Pearson

Edexcel GCSE Computer Science 2013 Controlled Assessment

Teacher Support

Unit 1CP0/2A, 1CP0/2B, 1CP0/2C: Practical Programming

Version/03.03.2016

Contents

Welcome

The GCSE Computer Science 2013 Controlled Assessment Teacher Support book

This Controlled Assessment Teacher Support Book has been designed to provide you with the answers to key questions that you may have during the teaching and assessment of the Controlled Assessment Unit 1CP0/2A 1CP0/2B, 1CP0/2C: Practical Programming.

It includes:

- advice to support your delivery of controlled assessment
- suggestions for getting the most from controlled assessment.

Expert advice from the people who know

We hope you find this document useful and look forward to working with you. We are on hand to answer your questions so please feel free to get in touch.

To contact our GCSE Computer Science team please email:
TeachingComputerScience@pearson.com

To speak to our Computer Science and ICT Subject Advisor, Tim Brady, please:

- Call +44 (0)20 7010 2161
- Email TeachingComputerScience@pearson.com.
- Follow @Pearson_CS
- Join our Facebook page
  Edexcel GCSE Computer Science Facebook group

Tim Brady, Subject Advisor

Version/01.04.2016

Unit 1CP0/2A 1CP0/2B, 1CP0/2C: Practical Programming

Unit codes explanation

There are 3 potential codes for Unit 1CP0/2* based on the programming language chosen. These are:

- Python (unit code 1CP0/2A)
- Java (unit code 1CP0/2B)
- C-derived language (unit code 1CP0/2C)

Controlled assessment

The purpose of the controlled assessment is to test student skills in responding to computer science problems.

In the controlled assessment unit:

- The assessment takes place under specific time limits.
- Work is undertaken under different levels of control. Task setting is taken under a high level of control; task taking and task marking are taken under a medium level of control.

What will candidates actually do?

Students will complete three tasks set within a context. The three tasks will have the same assessment criteria applied every year of the qualification and it will be released in the January of the year of assessment, e.g. the January 2015 controlled assessment will be assessed in June 2015. The controlled assessment can be completed at any time for submission by 15 May at the end of the course.

Students may spend a maximum of 15 hours working on the controlled assessment, and the controlled assessment brief specifies the recommended duration for each task. Students must select one programming language from the list above.

Candidates will be assessed on all three assessment objectives for this qualification (see page 13 of the specification).

Overview of assessment

Below is a summary of the units available on the specification. For a more detailed version, please see the full specification document.

Unit	Percentage	Marks	Details	Assessment
Unit 1: Principles of Computer Science	75%	90	Compulsory unit, 5 questions in context, draws on topics from across the specification.	Paper based, external examination, 120 mins
Unit 2: Practical Programming	25%	50	A practical 'making task', demonstrating computational techniques using a programming language.	Controlled assessment, internally assessed, 15 hours

Levels of control

Introduction

This section describes specific guidance for teachers when students are completing the Edexcel GCSE Computer Science controlled assessment 1CP0/2A, 1CP0/2B and 1CP0/2C: Practical Programming.
Teachers should also follow the Joint Council for Qualifications Instructions for conducting controlled assessments (legacy GCSE qualifications) for the academic year in question. This can be found on the JCQ website http://www.jcq.org.uk/.

Task setting

What is the level of control?
High

What does this mean?
A high level of control means that Pearson will set tasks for students to complete. The controlled assessment task will be made available on our website for teachers to download in January of the terminal year. The format of the tasks will be similar each year but the context will change. Teachers must ensure that students are completing the correct controlled assessment task for their terminal year. The front sheet shows the dates for which it is valid.

Task taking

What is the level of control?
Medium.
This is split into 5 areas:

1. ***Authenticity control***

Students must work alone to develop a response to the task. Students and teachers must sign the Controlled Assessment Authentication Statement (Appendix 4 in the specification or available on the website http://qualifications.pearson.com/en/qualifications/edexcel-gcses/computer-science-2013.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FForms-and-administration).

2. ***Collaboration control***

Students must be supervised and may not work with others to develop a response to the task.

3. ***Feedback control***

Teachers may help students to understand rubrics, assessment criteria and controlled conditions. Teachers may not provide solutions to students. Any additional feedback must be recorded on the Controlled Assessment Record (Appendix 4 in the specification or available on the website http://qualifications.pearson.com/en/qualifications/edexcel-gcses/computer-science-2013.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FForms-and-administration).

4. ***Resources control***

Every student must each have equal access to IT resources. Internet access is not allowed (this is to prevent malpractice by copying whole solutions from websites).
Students should have a controlled assessment profile. This profile can allow access to read-only shared areas, where resources can be provided in electronic form by the school. The profile should disable Internet access and resources made available by staff should NOT be solutions to the tasks presented in the controlled assessment brief. Printed resources can also be made available within the controlled assessment environment.

Where students are taking the controlled assessment over a number of sessions, at the end of each session their work must be saved and kept securely. Students must not be able to access their work outside the controlled assessment setting. In situations where computer workstations are situated close together invigilators must ensure that students are working independently.

5. Time control

A maximum of 15 hours' total duration is permitted for students to complete the assessment. Suggested times will be indicated for each task on the Controlled Assessment Task. This may be divided into shorter sessions. Where students are taking the controlled assessment over a number of sessions, at the end of each session their work must be saved and kept securely. A maximum of 15 hours' total duration is permitted for students to complete the assessment. Suggested times will be indicated for each task in the Controlled Assessment Brief.

