AQA

NEW SPECIFICATION

A-level
COMPUTER SCIENCE

Paper 1
June 2018

Teachers' Notes

To be given immediately to the teacher responsible for A-level Computer Science.

This booklet contains **important information** for centres about preparing for Paper 1, an on-screen exam to be held on Monday 11 June 2018, in advance of the examination.

The purpose of this booklet is to:

- give instruction in the preparation of the centre's network to be used in the examination

- provide support and guidance for centres in their management of the examination.

In the electronic version of this document, there are links throughout to the Joint Council for Qualifications (JCQ) website, and the contact for AQA Programmers referred to in Section 4.

This document should be read in conjunction with the JCQ document,

Instructions for Conducting Examinations (ICE) 2017 - 18,

which is available on the JCQ website.

7517/1/TN

Contents

New Specification Entry Codes (specific to programming language)

For the new Computer Science specification you will enter candidates using the entry code specifically for the programming language(s) a centre is using. This is so, for Paper 1, AQA can allocate an examiner(s) specifically to the programming language(s) the centre is using.

To align with the entry code, AQA will provide an Electronic Answer Document (EAD) for each programming language (see Section 4.5 for guidance). Your Examinations Officer will receive details of the AQA Examiner allocated to the programming language(s). After the exam, you must post the candidates' EAD to the relevant examiner for the programming language used (see Section 12).

The Paper 1 Question Paper (7517/1), generic for all programming languages, will be sent in hard copy to your Examinations Officer. It must be opened only on the day of the exam in front of candidates.

1   The responsibilities of the Head of Centre

It is the responsibility of the Head of Centre to ensure:

• that appropriate security systems are in place to prevent unauthorised access to exam materials, including candidates' work

• that AQA's requirements for the availability of the *Preliminary Material* (including the Skeleton Programs and any data files) to candidates for the exam are met in advance of the exam

• proper conduct of the exam in accordance with these *Teachers' Notes* and the JCQ Instructions for Conducting Examinations (ICE) 2017-18

• a sufficient provision of resources and appropriate system security as detailed in this document

• that candidates are made aware of the requirements of the exam.

2   Security

The centre must be able to demonstrate to a JCQ Inspector, should he/she visit, that appropriate security systems are in place to prevent unauthorised access to the exam materials. These systems must ensure that:

• electronic exam materials are stored securely at all times including before, during and after the exam. All wireless capabilities must be disabled or otherwise made secure, for example, by encryption

• candidate exam password information is stored securely and given to candidates only at the start of the session for the exam. Only exam administrators and the candidate can have access to a candidate's password which gives the candidate access to the on-screen exam

• expertise to access, administer and support the exam is available.

Turn over ▶

3   Materials a centre can expect to receive via e-AQA

With the exception of the question paper, all materials for the exam will be issued electronically on **1 September 2017** only in the Secure Key Materials (SKM) area of e-AQA. The A-level Paper 1 Question Paper (7517/1), generic for all, will be sent in hard copy to your Examinations Officer. It must be opened only on the day of the exam in front of candidates.

On 1 September: The following material will be accessible on the AQA website. You will need to log in to e-AQA, http://www.aqa.org.uk/log-in and select Secure Key Materials (SKM). Then follow the path below:

A-level > ICT and Computer Science > Computer Science (new specification) > Preliminary Material > A-level

- the *Teachers' Notes* (7517/1/TN) in PDF format

- the *Preliminary Material* (7517/1/PM) in PDF format. This is generic to all programming languages

- the Skeleton Program (available as a text file) in the following programming languages:

    C#
    Java[1]
    Pascal/Delphi
    Python 2
    Python 3
    VB.Net

- the Data File (if applicable to this exam session)

- the Electronic Answer Document (EAD) in which candidates will type their answers to the question paper during the exam.

    Note: for this new specification there will be a separate EAD for each programming language (see Section 4.5).

