



UNIVERSITY COLLEGE TATI (UCTATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: DNT 1034
COURSE	: ROUTING & SWITCHING
SEMESTER/SESSION	: 1-2024/2025
DURATION	: 3 HOURS

Instructions:

1. This booklet contains 5 questions. Answer ALL questions.
3. All answers should be written in answer booklet.
4. Write legibly and draw sketches wherever required.
5. If in doubt, raise your hands and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 7 PRINTED PAGES INCLUDING COVER PAGE

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QUESTION 1

- a) List **FOUR (4)** types of VLANs. (4 marks)
- b) Based Figure 1, configure appropriate VLAN configuration that support Data VLAN and Voice VLAN on Switch1 FastEthernet 0/2. (6 marks)

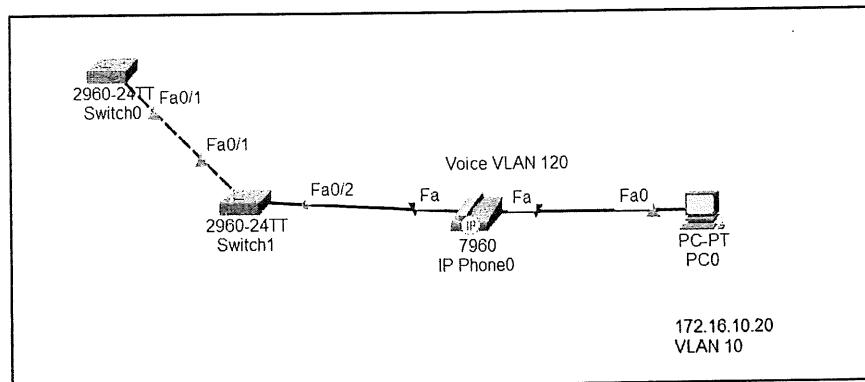


Figure 1

- c) Configure Router on Stick Inter-VLAN Routing on R1 based figure 2 below.

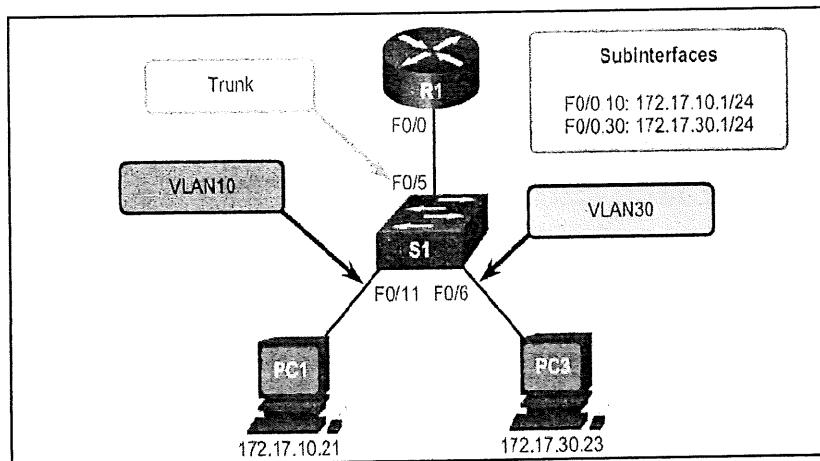


Figure 2

(9 marks)

- d) Identify which port need to configure with trunk mode on S1. (1 mark)

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QUESTION 2

- a) Based on the Figure 3, fill in the routing table of R1 on Table1. (16 marks)

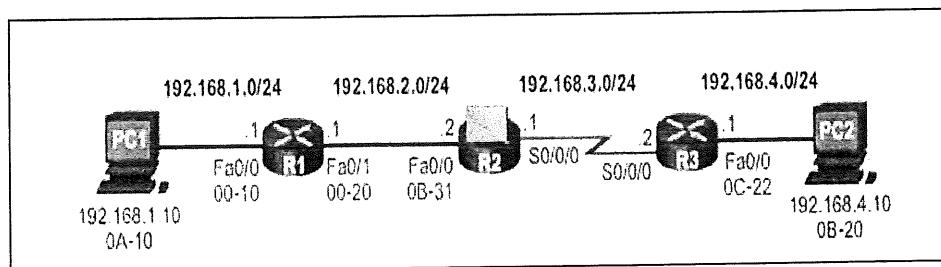


Figure 3

Table 1

Network	Hops	Next-Hop-IP	Exit Interface

- b) Briefly explain about the Administrative Distance of the route. (4 marks)
- c) State **FOUR (4)** purpose of dynamic routing protocols. (4 marks)
- d) Provide **THREE (3)** disadvantages of use dynamic routing protocol. (3 marks)

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QUESTION 3

- a) Answer all question based Figure 4 below.

