



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2015/2016**

COURSE NAME : BASIC COMPUTER NETWORK
COURSE CODE : DAT 21203
PROGRAMME : 2 DAT
EXAMINATION DATE : JUNE/ JULY 2016
DURATION : 2 HOURS 30 MINUTES
INSTRUCTION : ANSWER **FOUR (4)** QUESTIONS
FROM **FIVE (5)** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **SEVEN (7)** PAGES

- Q1**
- (a) Illustrate the topology for the following networks category.
(i) WAN
(ii) LAN
(4 marks)
- (b) Describe the following LAN topologies;
(i) bus
(ii) ring
(iii) three
(6 marks)
- (c) Explain the purpose of topology configurations.
(3 marks)
- (d) State right application for the following network protocol;
(i) UDP
(ii) TCP
(iii) Dial-up protocol
(6 marks)
- (e) Describe the purpose of the following OSI reference model layers;
(i) Physical layer
(iii) Transport layer
(iv) Network layer
(6 marks)

Q2 (a) Describe the following network protocol.

- (i) Static routing Protocol
- (ii) RIP routing protocol
- (iii) Dynamic routing protocol

(6 marks)

(b) State **TWO (2)** objectives of subnetting in a network designs.

(6 marks)

(c) Illustrate the LAN topology diagram for the following given small company devices configuration. Use network representation symbol from Figure Q2.

Table Q2(c) : LAN IP addresses configurations

Devices	IP address
Switch	192.168.100.250
Computer A, B, and C	192.168.100.100 to 130
Server	192.168.100.251
Router	192.168.100.1

(5 marks)

(d) Illustrate the new topology diagram if the company network in Q2(c) above are to be interconnected to their branch. Use B class network IP for the branch network. The devices and configuration topology in branch network are of similar to the main office

(8 marks)

- Q3** (a) Calculate the network address of the following nodes addresses.
- (i) 192.168.200.20/24
 - (ii) 172.16.100.10/16
 - (iii) 10.1.1.10/8
 - (iv) 200.55.10.10/32
 - (v) 10.9.1.10/28

(15 marks)

- (b) A new laboratory is to be establish for one of school department in a university faculty. You as a network system administrator assistance required to present the overview concept of the network. By using the network representation symbol in Figure Q2 draw the network topology together with the IP configuration for the laboratory that comply with the following requirements;

- Static IP for the static devices- use for 10 computers
- Using dynamic IP configuration for the mobile devices – wireless connection equipment required
- One switch of 24 ports
- One uplink to a router

(10 marks)

- Q4** (a) State the switch configuration for the following requirements;
- (i) Implement a console password for console 0 to 4
 - (ii) Enter into an administrative privilege mode
 - (iii) Setting IP address to a port 24 with 192.168.0.1/24 addresses
 - (iv) Looking at the VLAN configuration command
 - (v) Enforcing login password for the terminal
 - (vi) Activating a port
- (12 marks)
- (b) Determine the host range of the following IPs and netmasks.
- (i) 170.10.100.80 255.255.0.0
 - (ii) 10.1.1.100 255.0.0.0
- (8 marks)
- (c) State the purpose of subnetting in a network.
- (5 marks)



Figure Q2

END OF QUESTIONS