

November 2004

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK : 70

SYLLABUS/COMPONENT : 0418/03

INFORMATION TECHNOLOGY

Printout of the second e-mail prepared and ready to send to autoresponder-

Check send to address: design.h@ucles.org.uk (1 mark) 1.2.1
Check subject line ICTCOREX (1 mark) 1.2.1
Check for attachment present SCB4MANU.TXT (1 mark) 1.3.1
If candidate has attached file SCB4AFR.CSV instead of SCB4MANU.TXT then allow this
Email printed (1 mark) 11.1.1

Candidate x

Name top left of page (1 mark) 4.1.6
must be in the header

Date top right of page (1 mark) 4.1.6
must be in the header

03/03/05

All margins 3 cm (1 mark) 4.1.4

Allow for paper feed inconsistencies with printers – (the line length must be between 22.5 and 23 cm)

A4 page size (1 mark) 4.1.1

Landscape page orientation (1 mark) 4.1.2

Quattichem – Phase 2

Heading 100% correct
heading inserted (1 mark) 3.2.1
centre aligned (1 mark) 4.1.6
24 point (1 mark) 5.5.1
underlined (1 mark)

As you are already aware, Hothouse Design has been contracted to produce a location of industry study for the multi-national chemical company Quattichem. The initial information identified a short list of 52 countries located globally, but over the space of the last two weeks the company has decided to focus on a country within a specified region. The board of Quattichem have decided, for a variety of cultural, political and economic reasons (after viewing their other plants and holdings around the world) to commission us to investigate some of the countries within Africa as potential sites. They have provided a list of thirty nine countries that they felt were worth investigation for this project. Since the list was initially provided, they have also added Botswana, Gabon and Swaziland.

Some of the team undertaking this project may have been involved in the initial feasibility study for Quattichem. They have taken many of the points raised in that study and offered those back to Hothouse for further development. I would like to thank the initial team for the thoroughness of their work at that stage. The team's effort and enthusiasm undoubtedly led to Hothouse obtaining this contract and the exclusion of all but one competitor at this stage.

Page break inserted here (1 mark) 5.4.1

Document Present (1 mark) 11.1.1
Document Complete with paragraphing intact (1 mark)

Automated page numbering on all pages (1 mark) 4.1.3
Placement of numbers bottom left of page (1 mark) 4.1.3
must be in the footer

Page 3

The dry raw materials for the two processes involved are to be sourced from Thailand, Indonesia, South Africa and Switzerland. The final location must have easy access for bulk transport of these raw materials to the plant, and for the end product (which will be in bulk powder form) from the plant. The other major raw material will be heavy crude oil, which can be sourced anywhere globally but must be available in relatively large quantities (approximately 6000 barrels a day). Other location factors:

- economic factors
- political stability
- availability of water
- good transport links

Bullet points
Indented at least 4cm
Accept if start of text indented by 4cm from margin
Bullet points present (1 mark) 5.2.1
Bullet points indented (1 mark) 5.1.1

As in the initial study the same locational factors will be relevant. The location must be remote from any centres of population. It must be on a relatively flat area of land in excess of 60000 hectares which must not contain a habitat for any protected species of flora or fauna. Quattichem were explicit about this point at our initial meeting as they wish to try and develop an eco-friendly site, a strategy that they intend to use as part of the advertising campaigns for their product. There will be a requirement for a large quantity of natural water which will be used in the cooling processes. Approximately 20000 hectares of the site will be set aside to allow this water to cool back to the natural ambient temperature, before it is returned to the locality.

The team working on this project will be split into two. David will lead the overall development and with his colleagues, will collect and collate all the relevant information about all countries on the given list (which must include those mentioned above). Sofia's team will focus on those countries where annual Imports are greater than 100 AND less than 500 and with the Exports less than 50. The starting point for this team will be the following countries:

Body text
Left aligned (1 mark) 4.1.6
12 point (1 mark) 5.5.1
single line spacing (1 mark) 4.1.5
applied to all paragraphs (1 mark) 4.1.5

One factor which is of prime importance is the selection of a region that is free from earth movements, earthquakes and any volcanic activity. This means that Sofia's team must investigate which of the countries noted has no record of earthquakes or volcanic activity, as well as checking where tectonic plate boundaries lie within the continent. As climate will not be a factor affecting the running of the plant, the only consideration of this should be during the construction phase. These geographical factors were an area of focus for the Quattichem board when they commented upon the initial feasibility studies. Please ensure that these are highlighted at an early stage of the report.

David's team must also investigate in depth the political structures and stability of each country on the shortlist. This task must be undertaken with great sensitivity. The assistance that developing a plant like this could have to the economy of the region and country involved must also be considered. As mentioned earlier, the benefits of a relatively cheap and plentiful source of electricity would assist the country concerned. Quattichem have also asked us to investigate other methods of assisting the indigenous population in terms of developing specific areas. In order to do this I would like an initial grid developed for every region of each potential country which summarises key employment factors like this:

The initial grids and first draft of the report must be completed by next Friday. All team members will meet for a briefing at 9 o'clock on the following Monday in the conference room to discuss the next phase of the development of this report.

