uses layer 2 switches meaning that it's capable of providing basic security and authentication on the ports. provide performance through other means. and basic port level management through cut through and store/forward methods.

- 2b Simple network management protocol is a simple method used to overview, modify and configure a network.

- 3a A VLAN Trunk is a connection between 2 switches that allows traffic from different VLANs to be transmitted over the same route, even if the connecting route does not have access to a specific VLAN.

- 3b Access - port is set to be a basic connection not looking for Trunk.

Trunk - actively forcing for a Trunk connection.

Nonegotiate - not look to establish a trunk.

Dynamic desirable - actively asking for a trunk connection.

Dynamic auto - passively will accept a trunk connection.

3c A Virtual Switching System is a Cisco proprietary switching application used for Catalyst 4500 and 6500 switches. For the purpose of Virtual combining Layer 3 switching. This method is much like static with which doing chain the switches but this way is over ethernet up to 8 Ethernet ports can be used.

This is another method of redundancy creating multiple logical links in the distribution layer, using Layer 3 switching this way can reduce the number of switches needed. Replacing multiple switches while providing some security performance and redundancy.

Combining VSS with Redundancy
7. mixed up

2

Question No.

Examiner Only

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