

# Principal examiner reports for teachers

Principal examiner reports for teachers summarise what candidates did well and what candidates needed to improve for this examination series only.

This report is to be used in conjunction with the question paper and mark scheme.

For guidance on teaching and learning we provide resources for many of our syllabuses.

| Resource                                                                                                                                                                   | Where to find it                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Grade descriptions – Grade descriptions describe the level of performance typically demonstrated by candidates achieving the different grades awarded for a qualification. | <a href="#">School support hub</a><br>Select: Subject > Resource finder > Syllabus and specimen materials |
| Schemes of work – Schemes of work are designed to support you in your teaching and lesson planning.                                                                        | <a href="#">School support hub</a><br>Select: Subject > Resource finder > Teaching and learning           |
| Lesson planning – Guidance on how to plan a lesson.                                                                                                                        | <a href="#">Lesson planning</a>                                                                           |
| Resource plus – There may be additional resources such as teaching packs containing lesson plans, resources and worksheets and videos for aspects of your syllabus.        | <a href="#">School support hub</a><br>Select: Subject > Resource finder > Teaching and learning           |
| Teaching tools                                                                                                                                                             | <a href="#">Teaching Tools</a>                                                                            |
| Exemplar candidate responses                                                                                                                                               | <a href="#">School support hub</a><br>Select: Subject > Resource finder > Teaching and learning           |
| Learner guide – A guide for students to help them understand what the course involves.                                                                                     | <a href="#">School support hub</a><br>Select: Subject > Resource finder > Teaching and learning           |
| Community forums – Do you have a question or something to share? Our online forums are great way to keep up to date with your subject and the global Cambridge community.  | <a href="#">Community forum on the school support hub</a>                                                 |
| Access to scripts for this series.                                                                                                                                         | <a href="#">Access to scripts service</a>                                                                 |
| Results analysis is available for some syllabuses.                                                                                                                         | <a href="#">Results analysis</a>                                                                          |
| Test maker is available for some subjects.                                                                                                                                 | <a href="#">Test maker</a>                                                                                |

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# INFORMATION AND COMMUNICATION TECHNOLOGY

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Paper 0417/12  
Theory

## Key messages

### **What candidates did well**

- Many candidates used specific and detailed language when replying to describe, evaluate and discuss type of questions.

### **What candidates needed to improve**

- Candidates need to read the whole question carefully to ensure that their responses are fulfilling the demands of each one.
- Candidates need to refer to the scenario given in the question so that this is reflected in their answers.
- Candidates should also ensure that they check the command word of each question and then tailor their answer accordingly.
- Candidates need to not give generic names rather than brand names when answering questions.
- When a question indicates a specific number of answers, candidates should only write one answer in each allocated space.

## Comments on specific questions

### **Question 1**

#### **(a) Comprehensive responses**

- Most candidates correctly identified hardware as the word needed to complete the sentence.

#### **Limited responses**

- Some candidates gave examples of individual pieces of hardware instead of the overall term that was needed to complete the sentence.

#### **(b) Comprehensive responses**

- Many candidates correctly identified software as the word needed to complete the sentence.

#### **Limited responses**

- Some candidates gave specific pieces of software for example operating system and system software instead of giving the term for programs in general.

### **Question 2**

#### **(a) Comprehensive responses**

- Candidates gave detailed answers setting out how the voice could be recorded onto the computer.
- Many candidates used correct and specific ICT terminology when describing how the voice could be recorded.

#### **Limited responses**

- Some candidates did not go into enough detail about how the voice could be recorded on the computer.
- A few candidates reworded the question in their answer.

**(b) Comprehensive responses**

- Many candidates correctly described the processes involved to allow the student to listen to the recording, using correct and specific terminology within their answers.

**Limited responses**

- Some candidates did not go into enough detail about the processes that could enable the student to listen to the recording.
- Some candidates continued passed the processing stage and wrote about how the recording could be output through the speakers.

