



SURNAME: Phillips

NAME(S): Vordan

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.**

[illegible]

(Gweler yr ochr arall am y fersiwn Cymraeg)



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

12 Tudalen

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, pigwch ef a'i seilio i lawr (gan ddefnyddio'r label a ddarparwyd) i guddio'ch enw.

3. Rhaid i'r atebion fod mewn llawysgriften ddarlennadwy. Gall yr Arholwyr nail ai anwybyddu sgript annarllennadwy, neu drefnu iddi gael ei theipio a chael yr ymgeisydd i dalu.

5. Dechreuwch bob ateb ar dudalen newydd. Gwnewch unrhyw fras nodiadau yn y llyfr atebion a thynnw llwneil drwyddynt.
6. Ni ddylid rhwgo unrhyw ran o'r llyfr hwn; rhaid ei gyflwyno yn gyfan.
7. Os defnyddir mwy nag un llyfr, rhwymwch hwy gyda'i gilydd gan ddefnyddio'r tagiau sydd ar gael oddi wrth y gwyllwr/gwyhwyr.
8. 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.

arholi o dan unrhyw amgylchiadau.

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

(See the other side for English version)

[illegible]

Llenwch, plynwch a seliwch
(gweler nodyn 2 isod)

CYFENN:

ENW(AU) CYNTAF:

- ① a) i) The neighbour table ~~is~~ within EIGRP contains a list of all directly connected networks and routers ✓
- ii) The topology table contains a list of ~~network~~ networks connected to the device and all networks known by neighbouring routers ✓
- iii) The routing table is where the router stores information on how to reach different networks and the best path to use to reach these networks. ✓
- iv) The advertised distance is the cost of the route from the next hop address to the specified network, this number is always lower than the feasible distance ✓
- v) The feasible distance is the link cost to the next hop address plus the advertised distance to the network. This number is always higher than the advertised distance. ✓

- b) Hello packets are used by EIGRP to establish neighbour ~~addresses~~ adjacencies. These packets are sent as a multicast ~~to~~ through all ports.

Acknowledgement packets are used to reply to hello packets. These are unicast hello packets that contain no data or information.

Update packets are sent by routers to inform of any changes to the routing ~~and~~ topology tables, to their neighbours. Update packets are sent by routers to their neighbour routers to inform them of any and all network changes.

Query packets are sent by routers in order to acquire information on routing topology. They are typically sent to when a router does not know the successor or feasible successor to a destination network. This is a multicast packet.

Reply packets are sent in response to query packets and contain the requested information. This is a unicast packet.

All packets are sent reliably ~~across~~ across the networks.

- c) EIGRP protocol cannot communicate because the routers are configured with different MD5 keys. ~~Both~~ Both routers must have the same MD5 key on their respective links for communication to take place. To fix this situation, change MD5 Key configuration ~~on R2 to key id 1~~ ~~on R1 to key id 1~~ so that the ID matches on both routers.

d)

- d) The network sent from R1 to R2 doesn't match the network actually ~~connected to~~ connected to R1. Therefore R2 will not know of the 10.10.10.0/24 network. ~~To~~ and will not be able to communicate. To solve this on R1, go into EIGRP config and state "network 10.10.10.0 0.0.0.255" to broadcast the correct network and use "no network 10.0.0.0 0.255.255.255" to remove the incorrect network statement.

Simple solution
no auto
summary

- ④ a) ~~As~~ The Administrative distance (AD) is the trustworthiness of the route. The lower the AD, the better, or more trustworthy, the route is.

