

OCR

Oxford Cambridge and RSA

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A2 GCE APPLIED INFORMATION AND COMMUNICATION TECHNOLOGY

G048/IC Working to a brief

INSTRUCTIONS FOR CANDIDATES

For assessment submission

JUNE 2016



TIME

- These briefs are only valid for submission of marks to OCR in May 2016.

INSTRUCTIONS TO CANDIDATES

- You must use this booklet for guidance throughout your work for this unit.
- You must complete your project by the date set by your teacher.
- You must submit all your preparatory work with your solution to the brief.
- **All work submitted for assessment must be your own work.** You must read the Notice to Candidates on page 2 overleaf before you start your project. Where you have worked as part of a team you must clearly identify your individual contribution to the project.

INFORMATION FOR CANDIDATES

- The total number of marks available for the paper is **50**.
- You may start your preparatory work as soon as you receive this paper.
- There are no restrictions on computing facilities, hardware or software that may be used.
- This document consists of **8** pages. Any blank pages are indicated.

It is important that you discuss with your teacher anything that you do not understand.

NOTICE TO CANDIDATES

The work you submit for assessment must be your own.

If you copy from someone else or allow another candidate to copy from you, or if you cheat in any other way, you may be **disqualified** from at least the subject concerned.

Any materials (eg books, information from the internet that you have used to help complete this work) must be clearly acknowledged in the work itself.

- You must always keep your coursework secure and confidential while you are preparing it. **If it is stored on a computer network, keep your password secure. When printing work, collect all copies from the printer and destroy those you don't need.**
- When you hand in your coursework for assessment, you will be required to sign that you have understood and followed the coursework and portfolio regulations.

ALWAYS REMEMBER:

YOUR WORK MUST BE YOUR OWN

INSTRUCTIONS FOR CANDIDATES

Each of the following briefs has been written so that it may be completed alongside the Advanced GCE optional unit to which it relates. You **must** not use any other brief other than those listed in this booklet.

Read the briefs in this booklet. You must research and develop **one** of these briefs.

For assessment of this unit, you must produce evidence which **must** include:

- a preparatory report into current working practice
- a project plan in response to the set brief
- a diary or log of work completed
- support materials for use with the project
- an evaluation of your performance in relation to planning the project
- an evaluation of your performance in implementing the project
- an evaluation of your ICT solution to the given brief.

Whichever brief you choose, you will need to report on current working practices. Before you plan the structure and content of your project, you will need to carry out some research into working practices within the organisation. This research should enable you to plan a solution that works smoothly and with minimum disruption.

A project management plan will help you to organise your time efficiently. As a guide, the minimum requirements for the project management plan should include:

- key dates, deadlines and timescales
- how work may be managed in small sections or tasks
- organisation of information and resources
- time for reviews and modifications
- time for evaluation.

Full planning is vital to the success of the project. Full planning will also allow you to evaluate your work more effectively. There must be clear evidence of planning **before** you start your project.

While you are working on the project you must complete a diary or log. This diary or log should include:

- a full list of all tasks undertaken as part of the delivery of the project
- an assessment of your contribution to the success of the task
- the skills used in meeting the requirement of the task
- an assessment of how your skills needed to extend to meet the needs of the task – your discussion of your skills needs to include your use of working with others as well as ICT skills.

You will need to produce supporting materials. These may take any form and it is for you to decide what support materials your project needs.

Once you have completed the project, you will need to report on how well the project ran, what its strengths and weaknesses were and how well you worked with others. You should also suggest improvements to the project. You should collect feedback from users and the client in order to allow you to make informed comments about your project and the role that you played.

At the end of the unit, you must hand in:

- your report on current working practices
- your project plan
- your diary or log
- support materials
- your evaluation reports.

Make sure that all your work has your name, candidate number and centre number on each page.

Briefs

You may carry out the brief by working on your own or as part of a team. Where you are working on your own, the focus of 'working with others' becomes the clients or end users of the product. Where you are working as a team member, the focus may also include other members of the team.

You **must** develop a solution to **one** of the following briefs.

Brief 1

In a cycling road race, a small group of riders will sometimes break away from the main pack of riders (the peloton). The small breakaway group may be allowed to build up a substantial lead over the peloton. However, if the peloton gets its calculations correct, the breakaway group is usually caught before the finish line. This gap is usually expressed as a time gap.