**Question 3**

**(a) Comprehensive responses**

- Most candidates correctly identified RAM as the other type of internal memory.
- Some candidates expanded the letters RAM into the full definition of Random Access Memory.

**Limited responses**

- Some candidates did not read the question and then gave the internal memory as ROM which was given in the question.
- A few candidates that expanded RAM did not use the correct words for example Read Access Memory.

**(b) Comprehensive responses**

- Many candidates correctly identified two characteristics of ROM.

**Limited responses**

- Some candidates identified characteristics of RAM instead of ROM.
- A few candidates repeated the first answer they gave in the second option line.

**Question 4**

**Comprehensive responses**

- Many candidates correctly identified that both interfaces allowed communication between the user and the system and also that the CLI needed the user to type the commands whereas the dialogue-based interface needed speech as an input.

**Limited responses**

- Some candidates gave answers that were benefits and drawbacks of using the different interfaces instead of similarities and differences.

**Question 5**

**(a) Comprehensive responses**

- Most candidates correctly highlighted that the tablet has a larger screen and some wrote that it also has a larger keyboard.
- Some candidates wrote about the software being more appropriate on the tablet and that it allowed more connections.

**Limited responses**

- Some candidates did not go on to expand their answer to say why the larger screen/larger keyboard were better.
- A few candidates also mixed up their expansions giving 'less typing errors/easier to enter results' for the smaller screen.

**(b) Comprehensive responses**

- Some candidates discussed the benefits of using sensors as the ability to collect data automatically and continuously without human intervention and the drawbacks as over reliance on the technology and the environment affecting the readings that were taken by the sensors.

**Limited responses**

- Some candidates gave points without clarification or discussion for example that it is faster was a common answer without expanding to say that it is faster to enter the data.
- Some candidates wrote about how the sensors would collect the data rather than giving the benefits and drawbacks of the sensors.

**(c) Comprehensive responses**

- Many candidates stated that the data/SSD could be lost or damaged by the environment and that you do not need to carry the SSD with you when using the cloud.

**Limited responses**

- Some candidates wrote that the cloud is faster without giving any explanation.
- Many candidates also gave a generic-type answer saying that the cloud can be used on any device at any time which is also true for the SSD.

**Question 6**

**(a) Comprehensive responses**

- Some candidates gave good examples of both anti-virus software and anti-malware software.
- A few candidates discussed the heuristic approach that anti-virus software uses to identify virus and continued to explain that the software compares against a database of known viruses.

**Limited responses**

- Most candidates were not able to give enough detail in their answers.
- Many candidates gave answers that were limited to statements that anti-virus software protects against viruses and anti-malware protects against malware.

**(b) Comprehensive responses**

- A few candidates identified that both pieces of software are needed so that security and protection from various viruses and other types of threats can be increased.

**Limited responses**

- Most candidates repeated what they had written in part **(a)** or repeated what was in the question without actually giving any explanation of why both are needed to fully protect the computer system.

**Question 7**

**(a) (i) Comprehensive responses**

- Many candidates correctly identified that the continuous use of the keyboard was a cause of RSI.
- Some candidates identified that continuously clicking a mouse button would also give RSI.

**Limited responses**

- Some candidates gave answers that were the health issue and not the cause.
- A few candidates gave repeated answers writing that using a keyboard for a long time as the first cause and using the mouse for a long period of time as the other with no mention of clicking the buttons on the mouse.

**(ii) Comprehensive responses**

- Many candidates identified that using a wrist rest or an ergonomic keyboard would help to prevent RSI.

**Limited responses**

- Some candidates wrote that taking a break would be a prevention without expanding to say that whilst taking the break the fingers could be rested.
- Some candidates also gave repeated answers writing ergonomic keyboards and ergonomic mouse.

**(b)(i) Comprehensive responses**

- Many candidates identified that not sitting correctly/upright in the chair would cause back problems.

**Limited responses**

- Some candidates wrote poor posture as the answer without expanding to say whilst sitting at the computer.