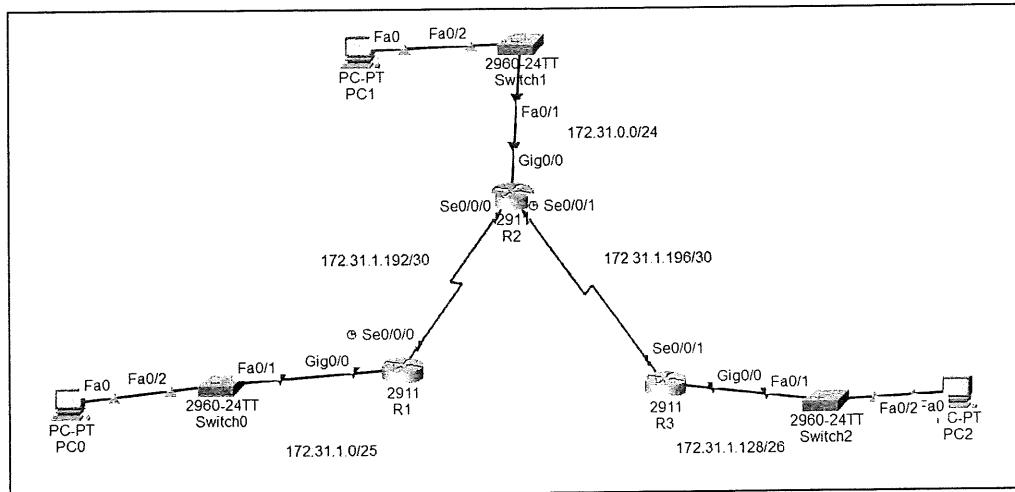


Figure 4

Table 2

Device	Interface	IP Address	Subnet Mask
R1	G0/0	172.31.1.1	255.255.255.128
	S0/0/0	172.31.1.194	255.255.255.252
R2	G0/0	172.31.0.1	255.255.255.0
	S0/0/0	172.31.1.193	255.255.255.252
R3	S0/0/1	172.31.1.197	255.255.255.252
	G0/0	172.31.1.129	255.255.255.192
	S0/0/1	172.31.1.198	255.255.255.252

i. How many remote network on R1, and R2 ? (2 marks)

ii. Configure a next hop static route for R1. (6 marks)

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- iii. Configure a directly attached static route for R2. (4 marks)
 - iv. Configure fully static route for R3. (6 marks)
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- b) Define what is floating static routes. (2 marks)

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QUESTION 4

- a) Configure RIP routing protocol and passive interface command on all routers-based Figure 3 below.

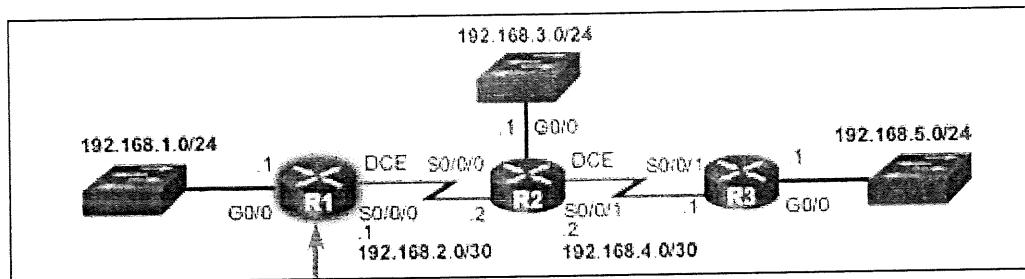


Figure 3

(13 marks)

- b) Figure 5 is the network topology that using OSPF routing protocol and OSPF process id 1. Using right command, configure OSPF routing protocol single area for Router 3 ONLY.

(8 marks)

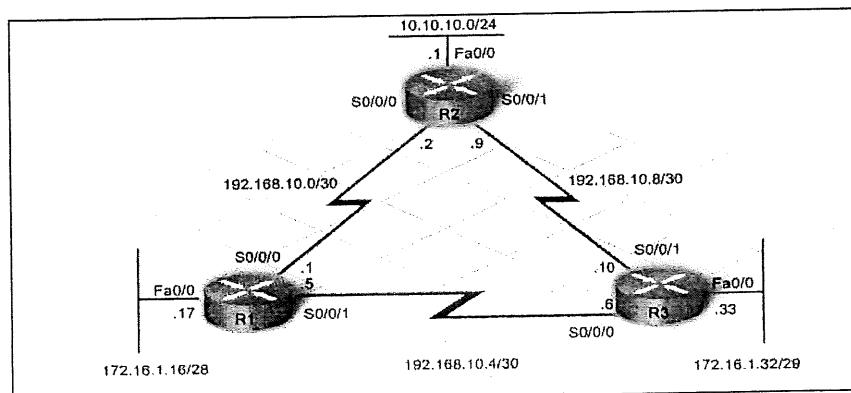


Figure 5

- c) Refer to question 5 (a), configure passive interface for R1. (2 marks)

QUESTION 5

- a) Identify two devices that can be used as a DHCP Server. (2 marks)
- b) Refer to the Figure 6, the administrator wants to configure DHCP Server on router R1 to serve giving IP address to Host A and Host B. Considering that several servers have been used, it necessary to exclude certain IP Address, configure DHCP R1 as DHCP Server and save configuration into startup config. Use `dhcp_pool` as DHCP Pool name and `tatiuc.edu.my` as Domain Name answer. (8 marks)

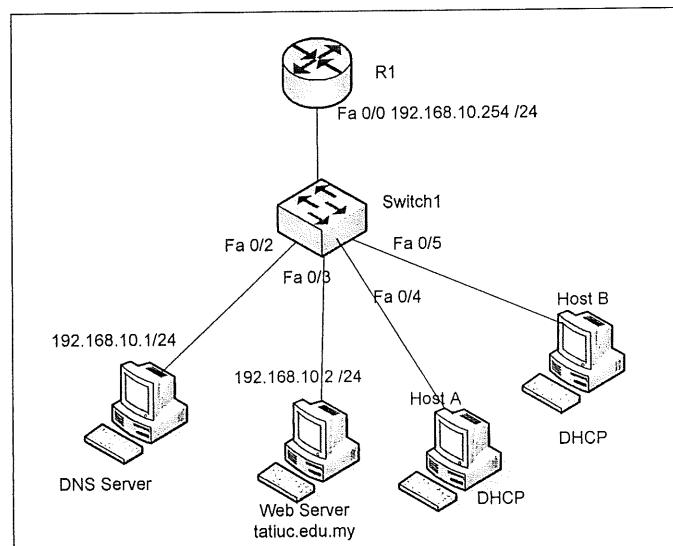


Figure 6

-----End of question-----