    These will be provided as **Microsoft® Word (2003) documents**. (See Appendix 1, Section B of these *Teachers' Notes* if your centre's software is not compatible with this format.)

- *Advice on using the Paper 1 Electronic Answer Document (EAD)* in PDF format. Centres may issue copies to their candidates. (This Advice is replicated in Appendix 1 of these *Teachers' Notes*.)

With the exception of the *Teachers' Notes*, Teachers are free to teach to and issue the above materials to their candidates as soon as it appears on e-AQA. **However**, before issuing the Skeleton Program of their choice to candidates, teachers may find it necessary to make minor alterations to it in order to adjust it to the environment (package) that has been adopted at their centre. Instructions as to how this must be done are given in Section 4 (and Appendix 2) of these *Teachers' Notes*.

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[1] See Appendix 3: 'Important information for centres entering candidates for the A-level Paper 1 exam using the Java programming language'.

4 The Preliminary Material, the Skeleton Program and the Electronic Answer Document

The Preliminary Material

4.1 Before the exam, centres must make **two** hard copies of the *Preliminary Material* for each candidate. Print the *Preliminary Material* 'back to back' in portrait orientation and pin together using two staples down the spine of the document.

The first hard copy of the *Preliminary Material* is for immediate use by candidates. **Candidates must not take this first hard copy of the *Preliminary Material* into the exam room. Centres must ensure that candidates are aware, in advance of the exam, of this requirement. If candidates have any unauthorised material in an exam (whether or not they intended to use it), it may be considered as malpractice.**

The second hard copy of the *Preliminary Material* is for use by the candidate in the exam. This second hard copy must be retained by the centre and issued only in the exam room.

Upload a copy of the *Preliminary Material* to each candidate's secure user area of your centre's computer network in good time before the exam.

The Skeleton Program

4.2 Your centre is at liberty to make **minor alterations** to the Skeleton Program code in order that it will successfully run within your chosen programming environment – which does not need to be the same as the programming environment used by AQA in the development of the Skeleton Program.

If you do make any alterations you must contact an AQA Programmer (see Appendix 2) on or after 1 September 2017 and in good time before the exam on 11 June 2018. Also, if any automatic conversion process results in changes to the Skeleton Program, then this, too, must be checked with the Programmer.

It is anticipated that the code alterations will, typically, only relate to the provision of programming libraries for basic input and output. The email address given in Appendix 2 will only be accessed by AQA Programmers from **1 September 2017 to the day before the exam**.

4.3 After agreeing any changes with the AQA Programmer (if changes are required) centres must do the following.

- Upload the (amended) Skeleton Program(s) (hereafter to be called 'the Skeleton Program') to the secure area of your centre's computer network in good time before the exam. Candidates must **only** have access to this Skeleton Program when they are sitting the exam. See Section 8 of these *Teachers' Notes* for more information.

> **Note:** it is extremely important that, **immediately before the exam**, a check is made to ensure that the uploaded Skeleton Program to be used in the exam is the correct one, ie the version as issued by AQA or the amended version (**without further modification**) approved by the AQA Programmer.

- Make **two** hard copies of the Skeleton Program for each candidate. Print the Skeleton Program on single-sided A4 stationery in either landscape or portrait orientation and pin the pages together with either one staple or two, whichever you consider most convenient to your candidate(s).

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The first hard copy is for immediate use by candidates. **Again, candidates must not take this first hard copy of the Skeleton Program into the exam room; centres must ensure that candidates are aware, in advance of the exam, of this requirement. If candidates have any unauthorised material in an exam (whether or not they intended to use it), it may be considered as malpractice.**

The second hard copy of the Skeleton Program is for use by the candidate in the exam. This second hard copy must be retained by the centre and issued only in the exam.

- Set aside one hard copy of the Skeleton Program to be put on top of your candidates' completed Electronic Answer Documents when being sent to the **examiner** allocated (by programming language) to your centre. Your Examinations Officer will have the name of your centre's examiner.