**(ii) Comprehensive responses**

- Many candidates identified that using an adjustable chair or a footrest were methods to help prevent back problems.

**Limited responses**

- Some candidates stated that taking a break would help prevent back ache without expanding their answer to say that during the break they must exercise or stretch.

**Question 8**

**Comprehensive responses**

- Many candidates were able to expand the acronym and gave a definition of what a VoIP system.
- A few candidates identified that calls would be cheaper and that video calls could be made.

**Limited responses**

- Some candidates gave answers that were generic and could easily apply to mobile phones.
- Some candidates wrote about the cost of installation and maintenance which is not relevant to the scenario set in the question.

**Question 9**

**Comprehensive responses**

- Most candidates correctly identified two types of extended reality giving virtual and augmented as the answers.

**Limited responses**

- Some candidates gave artificial reality.
- Some candidates spelt the word for augmented reality wrong and wrote their answer as argument.
- A few candidates gave the acronyms of VR, AR and MR which were not in enough detail.

**Question 10**

**(a) Comprehensive responses**

- A few candidates identified that the social media group would allow students to easily access educational resources and experts.
- A few candidates discussed about the media group making it easier for students and the university to communicate with each other.

**Limited responses**

- Most candidates wrote a series of statements about what could be done within the social media group rather than the benefits of using it. For example, 'it can be used to communicate with a large number of students' is a statement and needs to say what the benefit would be, in this case it is easy to communicate with a large number of students.
- Many candidates gave generic answers and did not relate their answer to the University and the scenario set in the question.

**(b) Comprehensive responses**

- Some candidates identified that the network manager would be able to monitor and remove inappropriate messages and images.
- Many candidates identified what would be a problem without the network manager and discussed issues of cyberbullying and using good netiquette.

**Limited responses**

- A few candidates did not link what they had written to the scenario and explained about the drawbacks of using social media in general and not why a network manager would be an advantage and needed.

**Question 11**

**(a) Comprehensive responses**

- Many candidates identified that the WAN covers a large geographical area, is a connection of a number of LANs and uses a router.

**Limited responses**

- A few candidates did not give enough detail in their answers for example a connection of a number of networks was not sufficient as it needs to mention LANs.
- Some candidates discussed the Internet in their answer instead of looking at WANs in general, this was not a sufficient explanation as the Internet as a type of WAN was given in the question.

**(b) Comprehensive responses**

- Many candidates identified the different types of networks as LANs, WLANs, PANs etc.
- Many candidates expanded the acronym for these networks and wrote the network name in full.

**Limited responses**

- A few candidates wrote WAN as their answer which was a repeat of the network given in part (a).
- A few candidates gave more than two answers for this question and continued to give additional answers below the lines already given.

**Question 12**

**(a) Comprehensive responses**

- Many candidates correctly created the design of a data entry form, using the required fields and showing the field sizes and structures.

**Limited responses**

- A few candidates designed a report form layout rather than a data entry form.
- A few candidates drew a computer screen, which was not necessary.

**(b) Comprehensive responses**

- Many candidates correctly identified suitable validation checks that could be carried out on the Date\_book\_sold field for example range checks, length checks and format checks.

**Limited responses**

- Some candidates identified presence check as a possible validation check which was not a suitable validation check since this field did not need to be filled in. The data entry form was for entering details of the books and at that point the book may not have been sold and therefore this field would have no data.

**(c) Comprehensive responses**

- Many candidates stated different types of research methods that can be used during analysis of the current system, writing 'observation, interviews and questionnaires' as their answers.

**Limited responses**

- Some candidates gave 'survey' as their answer which is the entire process of gathering, analysing and interpreting data and therefore not a research method in this scenario.
- A few candidates discussed the different methods used when implementing a new system which is further in the cycle and not analysis.

### Question 13

#### Comprehensive responses

- A few candidates correctly identified what is meant by CAL writing that it is a computer program that assists the user in learning a subject.

#### Limited responses

- Many candidates identified a generic use of CAL instead of a what is meant by CAL.
- Some candidates wrote about what CAL can do and not what is meant by it.

