GCE A level

1647/02

APPLIED INFORMATION &
COMMUNICATION TECHNOLOGY
UNIT AICT7 – Part B
Practical Tasks

A.M. WEDNESDAY, 22 June 2016

2 hours

INSTRUCTIONS TO CANDIDATES

1. Tasks are based on *Green Rock* scenario as in Part A.

2. Read the tasks carefully to make sure that you understand what is needed.

3. Carry out all tasks and make sure that you check your work carefully to ensure that the work you produce is accurate and correct.

4. You have a total of two hours to complete your work. *The Recommendation* is worth 20 marks and *The Implementation* is worth 40 marks. You are advised to divide your time accordingly.

5. You will be using *Network Design Software* for *The Recommendation*.

6. You will be using *Server Simulation Software* for *The Implementation*.

The Recommendation

Instructions for candidates

In the folder named *Network Design Software* there is an internet shortcut icon named *Network Design*. Double click the icon to run the Network Design Software.

You will see a plan of Green Rock with eleven physical network components to be used to design the network.

A component is selected by clicking the component once. It will appear on the plan. It can then be dragged to the required location on the plan of Green Rock and dropped.

You can use any of the network components as many times as required.

If you want to remove a component it can be dragged and dropped into the bin located to the right of the plan.

The components can be dropped anywhere in a location but it must be clear in which location each component is placed.

You are required to provide a screen shot and a written response for Task 1 and written responses for Task 2 and Task 3 all to be saved in a document named *The Recommendation*.

Save your work regularly.

The system

Visitors will have to call at the outdoor activity reception in advance to book an activity where a check has to be made to ensure the visitor is physically capable of taking part in the activity and understands the requirements and risks.

The outdoor activity area will have staff, a supervisor and an activity manager.

Visitors will have to call at the indoor activity reception in advance to book an activity where a check has to be made to ensure the visitor is physically capable of taking part in the activity and understands the requirements and risks.

The indoor activity area will have staff, a supervisor and an activity manager.

The centre manager and his assistant will use the office to view and amend all activities booked.

The auditor will use the office to check and print activities booked.

Green Rock expects to have busier periods during the year and will therefore employ additional staff as required.

The Objectives

These *Objectives* should be read carefully and referred to throughout Part B.

The *Objectives* for the new networked booking system are to enable:

1. the network to be managed from the office

2. the supervisor and activity manager in the outdoor activity reception to view and make outdoor activity bookings

3. the supervisor and activity manager in the outdoor activity reception to view indoor activity bookings

4. the supervisor and activity manager in the indoor activity reception to view and make indoor activity bookings

5. the supervisor and activity manager in the indoor activity reception to view outdoor activity bookings

6. the staff in the outdoor activity reception to view bookings for outdoor activities

7. the staff in the indoor activity reception to view bookings for indoor activities

8. the centre manager and his assistant should be able to view and amend all activity bookings

9. the auditor should be able to view and print all activity bookings

Task 1 [8]

Open a new word processed document and save it as *The Recommendation*.

Using the *Network Design Software*, select the **most appropriate** physical network components and position these in the **most suitable location** to design a network that will allow the staff at Green Rock to achieve *The Objectives*.

When you have completed your network design take a screen shot of the plan of Green Rock and save it in *The Recommendation* document.

Close the *Network Design Software*.

Justify your choice of each physical network component that you used to design the network, clearly stating the reason for the location of each physical network component.

Save your work.

Task 2

Green Rock has considered adopting a cable communication infrastructure with a mixture of fibre optic cables and twisted pair.

(a) Give **three** advantages of fibre optic compared with twisted pair. [3]

(b) Give **two** disadvantages of installing fibre optic compared with twisted pair. [2]

(c) Name the device required to connect two dissimilar media types such as fibre optic and twisted pair. [1]

Save your work.

Task 3

Green Rock would prefer a wireless communication infrastructure.

