

# KASNEB

## CICT PART II SECTION 4

### DATA COMMUNICATION AND COMPUTER NETWORKS (PRACTICAL)

#### PILOT PAPER

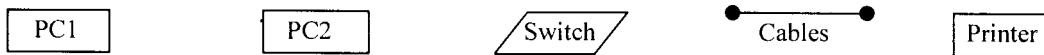
September 2015.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

#### QUESTION ONE

You are provided with the following:



(a) Use the above components to create a Local Area Network and apply the following configurations:

PC 1:	PC2:
IP address 192.168.0.1	IP address 192.168.0.4
Default gateway 192.168.0.1	Default gateway 192.168.0.1

Capture and save two screenshots in Question 1 document showing the above configurations. (4 marks)

(b) Determine the number of hops a packet will make from PC 1 to PC 2. Capture the screenshots and save in Question 1. (4 marks)

(c) Test the connectivity between the two computers. Capture and save the screenshots. (4 marks)

(d) Allow the printer installed in PC 1 (any printer) to be shared by users in the network. Capture and save the screenshots in Question 1 document showing the steps taken. (4 marks)

(e) Capture the screenshot in Question 1 document showing the steps followed to display the listening ports in your machine. Print Question 1 document. (4 marks)

**(Total: 20 marks)**

#### QUESTION TWO

(a) Explain how sensor network can be used to improve business services. Save your work in Question 2 document. (4 marks)

(b) Using PC 1, send a message containing "This is a test message" using the net.send command. (4 marks)

(c) Configure PC 2 to allow it use messaging service. Capture and save the screenshot showing the settings. (4 marks)

(d) Set internet browser security level to medium-high. Save Question 2. (2 marks)

(e) (i) Using computer management console create a user account called CICT ensuring that the user cannot change password and the password never expires. Capture the screenshots in Question 2 document. (2 marks)

(ii) Create a group called KASNEB and add the user account created in e (i) above. Capture the screenshots in Question 2 document. Save and print Question 2 document. (4 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) Radio frequency identification (RFID) tags use wireless electromagnetic fields to electronically communicate/send signals.  
Describe three ways in which RFID tags can be used by industries to perform tasks or operations. (5 marks)
  - (b) Using PC 1 default printer, allow everyone to manage the printer and documents. Capture the screenshots and save your work. (4 marks)
  - (c) A network administrator logged in to domain user account and popped up a notification message “Account is trusted for delegation”.  
Explain what the message implies. (4 marks)
  - (d) On PC 1, create a folder with your registration number and share it to your network. Capture the screenshot of the folder opened on PC 2.  
Print Question 3 document. (6 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Describe any three physical topologies commonly used in setting up a network. Save your work in Question 4 document. (6 marks)
  - (b) Use PC 1 to configure the virtual private network with the following settings:
    - VPN provider = windows (builtin)
    - Connection name = CICT
    - Server name = KASNEB
    - VPN type = SSTP
    - Type of sign in = Smart cardCapture the screenshots showing the procedures taken and save them in Question 4 document. (8 marks)
  - (c) State the devices you would interconnect using the following cables:
    - (i) Straight through. (1 mark)
    - (ii) Cross over. (1 mark)
    - (iii) Roller over. (1 mark)
  - (d) Turn on file and printer sharing on PC1 and capture the screenshot showing the settings. Save your work in Question 4 document.  
Print Question 4 document. (3 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) Explain one software you would use to analyse network packets. Save your work in Question 5 document. (2 marks)
  - (b) Capture the screenshots showing step by step how to configure your PC to automatically load WWLAN autoconfig service when the computer is started.  
Capture the screenshots in the document question. (6 marks)
  - (c) Oscioscopes are electronic test instruments that allow observation of constantly varying signal voltages.  
Describe two types of digital osciuouscopes. (4 marks)
  - (d) Use PC 1 to monitor network utilisation on the Local Area Network you have created.  
Capture the screenshot and save it in Question 5 document. (6 marks)
  - (e) Capture the screenshot showing how to test the working of your network interface card. Capture them in a document named Question 5. Print the document. (2 marks)
- (Total: 20 marks)**