Evidence that data file is present (1 mark) 6.1.1
 Page orientation portrait (1 mark) 9.1.3
 All fields fully visible (1 mark) 9.1.1

Heading 'Low population' at the top
 Does not have to be in the header and any alignment is acceptable
 Heading 100% correct (1 mark) 9.1.2

Low population

Country	Region	Population	Density	Energy	Imports	Exports
Botswana	Africa	1.5	3	0.01	1153	1302
Gabon	Africa	1.2	5	0.87	667	2055
Gambia	Africa	1.2	120	0.1	192	32
Guinea-Bissau	Africa	1.2	41	0.1	66	22
Namibia	Africa	1.7	2	0.01	916	881
Swaziland	Africa	1	55	0.01	1090	855

Sorted in ascending order on 'Country' (2 marks) 8.1.1

Search Population < 2 (2 marks) 8.2.1

Check data entry of Botswana Gabon & Swaziland
 Must be 100% accurate
 Data entered as specified (1 mark) 6.2.1

Name bottom right of report
 Does not have to be at bottom of the page
 Name present (1 mark) 9.1.3
 Position of name (1 mark) 9.1.3

<Candidate's name>

Heading 'Low density and high energy' at the top
 Does not have to be in the header, any alignment is acceptable
 Heading 100% correct (1 mark) 9.1.2

Low density and high energy

Only these 4 fields selected
 Can be any order or layout
 4 fields fully visible (1 mark) 9.1.1

Density	Country	Region	Energy
12	Algeria	Africa	1.58
5	Gabon	Africa	0.87
3	Libya	Africa	3.34
			3.34

search (2 marks) 8.2.1
 Density <20 AND Energy > 0.5

Calculated Field
 Maximum Energy calculated
 Calculated control correct. Any number of decimal places (2 marks) 7.1.1
 Position of calculated control below energy column (1 mark) 9.1.3

Sorted in descending order on 'Density'
 Sort (2 marks) 8.1.1

<Candidate's name>

Name bottom left of report
 Does not have to be at bottom of the page
 Name present (1 mark) 9.1.3
 Position of name (1 mark) 9.1.3

Page orientation (1 mark) 4.1.2
All margins 2 cm (1 mark) 4.1.4
 Allow for paper feed inconsistencies with printers – (the line length 17 cm)

Quattichem – Phase 2

As you are already aware, Hothouse Design has been contracted to produce a location of industry study for the multi-national chemical company Quattichem. The initial information identified a short list of 52 countries located globally, but over the space of the last two weeks the company has decided to focus on a country within a specified region. The board of Quattichem have decided, for a variety of cultural, political and economic reasons (after viewing their other plants and holdings around the world) to



commission us to investigate some of the countries within Africa as potential sites. They have provided a list of thirty worth investigation for this project. Since they have also added Botswana, Gabon and Swazi

Image of any building inserted (1 mark) 10.1.1
 It may contain construction, planning, tools etc
Placement top right of page (1 mark) 3.3.2
Scaling (1 mark) 3.3.2
 Graphic area no more than 40% of printed page and no less than 15% of page
 Orientation of graphic not important
Text must wrap around all the image (1 mark) 3.3.2

Some of the team undertaking this project may feasibility study for Quattichem. They have taken many of the points raised in that study and offered those back to Hothouse for further development. I would like to thank the initial team for the thoroughness of their work at that stage. The team's effort and enthusiasm undoubtedly led to Hothouse obtaining this contract and the exclusion of all but one competitor at this stage.

page break removed (1 mark) 5.4.1

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- economic factors
- political stability
- availability of water
- good transport links

Body text
Text fully justified (1 mark) 4.1.6
10 point (1 mark) 5.5.1
1.5 line spacing (1 mark) 4.1.5
applied to all paragraphs (1 mark) 4.1.5

As in the initial study the same locational factors will be relevant. The location must be remote from any centres of population. It must be on a relatively flat area of land in excess of 60000 hectares which must not contain a habitat for any protected species of flora or fauna. Quattichem were explicit about this point at our initial meeting as they wish to try and develop an eco-friendly site, a strategy that they intend to use as part of the advertising campaigns for their product. There will be a requirement for a large quantity of natural water which will be used in the cooling processes. Approximately 20000 hectares of the site will be set aside to allow this water to cool back to the natural ambient temperature, before it is returned to the locality.

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Database extract placed here
 Format of the extract is not important
Placing of extract (1 mark) 10.1.1

Country	Density	Imports	Exports
Benin	52	125	34
Gambia	120	192	32

Searching for
 100 < Imports < 500
 AND Exports < 50
Search (2 marks) 8.2.1

Only these 4 fields selected (1) 9.1.1
 Can be arranged in any order or layout

One factor which is of prime importance is that the site is free from earth movements, earthquakes and any volcanic activity. This means that Sofia's team must investigate which of the countries noted has no record of earthquakes or volcanic activity, as well as checking where tectonic plate boundaries lie within the continent. As climate will not be a factor affecting the running of the plant, the only consideration of this should be during the construction phase. These geographical factors were an area of focus for the Quattichem board when they commented upon the initial feasibility studies. Please ensure that these are highlighted at an early stage of the report.

<Candidate Name>

<date>

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Activity	Region	Percentage
Industry	Cottage Industry	7%
Agriculture	Coffee, Maize	56%
Unemployed		34%
Education or Other		3%

Table inserted in correct place (1 mark) 5.3.1
100% accuracy in numeric data entry needed
Any alignment acceptable
5 rows and 3 columns (1 mark) 5.3.1
data entry (1 mark) 3.2.1

The initial grids and first draft of the report must be completed by next Friday. All team members will meet for a briefing at 9 o'clock on the following Monday in the conference room to discuss the next phase of the development of this report.

No widows or orphans (1 mark) 5.4.1
No split lists (1 mark) 5.4.1
No split tables (1 mark) 5.4.1
Document complete and spell checked with paragraphing intact (1 mark)