(a) Describe the advantages of installing a wireless communication infrastructure compared with a cable communication infrastructure. [5]

(b) State the role of a Wireless Access Point on a wireless network. [1]

Save your work.

The Implementation

Instructions for candidates

The network hardware and software have been installed and you now have to configure the network.

You will need to refer to *The Objectives* throughout The Implementation.

In the folder named *Server Simulator Software* there is an Internet shortcut icon named *Server Simulator*. Double click the icon to run the Server Simulator Software.

You will see a simulated desktop with *Server Simulation Software*, a shortcut to *Documents and Settings* folder and a shortcut to *Printers and Faxes*.

You are required to provide written responses and screen shots for the tasks all to be saved in a document named *The Implementation*.

Save your work regularly.

Task 4 [4]

Open a new word processed document and save it as *The Implementation*.

Describe **two** rules that you would recommend when naming objects to be used in the network.

For **each** of the **two** rules, give an example of a suitable name.

For **each** of the **two** rules, give an example of a name that would be disallowed.

Save your work.

Task 5 [2]

Giving a reason, describe a suitable naming convention for the users of the network.

Save your work.

Task 6 [1]

Using your naming convention from Task 5, give login names for the users that are going to be created for the Green Rock network.

Harold Palmer, centre manager

Ms Henrietta Small, assistant centre manager

Auditor who will be a different person every visit

Mrs Helen Smythe, outdoor activity manager

Mr Henry Smythe, indoor activity manager

Miss Suzanne Smith, indoor activity supervisor

Miss Coleen Keegan, outdoor activity supervisor

Mr David Jones, outdoor activity staff

Miss Shirley Smith, outdoor activity staff

Miss Deirdre Jones, indoor activity staff

Mr David Jones, indoor activity staff

Save your work.

Task 7 [2]

Giving a description, name **each** of the groups that are going to be created to allow *The Objectives* to be achieved.

Save your work.

Task 8 [6]

Stating the *Objective(s)* to be achieved, identify the permissions that **each** group should have to the shared folder that contains the Outdoor Activity Booking Database.

Save your work.

Task 9 [6]

Stating the *Objective(s)* to be achieved, identify the permissions that **each** group should have to the shared folder that contains the Indoor Activity Booking Database.

Save your work.

Task 10 [1]

Using the server software, create new user accounts for all the users of the Green Rock network.

Set the password to *'Rock'* which must be changed the first time each user logs on.

Take a screen shot for the **first user** created of the third 'New Object – User' dialogue box as evidence that you have typed in a password and that the user must change the password at next log on. Give this screen shot a heading 'Screen Shot 10a'.

Take a screen shot of the Active Directory window with 'Users' being displayed in the right hand panel as evidence that you have created the **11** new users. Give this screen shot a heading 'Screen Shot 10b'.

Save your work.

Task 11 [1]

Using the server software, create the groups named in Task 7 accepting all default properties.

Take a screen shot of the Active Directory window with 'Users' being displayed in the right hand panel as evidence that you have created the groups. Give this screen shot a heading 'Screen Shot 11'.

Save your work.

Task 12 [6]

Using the server software, add the correct users to the correct groups to allow *The Objectives* to be achieved.

Take a screen shot of **each** 'Group' dialogue box with the 'Members' tab selected as evidence that you have added members to the group. Give these screen shots the heading 'Screen Shots 12'.

Save your work.

Task 13 [7]

Create a shared folder to store the outdoor activity database and set the necessary permissions for **each** group that you have created.

Take a screen shot as evidence that you have set the permissions for **each** group for the shared folder that will contain the outdoor activity database. Give these screen shots a heading 'Screen Shots 13'.

Save your work.

Task 14 [4]

Create a shared folder to store the indoor activity database and set the necessary permissions for **each** group that you have created.

Take a screen shot as evidence that you have set the permissions for **each** group for the shared folder that will contain the indoor activity database. Give these screen shots a heading 'Screen Shots 14'.

Save your work.

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