4.4   Before the exam, schools/colleges may load a copy of the electronic version of the Skeleton Program (and Data File, if applicable) onto a **separate** area of their centre's network to allow candidates to 'experiment' with the program. Candidates must **not** have access to this version on the day of the exam.

The Electronic Answer Document (EAD)

4.5   As the entry codes for the new Computer Science specification are language-specific, AQA has produced an EAD for each language. Please ensure you select the correct EAD for which your candidates are entered. **The front cover of each EAD will specify the language being used by the candidate.** The remainder of the document is the same for all candidates.

> 7517/1A – C#
> 7517/1B – Java
> 7517/1C – Pascal/Delphi
> 7517/1D – Python
> 7517/1E – VB.Net

4.6   On or after **1 September 2017** the (language-specific) EAD can be issued to candidates so that they can enter their personal details on the front cover **and** in the footer on pages 2, 3, etc. (See Appendix 1, *Advice on using the Paper 1 Electronic Answer Document (EAD).*) A copy of this personalised EAD can then be stored by the centre in each candidate's own secure space for the exam on the centre's network. If candidates are to complete the EAD in this way, the centre is responsible for ensuring that no other information is typed into the EAD in advance of the exam.

Centres are encouraged also to issue another copy of the EAD to candidates at any time before the exam so that candidates may practise using it. In particular, candidates should practise how to re-size a screen capture (screen dump/screen shot) to ensure that they can be read with ease by the examiner.

5   Timetabling

5.1   Centres must arrange for **each** candidate to be allowed to complete the exam in **2 hours and 30 minutes**.

5.2   Centres which are unable to accommodate all their candidates in the timetabled session of the exam will need to ensure that candidates awaiting the exam are supervised under exam conditions from the published starting time of the exam until their test is completed.

5.3   Candidates awaiting their exam must not have access to any means of communication including mobile telephones, the Internet or computers. Anyone wishing to leave the supervised area must be escorted by a member of staff.

5.4   There will be attendance registers for the exam. These must be fully completed at the end of the final session (if more than one).

5.5   An accurate seating plan of candidates present at each session must be kept.

5.6   Candidates can only sit the exam once in any exam series.

6   Accommodation

6.1   Centres must ensure that:

- the accommodation is suitable for an exam room in accordance with JCQ ICE (Appendix 1 Section 6)
- a sufficient number of workstations is available, including at least one replacement computer and printer, and a supply of easily replaced items (eg mouse).

6.2   A computer must be made available to each candidate on a 1:1 basis. In advance of the exam, each workstation **must** be tested to ensure it is in full working order for the purpose of the exam.

6.3   Whilst the layout of the exam room cannot be specifically prescribed, centres should ensure that:

- each workstation in use by candidates is isolated by a minimum space of 1.25 metres measured from the nearest outside edge of one screen to the next, unless monitors are positioned back-to-back or separated by dividers or privacy screens. Where it is not possible to arrange the workstations with this space, it is recommended that only every second workstation is used
- the arrangement of workstations for on-screen tests and the position of the invigilator's desk should facilitate detection of any unauthorised activity by candidates, eg communication with others or use of unauthorised reference material.

6.4   Candidates must be given sufficient workspace to allow them unrestricted access to the computer and to carry out non-computer activities, such as checking and collating print-outs, and the use of additional permitted materials, ie their *Question Paper*, *Preliminary Material* and *Skeleton Program*.

6.5   The room should have sufficient lighting, heating and ventilation. The computer screens should be placed to avoid excessive reflection.

6.6   The following JCQ notices must be displayed according to JCQ ICE (Appendices 4 and 6):

- *Warning to Candidates*
- *Mobile Phone Poster*

6.7   The centre number, session, start and finish times should be displayed prominently. A clock should also be visible to all candidates.