This may be divided into shorter sessions. Where students are taking the controlled assessment over a number of sessions, at the end of each session their work must be saved and kept securely.

Teachers can:

- Tell candidates they have a maximum of 15 hours in the controlled environment (e.g. the classroom) to complete the controlled assessment. If a student is ill, or their computer crashes, they can make up this time in additional sessions. Systems or processes must be in place to control the integrity of the controlled environment.
- Issue clean copies of the following documents at every session:
  - the controlled assessment brief
  - the assessment criteria
- Give generic class-wide feedback or instruction. This should be of a general nature and be concerned with over-riding guidance like 'remember that spelling and grammar will be considered in assessment.
- Allow students to complete a practice task or exercises, in normal classroom conditions. This may include similar or related challenges to the controlled assessment and approaches to solutions can be discussed and trialed.
- Discuss the assessment criteria with candidates when doing a practice run.
- Provide any form of written or online system based (not Internet) documentation that covers syntax and the normal help material for program development. This includes Help in an IDE.

Teachers cannot:

- Allow the students to access the Internet or the centre Intranet.
- Allow the students to remove the controlled assessment brief from the controlled assessment area or bring it back in.
- Allow the students to bring any other materials in or out of the controlled assessment area.
- Demonstrate an example of a solution to the actual problem, or a closely related problem, during controlled conditions.
- Use the actual controlled assessment task in practice sessions.
- Work up resources outside of controlled conditions that model the solutions needed for the task and then make these available in the controlled conditions
- Help student to debug their program(s).

Task marking

What is the level of control?
Medium.

What does this mean?
Teachers should mark the controlled assessment using the assessment criteria on pages 23 to 27 in the specification.
Students may provide solutions to the tasks in one of the programming languages specified by Pearson. Assessment criteria are applicable to all these languages. Teachers will need to fill in a Controlled Assessment Record for each candidate to show where marks were awarded. There is no requirement to annotate students' work, although it is necessary to write full justification comments on the Controlled Assessment Record. These sheets will need to be signed by both the teacher and candidates to authenticate the work. Edexcel will ask for a sample of the tasks to moderate, including work with the highest and lowest marks in the cohort. The submission deadline for all marks to be submitted and for the sample of work to reach the moderator is 15 May.

Quality of Written Communication (QWC)

QWC will be assessed in the task.
This includes the ability to:

- present relevant information in a form that suits its purpose
- ensure that text is legible and that spelling, punctuation and grammar are accurate, so that meaning is clear
- use suitable structure and style of writing
- use specialist vocabulary when appropriate. write legibly, with accurate use of spelling, grammar and punctuation in order to make the meaning clear

Students can use the spelling, punctuation and grammar tools in the word processing software that they use. There is no need for them to evidence that they have used these, or

manual proofreading techniques; teachers should make a judgement on whether the submitted work meets the criteria.

Presentation of work[1]

Students must present their work for the controlled assessment electronically.
Folders must be created by the centre according to the instructions given in the brief. The work submitted will be a number of files and each task in the controlled assessment brief gives instructions on how to name the files.
Programs must be submitted as source code only.
Student files should be identified by student name and task and presented in a single folder. Students will be expected to present content in a format appropriate for viewing at a resolution of 1024 x 768 pixels.

Security and backups

It is the responsibility of the centre to keep secure the work that students have submitted for assessment. Centres are strongly advised to utilise firewall protection and virus checking software and to employ an effective backup strategy, so that an up-to-date archive of students' evidence is maintained. Centres are advised to archive completed, assessed work so as to free up work space for work in progress.

Marking, standardisation and moderation

The controlled assessment is marked by centre staff. Where marking for this specification has been carried out by more than one teacher in a centre, there must be a process of

[1] More details in the Administrative Guidance for Internally Assessed Unit https://qualifications.pearson.com/content/dam/pdf/GCSE/Computer%20Science/2013/forms-and-administration/Computer-Science_moderation_centre_guidance-issue1.pdf

internal standardisation carried out to ensure that there is a consistent application of the criteria laid down in the marking grids, across all the units.
Centre marks should be submitted via Edexcel Online.
Marks awarded by the centre will be subject to external moderation by Pearson. This is to ensure consistency with national standards. Following the submission of marks, Pearson will notify centres of the students whose responses have been selected for moderation. This sample will take cohort size into account.
Controlled Assessment Record and Authentication Sheets should be completed for all students.
Sample work must be submitted in an approved digital format; that is, on CD-ROM or USB flash drives and must include the Controlled Assessment Record and Authentication Sheets for the students in the sample.
If the moderation indicates that centre assessment does not reflect national standards, an adjustment will be made to students' final marks to compensate for this. Please refer to the JCQ Instructions for conducting Controlled Assessments (GCSE qualifications) on the JCQ website: www.jcq.org.uk for further information. The controlled assessment in this qualification will comply with these instructions.
Detailed guidelines are found in the document "Administrative Guidance for Internally Assessed Unit" on the website at
http://qualifications.pearson.com/content/dam/pdf/GCSE/Computer%20Science/2013/forms-and-administration/Computer-Science_moderation_centre_guidance-issue1.pdf.

FAQs: Preparing to teach controlled assessment

A detailed set of Frequently Asked Questions can be found via the Edexcel subject pages: http://qualifications.pearson.com/en/qualifications/edexcel-gcses/computer-science-2013.html