# INFORMATION AND COMMUNICATION TECHNOLOGY

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| <p><b>Paper 0417/21</b><br/><b>Practical Test</b></p> |
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## Key messages

### **What candidates did well**

- Most candidates attempted all tasks and completed them to a good standard.
- Most candidates produced all the screenshot evidence required.
- Most candidates produced a well-presented document with a consistent layout.
- Many candidates produced database reports which contained the correct fields and formatting.
- Many candidates created the presentation as specified in the question paper.

### **What candidates needed to improve**

- Candidates must be able to distinguish between the typeface categories of serif and sans-serif font types and select a named font for the type specified.
- Candidates must enter accurately text in bold on the question paper.
- Candidates must use proofing techniques to identify errors and ensure consistency of presentation.
- Candidates must retain existing styles applied to document recall text.
- Candidates must ensure they include their identification details in tasks before printing as instructed on the question paper.
- Candidates must be able to group images and capture screenshot evidence of all items grouped as one object.
- Candidates must make sure that database date fields are imported in DMY format.
- Candidates must be able to set the display format of date/time data.
- Candidates must be able to distinguish between the database page header/footer area and the report header/footer area and understand which is appropriate to use.
- Candidates must produce legible screenshots which show the outcome of an action rather than the skill process.
- Candidates must print their Evidence Document as this contains supporting evidence.
- Candidates must make sure their hyperlink evidence captures both the selected text and the link is applied to it.

## Comments on specific questions

### **Task 1 – The Evidence Document**

#### **Comprehensive responses**

- Most candidates created an evidence document to store screenshot evidence.

#### **Limited responses**

- Some candidates did not include identification details on every page of the document.
- Some candidates produced screenshots which were too small or faint to be read.
- Some candidates cropped essential evidence from their screenshot(s).
- Some candidates did not present the evidence document.

## Task 2 – Document

### Question 1

#### Comprehensive responses

- Most candidates successfully opened the correct file.
- Most candidates provided screenshot evidence of correctly setting the top, bottom, left and right margins.

#### Limited responses

- Some candidates made changes to the paragraph styles which had already been created and applied to the recall text.
- Some candidates set the page margins in inches instead of centimetres. The equivalent measurements in inches were acceptable (0.79" and 0.59"); 2" and 1.5" were incorrect.

### Question 2

#### Comprehensive responses

- Most candidates saved the file with the correct file name in the format of the software being used.
- Most candidates produced a screenshot of the folder contents after the file had been saved which provided the evidence required.

#### Limited responses

- Some candidates saved the document in the original RTF format instead of the format of the word processing software being used.
- Some candidates did not enter the filename in capitals as shown on the question paper.
- Some candidates did not provide evidence of the file type in their screenshot.

### Question 3

#### Comprehensive responses

- Most candidates entered the footer text accurately followed by their name, centre number and candidate number on a single line.
- Most candidates left-aligned the footer text.

#### Limited responses

- Some candidates did not display the footer details on a single line.
- Some candidates did not display the footer text on all pages.
- Some candidates entered only their name and did not include the centre and candidate numbers.
- Some candidates entered the footer details in the header.

### Question 4

#### Comprehensive responses

- Most candidates named the new style correctly.
- Most candidates created and stored the new style with the correct formatting applied.
- Most candidates based the new style on the default/normal paragraph style.

#### Limited responses

- Some candidates had capitalisation or typographical errors or used an underscore instead of a dash in the style name.
- Some candidates did not base the style on the 'default' or 'normal' paragraph style as instructed.
- Some candidates entered 'sans-serif' as the font name which is not a recognised named font style. A named font style with attributes of the sans-serif typeface category must be selected.
- Some candidates included additional formatting not listed.
- Some candidates did not change the line spacing to single.

### Question 5

#### Comprehensive responses

- Many candidates correctly identified the six calculations containing the = symbol and applied the RH- Calc created in **Question 4** to each line.