6.8   All display material must either be completely covered up or removed from the exam room.

6.9   A copy of the JCQ ICE document should be available to the invigilator in the exam room.

Turn over ►

7   Candidates who are taught at a centre other than that which entered them for the exam

Paper 1 is **not** centre-assessed coursework so consortium arrangements as defined by the JCQ do **not** apply. If a candidate is to sit the Paper 1 exam at a centre other than the one by which he/she was entered for the exam (the 'home' centre), the home centre of the candidate must complete the JCQ form called an Alternative Site Form, which tells the JCQ Inspectorate that the candidate will not be sitting at the centre which entered them for the exam. This form is available on the JCQ website: www.jcq.org.uk.

8   Preparation of your centre's computer network

8.1   Centres must set up on their network a separate secure user area for each candidate sitting the exam. Each candidate **must** be assigned an individual candidate user name and password which is not the one they have used throughout the academic year. These user areas must **not** be accessible to candidates at any time other than during the exam session. (Candidates must be advised at the start of the exam of the need to save their work regularly in a user-created directory structure that protects against accidental overwriting that would result in the loss of work.)

8.2   Each candidate's access to their user area must be blocked at the end of the Paper 1 exam session. If any candidates are sitting the exam at a later session, centres must ensure that the user areas of those who have already sat the exam cannot be accessed. A different password must be used for each candidate.

See Section 14 of these *Teachers' Notes* for centres unable to provide a separate candidate user area on the centre network.

8.3   Each user area should only have a copy of the files associated with the scheduled exam, and candidates should only have access to the software packages appropriate to the exam. Centres must ensure that the software available to candidates will allow them to meet the requirements of the exam. The software required is:

- the appropriate programming language development system which your candidates are going to use in the exam
- a word processor
- image editing software or screen capture software where this is not already provided by the computer's operating system.

8.4   Centres must **not** store their working files in a shared area. In each user area before the exam begins there should be an individual copy of:

- the required **Preliminary Material** file
- the appropriate **Skeleton Program**
- the **Data File** (if applicable to this exam session)
- the appropriate **EAD** file.

Note: For candidates using **Java** the 'Standard Classes' resources are also to be available, if the centre has chosen to use these classes (see Appendix 3).

8.5   Each user area must be allocated sufficient electronic storage space to allow candidates to save their EAD.

8.6   Candidates must not be able to save anything during the exam in a central location where anyone can access such material.

8.7   Centres should ensure that up-to-date virus protection measures are in place.

8.8   Candidates must **not** have access to:

- any documents/files
- data stored in shared areas on a network
- data stored on the hard drive or portable storage media (unless the latter is part of an emergency measure brought about by circumstances described in Section 14 of these *Teachers' Notes*) other than those required for the exam
- a calculator of any sort, including that on the computer and any spreadsheet software
- email, an intranet, the Internet or instant messaging software.

8.9   **No extra time can be allowed for slow machines or networks which run slowly**. Before the exam, centres must ensure the appropriate hardware and software are available to candidates and there are no problems with the computer facilities.

8.10   Well in advance of the exam, centres must ensure that candidates know:

- where they are to save the work they do during the exam
- what file format to use
- the name format in which to save their work (this must include their centre number and candidate number)
- about the role of the print monitor (see Section 11)
- how to resize a screen capture (screen dump/screen shot) to ensure that the examiner can read it with ease.

9   Immediately before candidates start the exam

After issuing the *Question Paper* and a new hard copy of the *Preliminary Material* and *Skeleton Program* to each candidate and immediately before the start of the exam, candidates must be instructed to:

- load the programming language software
- load the word processing software
- load the appropriate **Skeleton Program** file
- load the **Data File** (if applicable to this exam session)
- load the appropriate **Electronic Answer Document**.

On the front page of the Electronic Answer Document (if this has not been done in advance of the exam), candidates must insert their:

- Centre Number
- Candidate Number
- Candidate Name.

Into the footer **on every page**, other than the front page, candidates must insert their:

- Centre Number
- Candidate Name
- Candidate Number.

