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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2018/2019**

COURSE NAME : BASIC COMPUTER NETWORK
COURSE CODE : DAT 21203
PROGRAMME CODE : DAT
EXAMINATION DATE : JUNE / JULY 2019
DURATION : 2 HOURS 30 MINUTES
INSTRUCTION : ANSWERS ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FIVE (5) PAGES**

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Q1 (a) Calculate the network IP addresses of the following host.

- (i) 10.9.1.18/28
- (ii) 192.168.200.20/24
- (iii) 172.16.100.10/16
- (iv) 192.168.10.100/24
- (v) 172.16.1.99/16

(10 marks)

(b) Calculate the broadcast address of the following host.

- (i) 10.10.10.10/8
- (ii) 192.168.100.10/30
- (iii) 20.1.0.10/8
- (iv) 172.55.10.10/28
- (v) 192.168.2.45/24

(10 marks)

Q2 (a) Discuss **THREE (3)** functions of Transport Layer.

(6 marks)

(b) Discuss **THREE (3)** benefits of peer-to-peer network.

(6 marks)

(c) Differentiate between WAN and LAN topology.

(4 marks)

(d) Draw a diagram that matches between TCP/IP and OSI layered architecture.

(4 marks)

Q3 (a) List **FIVE (5)** network topology.

(5 marks)

(b) Draw the diagram of network topology in Q3(a) above.

(10 marks)

(c) State **THREE (3)** objectives of VLAN.

(3 marks)

(d) List **TWO (2)** services of presentation layer.

(2 marks)

Q4 (a) State switch configuration commands for the following requirements.

- (i) Entering into a privilege mode (2 marks)
- (ii) Enforcing console password (2 marks)
- (iii) Showing VLAN configuration (2 marks)
- (iv) Telneting a switch terminal that has 192.168.1.250/24 IP address. (2 marks)
- (v) Activating an ethernet port on a router (2 marks)

(b) Figure Q4 shows four routers used to inter-connects six LANs.

- (i) Identify the IP address for the R4 Fa0/0 interface. (2 marks)
- (ii) Identify the IP address for the R4 Fa0/1 interface. (2 marks)
- (iii) Identify the IP address for the R2 Fa0/0 interface. (2 marks)
- (iv) State the command used to configure R2 router using RIP routing protocol so that LAN4 is able to connect the router R1 through LAN3 network. (2 marks)
- (v) State the command used to configure R2 router using RIP routing protocol so that LAN6 is able to connect the router R1 through LAN5 network. (2 marks)

Q5 A network infrastructure of an organization given in Figure Q5 using C class IP for its subnets.

(a) Identify the following host subnet network IP addresses;

(i) 204.17.5.10/27 (2 marks)

(ii) 204.17.5.50/27 (2 marks)

(iii) 204.17.5.100/27 (2 marks)

(iv) 204.17.5.200/27 (2 marks)

(v) 204.17.5.135/27 (2 marks)

(b) The Subnet 7 changed from one into two subnets:

(i) Identify the IP address range of the first subnet (5 marks)

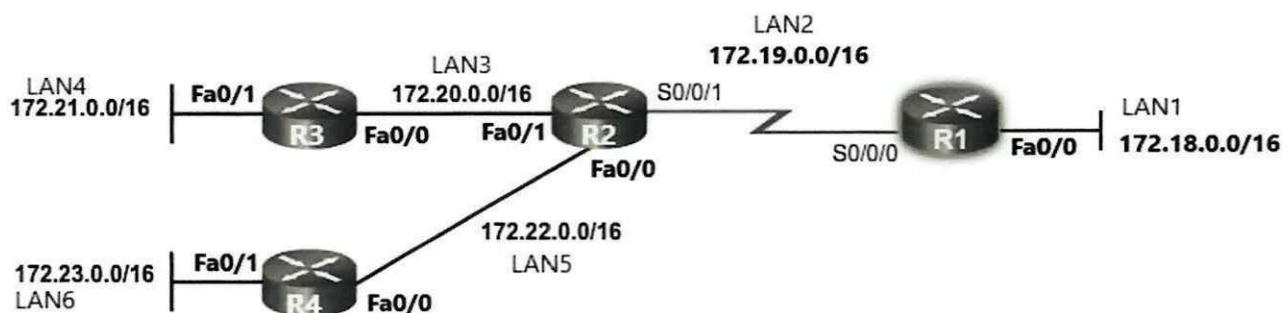
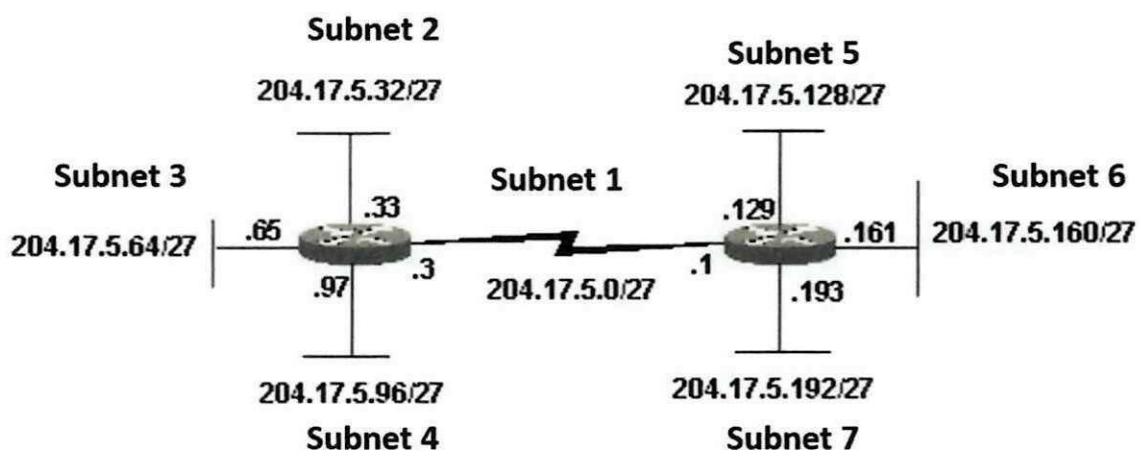
(ii) Identify the IP address range of the second subnet (5 marks)

- END OF QUESTIONS -

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**Figure Q4****Figure Q5**