#### Limited responses

- Some candidates did not apply the formatting to all six lines.
- The style formatting applied to the six lines did not always match the style settings seen in the RH- Calc screenshot evidence, most commonly with bold set in the style and not applied to the text.
- Some candidates applied the formatting without providing screenshot evidence of creating the RH- Calc style.

### Question 6

#### Comprehensive responses

- Most candidates formatted the correct text to display as two columns of equal width.
- Some candidates set the column spacing correctly.
- Some candidates applied both full justification and italic enhancement to this text.

#### Limited responses

- Many candidates did not apply full justification to the column text.
- Some candidates did not apply italic enhancement to the text.
- Some candidates did not set the column spacing correctly.
- Some candidates did not control the column display with the initial column break in the wrong position, the final full stop not included in the column selection or the two-column layout applied to the entire document.

### Question 7

#### Comprehensive responses

- Most candidates correctly modified the pre-defined *RH-Title* paragraph style and provided screenshot evidence of the correct style settings set.

#### Limited responses

- Some candidates did not provide screenshot evidence of all the style changes made.
- Some candidates incorrectly changed the font style from Times New Roman (which was a serif font style and did not need to be changed) to 'serif' which is not a recognised named font style.
- A few candidates created a new style which did not evidence the skill of modifying a pre-defined style.

### Question 8

#### Comprehensive responses

- Most candidates applied square bullets to the specified text.
- Many candidates correctly indented the bulleted list 1-centimetre from the left margin.

#### Limited responses

- Some candidates did not apply the bullets to all the required text.
- Some candidates did not set the bullet indent accurately or did not amend the default indent measurement.

### Question 9

#### Comprehensive responses

- Most candidates inserted a new line at the top of the document, imported the logo and placed it on the new line.
- Most candidates aligned the logo to the right margin with the aspect ratio and size maintained.

#### Limited responses

- Some candidates did not insert a new line at the top of the document. The logo was placed alongside the title text with text wrap applied.

- Some candidates inserted more than a single line above the title.
- Some candidates centred the logo.
- Some candidates did not maintain the logo size and/or aspect ratio.
- A small number of candidates placed the logo in the header.

### Question 10

#### Comprehensive responses

- Some candidates reproduced the label accurately as shown on the question paper.
- Most candidates drew five parallel rectangle shapes with rounded corners.
- Some candidates placed the correct text in the shapes as shown and split this correctly over four lines in single line spacing.
- Most candidates formatted the text to display a 10-point sans-serif font style with bold enhancement.
- Few candidates centred the text vertically and horizontally within the shapes.
- Some candidates aligned the shapes at the top and bottom with equal space between the shapes.
- Most candidates inserted the drawing in the correct position in the document with no overlap.
- Few candidates provided screenshot evidence of the five shapes grouped as one object.

#### Limited responses

- Few candidates reproduced the label exactly as shown on the question paper.
- Some candidates incorrectly applied a background fill to the shape(s).
- Some candidates drew rectangles with square corners.
- Some candidates drew different sized rectangles.
- Some candidates did not place the correct text in the correct shape.
- Some candidates did not display the text in a sans-serif font style.
- Many candidates had typographical errors in the text suggesting the text had not been copied from the supplied file as instructed.
- Few candidates split the text over four lines as shown.
- Few candidates centred the text vertically within the shapes.
- Few candidates provided sufficient screenshot evidence of the five shapes grouped as one item.

### Question 11

#### Comprehensive responses

- Most candidates demonstrated good proofreading and document presentation skills.
- Most candidates presented the document in portrait orientation with no widows or orphans, and the list not split over columns or pages.
- Most candidates retained the original style formatting and maintained consistent spacing throughout the document.

#### Limited responses

- Some candidates made changes to the formatting of pre-defined styles already applied to the document text. This was most commonly seen in incorrect or inconsistent spacing of the body style text.
- Some candidates did not control widows and orphans within the document.
- Some candidates displayed inconsistent page margins with the column section indented further than the page margins resulting in uneven page margins.
- Some candidates changed the case on the text in the bulleted list, starting one or more lines with an initial capital.
- Some candidates changed the body style spacing applied to the bulleted list.
- Some candidates inserted extra paragraph breaks within the text, so the paragraphs were no longer intact.