They must then **save the Electronic Answer Document** with their **Centre Number** and their **Candidate Number** as the filename (eg 12345-9999).

Turn over ▶

- Candidates must also be reminded of the need to regularly save their word-processed copy of the Electronic Answer Document and the files developed within the programming software in the user-created directory structure that protects against accidental overwriting that would result in loss of work.

The above instructions are vital in order to ensure that at the end of the exam the source of each print-out is clear and that a candidate's file can be identified should there be a need for re-printing (see Section 12.5). **It may not be possible to credit the whole or part of a candidate's answer if these details are not printed on every page as instructed above.**

10   Conduct of the exam

10.1   There must be one invigilator for every 20 candidates or fewer. Additional invigilators can be employed at the discretion of the centre to ensure all candidates are in view at all times.

10.2   Technical help should be available throughout the exam in case of hardware/software problems.

10.3   Any teacher who teaches Computer Science, or a senior member of teaching staff who has overall responsibility for the candidates' preparation for this exam may **not** act as an invigilator.

It is, however, acceptable for them to be available in order to provide technical support (see section 10.2 above) during the examination, should it be required.

10.4   Candidates may bring a pencil/pen and ruler with them into the exam. On request, candidates may be provided with pen and paper to do rough workings. These rough workings must be handed to the invigilator at the end and not removed from the exam room by the candidate. See Section 10.14 below.

10.5   Other than the Question Paper (7517/1), candidates should only use or have access to permitted software and documents, ie those referred to in Sections 8.3 and 8.4 above. Candidates must **not** have access to any books or documents whilst sitting the exam.

10.6   The exam must be taken under exam conditions and communication between candidates is **not** permitted at any time, including communication via computers.

10.7   Candidates must **not** bring portable storage media (eg memory sticks, CDs, etc) into the exam, although immediately before the start of the exam (as in Section 14.4), some form of portable storage medium may be used by the centre for the provision of the required software to the candidate.

10.8   Candidates must **not** have access to pre-prepared templates or other files during the exam except those referred to in Sections 8.3 and 8.4 above. Software-specific wizards may be used.

10.9   Candidates may use paper-based dictionaries (English or bilingual only) during the exam. Technical dictionaries are **not** permitted.

10.10   Candidates must **not** use a calculator of any sort, including that on the computer and any spreadsheet software.

10.11   Candidates may use software-specific help facilities that use local files. It is expected that the programming language software will include the normal help files as supplied with the original software. If the software uses non-local files located on the Internet, candidates must **not** be

able to access these help facilities. If the software has both local and non-local help facilities, candidates may use the local files only; access to the non-local help facilities must be disabled.

10.12   If a candidate experiences technical difficulties, including printing, the centre may use its discretion to produce print-outs already sent to the printers outside the timed 2½ hour exam, and must write a note about the difficulty on the candidate's output.

10.13   **No extra time can be allowed for slow machines or networks which run slowly.**

10.14   Candidates are not allowed to remove anything from the exam room. The invigilator must collect all extraneous candidate materials (eg draft copies of candidates' work, rough work, additional print-outs and question papers) at the end of the exam (or each exam session, if more than one) and keep these in a secure place until the publication of results by AQA.

11   Printing

11.1   It is recommended that the ratio of candidates to printers is no more than 10:1.

11.2   Centres must ensure that the printers are set up to print on A4 paper. EADs **must** be printed on one side of paper only.

11.3   There is no requirement to print in colour. No extra credit is given for work printed in colour.

11.4   Printers must be in the same room as the candidates. A Print Monitor (who should be neither an invigilator nor a candidate, but who could also be the source of technical help) must be assigned to collect and deliver print-outs to the candidates. Candidates must **not** be allowed to collect print-outs.