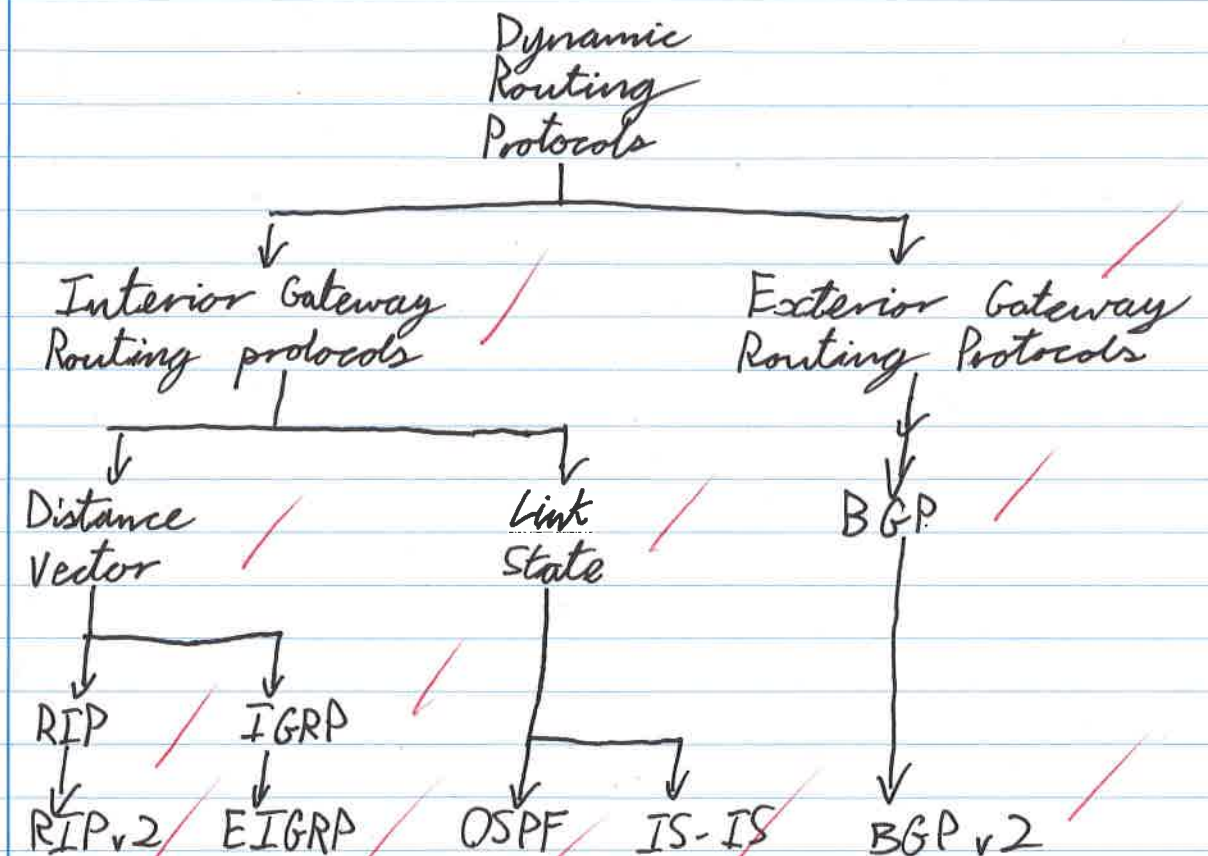
Different protocols and interfaces have a different AD, such as:

- i) Connected interfaces having a AD of 0
- ii) Static routes AD is 1
- iii) EIGRP has two values, one for internal and one for external.
Internal EIGRP is 90
External EIGRP is 160
- iv) OSPF AD is 110
- v) unknown routes are 255

- b) ~~Figure 3~~ As Figure 3 shows R1 advertise the 172.17.0.0 and 192.168.1.0 networks across EIGRP and R2 advertising the 10.0.0.0 and 192.168.1.0 networks. This allows both routers to communicate with networks learned through EIGRP.

Both Routers also utilise floating static routes. R1's ~~static~~ route shows how to reach 10.0.0.0 or 255.0.0.0 network through ~~the~~ the backup link, next hop being 172.16.1.2. R2 ~~similarly~~ similarly has a route to 172.17.0.0 255.255.0.0 through the backup, next hop being 172.16.1.1.

These static routes use an Administrative distance of 100, which is higher than EIGRP's AD of 90. This ~~makes~~ makes it a floating static route and routers will prefer the EIGRP link, and will only use the static if EIGRP goes down.



Question No.

Examiner Only



Rhif y Cwestiwn

Arholwr yn unig