### Task 3 – Database

### Question 12

#### Comprehensive responses

- Most candidates successfully imported only the seven required fields from the correct csv file.
- Most candidates correctly set the *Member\_ID* field as the primary key.
- Most candidates set the data types as instructed.

### Limited responses

- Some candidates imported all the fields from the source file and did not restrict the import to only the seven fields specified on the question paper.
- Some candidates did not show all the field names and data types in their screenshot evidence.
- A few candidates did not set a primary key.

### Question 13

#### Comprehensive responses

- Most candidates imported the data correctly and set the primary key as instructed.
- Some candidates correctly stored and displayed the required numeric values to 1 decimal place.

#### Limited responses

- A few candidates did not store the numeric data as a decimal, so the values were rounded in the report.
- Many candidates did not set the display of the decimal values to 1 decimal place with most accepting the default display of the software.
- Some candidates did not provide screenshot evidence of the table structure showing all field names and the data types set.

### Question 14

#### Comprehensive responses

- Most candidates imported the data correctly and set the primary key as instructed.
- Most candidates set the data types correctly.

#### Limited responses

- Some candidates did not import the date data in DMY format.
- Many candidates did not set the display format of the date to dd-MMM-yyyy.
- Some candidates did not provide screenshot evidence of the table structure showing all field names and the data types set.

### Question 15

#### Comprehensive responses

- Most candidates created the correct one-to-many relationship between the tables and provided screenshot evidence that clearly showed the relationship type.
- The relationship diagram shows that the referential integrity has been applied so the diagram shows the single and one-to-many infinity symbols confirming the relationship type.

#### Limited responses

- The type of relationship created was not always shown in the screenshot evidence.

### Question 16

#### Comprehensive responses

- Most candidates entered the report title accurately at the top of the page and fully visible.
- Most candidates were successful in finding the YA024 records in the *Member\_ID* field.
- Most candidates created a new field with the correct field name.
- Many candidates used the correct calculation for the new field and provided screenshot evidence of the formula used.
- Most candidates sorted on a single field correctly.
- Most candidates displayed the correct fields in the correct order.
- Most candidates correctly calculated the average and provided screenshot evidence of the database formula used.
- Most candidates displayed the result to two decimal places and placed the calculation in the report footer.
- A few candidates displayed the correct field control on the right in the report header without a label.
- Most candidates presented the report in landscape orientation, a single page wide with the field labels and data fully visible.
- Most candidates entered their identification details on the report.

### Limited responses

- Some candidates had data entry or capitalisation errors or displayed additional text such as 'Query 1' in the title area. The 'y' descender was not always fully visible if the text box had not been adjusted to accommodate the title size.
- Few candidates were successful in searching and selecting data using the OR operator with two criteria. Many used AND instead of OR which did not find all the required records.
- Some candidates did not attempt the numerical OR searches.
- Some candidates had data entry or capitalisation errors in the new field name.
- A few candidates sorted in descending rather than ascending order.
- Some candidates displayed extra fields in the report, commonly including the *Member\_ID* data.
- Many candidates had truncated data in their report where the default field widths were not manipulated. This was most commonly seen in the *Item* field data.
- Some candidates did not display the fields in the correct order, particularly where the sort field was displayed first. This can be avoided by setting the sort order in the report structure rather than in the query or during the creation of the report if a report wizard is used.
- Some candidates did not display the average value to 2 decimal places.
- Some candidates did not provide screenshot evidence of a database formula used. A few candidates evidenced a spreadsheet formula or keyed the formula into their Evidence document instead of taking a screenshot of the formula in the database.
- Some candidates did not display the database formula in full as the control box was truncated.
- Few candidates placed the *Member\_ID* control on the right in the report header. A number of candidates inserted a text box with 'YA024' keyed instead of using the field control source. When a control was positioned in the report header it often included a label or was not on the left. Some candidates placed the wrong field control in the report header, most commonly using the *Mem\_ID* field.
- Some candidates did not fit the report to a single page wide with one or more fields extending onto a second page.
- A few candidates presented the report in portrait orientation.