11.5   It is the responsibility of the Print Monitor to ensure the correct ownership of each print-out.

11.6   Candidates must send their print-outs to the printer during the timed 2½ hour exam. If a candidate experiences difficulties when trying to print, the centre may use its discretion to produce print-outs already sent to the printers outside the timed 2½ hour exam, and must write a note about the difficulty on the candidate's output.

11.7   Do not be concerned if the AQA logo does not appear when the EAD is printed out.

12   At the end of the exam

12.1   Before papers are collected by the invigilator, **candidates are required to**:

- collate their print-outs into question number order
- attach them securely together in the top left-hand corner using a staple or tie.

The means of securing the print-outs together must be provided by the centre.

12.2   Candidates must ensure that their name, centre number and candidate number are on each page of each print-out. It is the candidate's responsibility to ensure that these details are correct on each page. Handwritten details are acceptable.

12.3   You will have been allocated an AQA Examiner specific to the programming language(s) based on the candidates' entry codes received from your Examinations Officer. Make sure you use the correct examiner address label when dispatching materials.

12.4 **When sending candidates' completed EADs to your allocated examiner, one copy of the Skeleton Program – as made available to candidates for the exam – must be placed on top of the completed EADs.**

12.5 Centres must remind candidates to ensure that their EAD is individually saved on the network in their individual secure work areas. Centres must ensure that these EADs are secure from unauthorised access. Centres must safeguard this work and store it in a manner which will allow an individual's saved work to be easily retrieved if it is required for re-printing. After the exam the EADs of all candidates must be copied on to a portable storage medium and kept securely by the Examinations Officer at least until the publication of results.

12.6 All other exam material (eg draft copies of candidates' work, rough work, additional print-outs and question papers) must be collected by the invigilator at the end of each session and stored in a secure place until the publication of results by AQA.

12.7 Immediately after the end of the exam session, each candidate's access to their user area must be blocked. If any candidates are sitting the exam at a later session, centres must ensure that the user areas of those who have already sat the exam cannot be accessed. A different password must be used for each candidate.

13 Malpractice

This type of exam relies on the integrity of candidates, teachers and invigilators. If any candidates submit work which is not their own, or any form of malpractice occurs, or is thought to have occurred, it must be reported to AQA. The matter will be investigated by AQA and if it is found that the candidate has been involved in malpractice, the candidate may be disqualified from at least the subject concerned.

14 Emergencies

14.1 In the event of an emergency, eg a fire alarm sounding, the invigilator should take the following action:

- evacuate the exam room
- safeguard the security of assessment content and responses (eg by locking an assessment room which has been evacuated without closing down software)
- ensure candidates are supervised as closely as possible whilst out of the exam room to ensure there is no discussion about the exam
- after the candidates' return, note the point and time at which the interruption occurred and the duration
- allow the candidates the full working time prescribed for the exam
- make a full report of the incident, and of the action taken, and submit it to AQA.

14.2 In the event of hardware, software and communication failures affecting individual workstations or the network, the centre must ensure candidates continue the assessment session at a different workstation or at a later time, without the loss of working time.

14.3 In the event of a total technology failure where candidates are unable to sit the exam (or restart the exam at a later time), the Head of Centre must write to irregularities-n@aqa.org.uk at AQA with full details.

14.4   Centres unable to provide a separate candidate user area on the centre network can instead provide each candidate with a named/labelled USB pen drive or similar storage medium. Each storage medium must be preloaded with the documents listed in Section 8.4. At the end of the exam the storage medium must be collected in, and the candidates' work must be stored as outlined in Section 12.5.

14.5   If a candidate experiences technical difficulties, including printing, the centre may use its discretion to produce print-outs already sent to the printers outside the timed 2½ hour exam, and must write a note about the difficulty on the candidate's output.

