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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

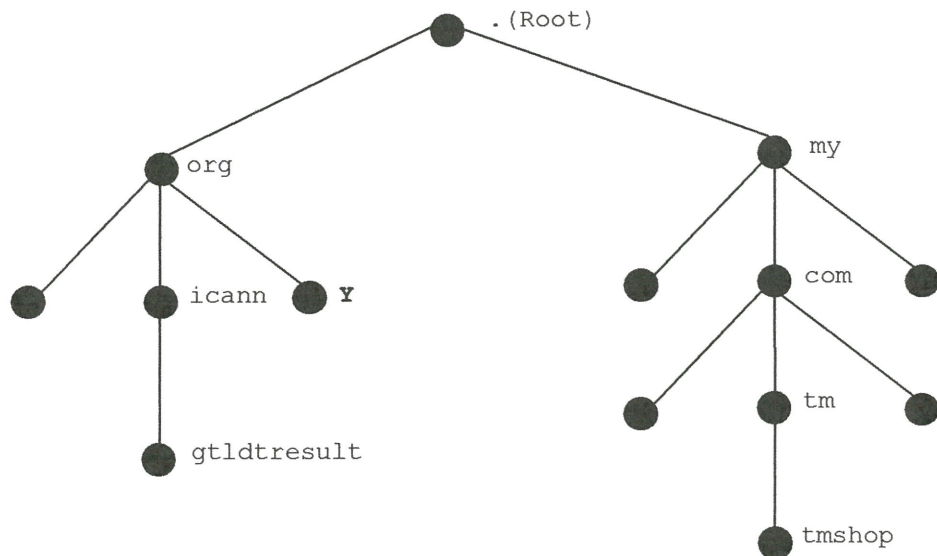
**FINAL EXAMINATION  
SEMESTER II  
SESSION 2013/2014**

**COURSE NAME : NETWORK OPERATING SYSTEMS**  
**COURSE CODE : BIT 32603**  
**PROGRAMME : 3 BIT**  
**EXAMINATION DATE : JUNE 2014**  
**DURATION : 2 HOURS AND 30 MINUTES**  
**INSTRUCTION : ANSWER ALL QUESTIONS**

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

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- Q1**
- (a) What does it indicate if the IPCONFIG/ALL command reveals a computer has leased period for its IP address? (1 mark)
  - (b) Give **TWO(2)** differences between a public computer and a private computer. (4 marks)
  - (c) Provide **TWO(2)** characteristics of a server. (2 marks)
  - (d) Name the **TWO(2)** types of Domain Name System (DNS) queries. (2 marks)
  - (e) Answer the following questions based on Figure **Q1(e)**.



**FIGURE Q1(e)**

- (i) Define the Fully Qualified Domain Name (FQDN) for `tmshop`. (1 mark)
- (ii) Define the Fully Qualified Domain Name (FQDN) for `gtldresult`. (1 mark)
- (iii) Define the Fully Qualified Domain Name (FQDN) for the `Root`. (1 mark)



- (iv) Is it possible for **Y** to be named with **tm** which is similar to the one already exists in domain **com**? State your reason. (2 marks)

**Q2** (a) Outline **FOUR(4)** advantages of using Dynamic Host Configuration Protocol (DHCP) on a network. (4 marks)

(b) State the **FOUR(4)** types of communication messages when a computer client requesting an IP address from a Dynamic Host Configuration Protocol (DHCP) server. (4 marks)

(c) Outline **THREE(3)** reasons for implementing Active Directory (AD) infrastructure over a network. (6 marks)

**Q3** (a) Describe **TWO(2)** types of namespace within the Active Directory (AD) structure. (4 marks)

(b) Illustrate the domain forest based on the given case study.

The Microsoft has a DNS with domain named Microsoft.com. Physically, it has two domain controllers sharing the same directory data in a way to create a domain forest. It has been set up with a contiguous naming structure. The root domain has two child domains, sf.microsoft.com and bt.microsoft.com. These domains in turn have sub domains; eng.sf.microsoft.com, bus.sf.microsoft.com and bus.bt.microsoft.com.

(6 marks)

(c) List **THREE(3)** examples of domain objects. (3 marks)

**Q4** (a) Define each of the following:

(i) Function of a domain controller. (1 mark)

(ii) Active Directory (AD) schema. (1 mark)

- (iii) Global catalog for a domain (1 mark)
  - (iv) Domain organizational unit. (1 mark)
  - (b) A domain trust is a useful way to allow users from a trusted domain to access services in a trusting domain. Differentiate between **FIVE(5)** types of domain trusts. (10 marks)
- Q5**
- (a) What is the benefit of setting up account lockout? (1 mark)
  - (b) Explain the Password Policy that can be enforced by the IT administrator to the computer users. (6 marks)
  - (c) Illustrate the process of Kerberos authentication protocol that is used for Active Directory (AD) services. (6 marks)
- Q6**
- (a) How do you measure the overall system performance of a server? (2 marks)
  - (b) Analyze the use of Simple Network Management Protocol (SNMP). (2 marks)
  - (c) Describe **TWO(2)** types of Simple Network Management Protocol (SNMP) station. (4 marks)
  - (d) Describe **THREE(3)** server activities that need to be monitored. (6 marks)
  - (e) Server benchmark is an effective plan to determine normal performance and distinguish it from hard situations. Prepare **FOUR(4)** ways to establish server benchmarking. (8 marks)



- Q7** Propose a plan to accommodate new IT requirements of the company in the following case study.

You are in the position of being charged with the creation and implementation of a totally new network and server infrastructure for a company with 500 employees. Currently, the company runs a very old server installed with Windows 2000 Server that is failing, and a majority of 400 computers are installed with Windows XP, while another 50 computers installed with Ubuntu have serious issues with losing connection to the server due to compatibility issue. For the future, the company requires an environment where it can hosts a web server using own domain name and a facility to automatically assign IP addresses for all the computers. In addition, each of the staff would have an identity to log on to any computers in the company.

(10 marks)

**- END OF QUESTION -**