There are a number of factors that will decide whether the breakaway group maintains its lead over the peloton. The most significant of these are:

- The distance remaining in the race
 - The greater the distance, the longer the peloton has to catch a breakaway group.
- The speed of the breakaway group
 - The faster the group, the faster the chasing group will need to ride to catch them and so the harder it will be to catch them. Because each group is going faster, riders will tire more easily.
- The number of riders in each group
 - The more riders there are, the more they can share the workload of being at the front of the group; this allows others in the group to rest while slipstreaming the leading rider. In a fast race, the maximum sustainable lead time for any rider is thought to be two minutes. Larger groups tend to go faster than smaller groups.
- How closely grouped each group of riders is
 - The more closely grouped, the greater the effect of slipstreaming and the more rest each rider will receive.
- The gradient of the road
 - On a steeper road, speed will be reduced, therefore the effects of slipstreaming will be reduced.

- Physiological factors
 - There are a number of wild card factors which will provide greater motivation for some riders to make an extra effort. These include:
 - national pride, where a rider may want to win a stage on a date that is significant for his or her country
 - the race taking place in a rider's home region.

You have been asked to create a model which calculates the maximum time gap that the peloton should allow a breakaway group to build up. In doing so, you need to take account of the factors listed above. Your model should allow for each variable to be manipulated so that varying conditions may be investigated. Your model can include the following assumptions:

- All members of each group will share the work equally.
- Where the riders are all within 30 cm of each other, energy used is reduced by 35%. For gaps of between 31 cm and 90 cm, the energy used is reduced by 25%. Gaps of over 90 cm do not result in any significant reduction in energy use.
- Slipstreaming has the following effects:
 - At 30 km/h, the maximum effect of slipstreaming is to reduce energy consumption by 35%.
 - At 15 km/h, energy consumption is reduced by 5%.
 - At speeds below 12 km/h, slipstreaming has no benefit.

This task may be completed in conjunction with Unit G049: Numerical modelling using spreadsheets.

Brief 2

You have been asked by your course tutor to use multimedia software to create an interactive skill game. The skill game will result in an overall score and a 'congratulations message'. Each player will be given the option to print out their score on a personalised certificate.

The product will be aimed at students in Year 9.

You have been asked to include a range of different multimedia elements in the work. The intention is for the product to showcase the range of skills taught as part of your course, so you have been asked to make sure that all materials are of a suitably high quality.

This task may be completed in conjunction with Unit G050: Interactive multimedia products.

Brief 3

Mike Davis is about to launch a new business called Home Build Furniture. The business will sell flat-pack furniture. Mike will include an instruction pamphlet in each package, so that customers are able to assemble the furniture.

Mike is aware that there are already examples of instruction pamphlets issued by his competitors. He knows that these are effective but he would like to include something more than simple line drawings and so present a more sophisticated image. Mike would also like to include written instructions.

Mike has asked that you create three suitable instruction pamphlets. Each pamphlet should have a minimum of four A4 pages, or equivalent, and focus on a substantially different product.

This task may be completed in conjunction with Unit G051: Publishing.

Brief 4

Bettertoy Models wants to relaunch its successful range of action doll figures and has asked you to create graphics that will be used on the packaging for the product. The main advertising for the relaunch will use images of historical settings for the action doll figures. Each type of action doll figure will be based in a different historical setting.

Bettertoy Models would like the packaging for the action doll figures to follow this theme.

You have been asked to produce graphics that could be used on the packaging for two types of action doll figures. These graphics should include images of the action doll figures as well as the historical settings in which they will be placed. Bettertoy Models has also asked that you present your graphics as a packaging net.

This task may be completed in conjunction with Unit G052: Artwork and imaging.

Brief 5

AJS Maps wants to develop a range of interactive websites for tourists. The websites will allow users to explore tourist areas and will include key features on which users may click to get further information about sites of interest. These may be included as hot spots on images of the area, but AJS Maps is willing to accept other solutions. Full contact details for each site of interest should be included.

AJS Maps wants the completed interactive website to be viewable on a range of different types of mobile devices and would like the site to adapt the view of each webpage so that it is optimised for the device on which it is to be viewed.

You have been asked to create a prototype website.

This task may be completed in conjunction with Unit G053: Developing and creating websites.

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