14.6   Should it be discovered that a wrong version of the Skeleton Program has been uploaded to the candidates' exam user areas:

- ask the candidates to print their Electronic Answer Documents – without further adding to their answers – and log off their computers. Make a note of the time they were asked to do this as the exam is effectively stopped at this point. The Electronic Answer Documents must be given to the invigilator for later dispatch to the AQA Examiner

- keep the candidates calm and under exam conditions whilst the correct version of the Skeleton Program is uploaded

- when the exam is started again, allow the candidates the remainder of the 2½ hour exam time. Candidates should open their Electronic Answer Document and continue as before

- at the end of the exam, the first and second versions of candidates' Electronic Answer Documents should be paired and sent to the AQA Examiner. One copy of the (corrected) Skeleton Program should be enclosed with the Electronic Answer Documents

- an electronic copy of the correct and incorrect versions of the Skeleton Program must be sent as soon as possible to irregularities-n@aqa.org.uk at AQA with a report including the circumstances under which the incorrect version was uploaded to the centre's network and how long after the start of the exam the error was discovered.

Teachers' Notes continue on the next page

AQA Appendix 1

A-level Computer Science
Paper 1
June 2018

Advice on using the Paper 1 Electronic Answer Document (EAD)[2]

Centres may give a copy of this Advice document to candidates at any time, including during the exam.

There is a specific EAD for each programming language. Please ensure the candidates use the correct one for the language they are entered for. **The front cover of each EAD will specify the language being used by the candidate.** The remainder of the document is the same for all candidates.

> 7517/1A – C#
> 7517/1B – Java
> 7517/1C – Pascal/Delphi
> 7517/1D – Python
> 7517/1E – VB.Net

The EAD is provided by AQA to centres as a Microsoft® Word (2003) document. Candidates must type their answers to the Paper 1 question paper into the EAD on-screen.

A   In advance of the exam

- Candidates may in advance of the exam complete the details on the front cover of the Electronic Answer Document (EAD) **and** in the footer of page 2 (and any subsequent pages). This should be saved to the individual candidate's user area of the secure network.

  If candidates are to complete the EAD in this way, **the centre is responsible** for ensuring that no other information is typed into the EAD in advance of the exam.

- Centres must ensure that candidates know:
  – where they are to save the work they do during the exam
  – what file format to use
  – the name format in which to save their work
  – about the role of the Print Monitor
  – how to re-size a screen capture (screen dump/screen shot) to ensure the examiner can read it with ease.

- The Paper 1 exam is not a test of candidates' typing or word processing skills, but centres are strongly encouraged to ensure that their candidates are familiar with the EAD before the exam. Candidates are free to practise **using a copy** of it before the exam.

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[2] Appendix 1: 'Advice on using the Paper 1 Electronic Answer Document (EAD)' is available as a separate document in Secure Key Materials on e-AQA. Follow the path: A-level > ICT and Computer Science > Computer Science (new specification) > Preliminary Material > A-level.

B   What to do if the EAD fails for any reason

- When printing the EAD, if it appears to have page breaks in inappropriate places, check whether the margin size on the default printer needs changing. The margins used for the original EAD are: Top – 2 cm; Bottom – 2.5 cm; Left – 2 cm; Right – 2 cm.

- Do not be concerned if the AQA logo does not appear or is misshapen when the EAD is printed out.

- If your centre's word processing software is not compatible with Microsoft® Word (2003), you should ask candidates to type their answers into a blank document ensuring that the **front page prominently** carries the following information:

  – A-level Computer Science Paper 1 exam, June 2018
  – Centre Number
  – Candidate Number
  – Candidate Name
  – Programming Language used
  – at the end of the exam, the candidate's signature.

- **Each subsequent page must also** carry the following personal information of the candidate in a footer (either typed in or written by hand):

  – Centre Number
  – Candidate Name
  – Candidate Number.

- Each answer **must** be clearly numbered. Leave at least one blank line between each question, including each part question, and leave a right-hand margin on each page of approximately 3 cm.

- All pages must be securely attached together with a staple or tie in the top left-hand corner.

C   Using screen captures (screen dumps/screen shots) in the EAD

- Paste the screen capture into a cell of the EAD.

- If only part of the capture shows up in the cell:

  1.   select the cell in which the screen capture appears
  2.   double click to bring up the picture editor dialogue box called 'Format Picture'
  3.   select the 'Layout' tab
  4.   select the 'In Front of Text' option
  5.   press 'OK' and go back to your EAD cell
  6.   expand the cell in the EAD by pressing the return key on your keyboard enough times until the cell is big enough to show the whole screen capture. Crop the screen capture if necessary, but ensure the examiner will be able to read it easily.

- If the above should fail, candidates should be advised to:

  1.   paste any screen capture into a blank Word document and save it using a suitable filename
  2.   print this document with a footer containing the Centre Number, Candidate Number and Candidate Name (or write them on by hand after printing)
  3.   insert the question part number
  4.   attach to the printed EAD in the relevant place leaving a reference in the corresponding cell of the EAD to advise the examiner to look for a supplementary hand-out containing a screen capture.

Turn over ►

AQA   **Appendix 2**

What centres must do to amend AQA's Skeleton Program to the program environment used at their centre (see also Section 4 of these *Teachers' Notes*)

- To amend AQA's Skeleton Program you **must** obtain approval from an **AQA Programmer**. The programmers will be available by email from **1 September 2017 until the day before the exam**.

- Programmers will only enter into dialogue with teachers from a centre.

  Note: **Candidates are not allowed to amend a Skeleton Program and use that Skeleton Program in the exam without the approval of that Skeleton Program by an AQA Programmer via a teacher.**

- The email address for the AQA Programmers for all languages is:

  computerscience@aqa.org.uk

- Send an email to the Programmer, supplying the following information.

  – In the subject line:
    - **7517 new spec**, your **Centre Number**, your **Centre Name**, the name of your **programming language** and **the program environment**.

  – In the body of the email:
    - The name and phone number (and extension, if applicable) of the person at the centre that the Programmer should contact about the amendments made to the Skeleton Program.
    - You **must** indicate in some way, or explain, where you have made amendments.

  – As an attachment:
    - Your amended Skeleton Program.

- If your amendment is acceptable, you will be sent an email confirming this. If it is not, you will be contacted by email or phone by an AQA Programmer (between 9 am and 4 pm during the school day, if by phone), normally within 48 hours (or by the following Monday, if you email on a Friday).

- The Programmer is there to check on **your** amendments to the AQA Skeleton Program that will, typically, only relate to the provision of programming libraries for basic input and output. Programmers are not there to make the amendments for you. The Programmer is there to ensure that your amendments neither advantage nor disadvantage your candidates. The Programmer can **only** discuss the amendments needed to adapt the AQA's Skeleton Program to your program environment for use in the exam.

- Once amendments are approved, you will be asked to send immediately the final version of your amended and approved Skeleton Program to the Programmer as an email attachment.

- **Important**
  After the exam, put one copy of your **amended and approved Skeleton Program** on top of your candidates' completed Electronic Answer Documents when you send them to the specific (by programming language) **AQA Examiner** allocated for your centre (not the AQA Programmer). Your Examinations Officer will have the details of your centre's examiner.

AQA

<div align="right">**Appendix 3**</div>

A-level Computer Science
Paper 1
June 2018

Important information for centres entering candidates for the A-level Paper 1 exam using the Java programming language

Java

For the exam, AQA is making the following resource available. Standard class for:

- a console (`AQAConsole2018`)

Candidates will be allowed to use this resource in the exam.

This resource can be found on the AQA website. You will need to log in to e-AQA http://www.aqa.org.uk/log-in and select Secure Key Materials (SKM). Then follow the path below:

A-level > ICT and Computer Science > Computer Science (new specification) > Preliminary Material > A-level

Candidates are encouraged to use this class throughout the year. This class is not compulsory; centres may choose not to use it.

END OF TEACHERS' NOTES