### Question 17

#### Comprehensive responses

- Most candidates entered the report title accurately in a larger font size at the top of the report and fully visible.
- Most candidates were successful in completing the search and selection of data using two criteria.
- Most candidates displayed the correct fields in the correct order.
- Some candidates completed the sort correctly based on two criteria.
- Most candidates presented the report in landscape orientation, a single page wide with the field labels and data fully visible.
- Most candidates entered their identification details in the page footer.

#### Limited responses

- Some candidates had data entry or capitalisation errors in the title text. The 'p' descender was not always fully visible if the text box had not been adjusted to accommodate the title size.
- Some candidates sorted the data on a single field only.
- Some candidates sorted both fields into ascending order where the *First\_name* field should have been in descending order.
- A number of candidates had truncated data in their report where the default field widths were not manipulated to accommodate the data. This was most commonly seen in the *Last\_name* and/or *Item* fields.
- Some candidates did not display the fields in the correct order, particularly where the *Last\_name* field was displayed first.
- Some candidates did not fit the report to a single page wide with one or more fields extending onto a second page.
- A few candidates presented the report in portrait orientation.
- A few candidates entered their identification details in the report footer instead of the page footer.

## **Task 4 – Presentation**

### **Question 18**

#### **Comprehensive responses**

- Most candidates successfully imported the five slides and presented these with a consistent title and bulleted list layout.

#### **Limited responses**

- A few candidates did not display bullets on the slides.
- Some candidates did not use a consistent display for the titles and/or bullets on all slides.

### **Question 19**

#### **Comprehensive responses**

- Some candidates displayed all the master slide items in the correct position.
- Most candidates displayed the master slide items in a consistent position on every slide.
- Most candidates placed the master slide items, so they did not overlap other slide items.
- Most candidates drew a black triangle with the correct size and orientation and positioned it in the top left corner.
- Most candidates included slide numbers and identification details as instructed.

#### **Limited responses**

- Some candidates did not size the triangle accurately.
- A few candidates did not place the triangle with the correct orientation.
- A few candidates did not apply a black fill to the triangle drawn.
- Some candidates presented the slide numbers in the default position instead of placing them on the top right.
- Some candidates placed their identification in the bottom centre instead of the bottom left.
- Some candidates did not position the master slide items consistently on every slide, for example on some slides the slide numbers were on the top right and on others were in the default position of bottom left.

### **Question 20**

#### **Comprehensive responses**

- Most candidates changed the layout of slide 1 to a title slide layout and centred the text.

#### **Limited responses**

- Some candidates did not remove the bullet from the subtitle text.
- Some candidates did not centre both the title and subtitle text.

### **Question 21**

#### **Comprehensive responses**

- Most candidates inserted the text accurately as the first item in the list and removed the bullet point.

#### **Limited responses**

- Some candidates entered the text in the title area and not as the first item in the list.
- Some candidates had capitalisation or typographical errors in the text entered.
- Some candidates did not remove the bullet from the text.

### **Question 22**

#### **Comprehensive responses**

- Most candidates indented the correct four bulleted items as shown on the question paper.

#### **Limited responses**

- Some candidates did not attempt to format the bulleted items as shown.
- Some candidates indented more than the four bulleted items.

### Question 23

#### Comprehensive responses

- Most candidates opened the correct source file and attempted to create a standard line chart.
- Many candidates selected the correct data for the chart.
- Most candidates displayed the calories on the value axis.
- Most candidates displayed an accurate legend.

#### Limited responses

- A number of candidates plotted the age data as an extra data series instead of displaying the age as labels on the category axis.
- Some candidates displayed the values 1 to 11 on the category axis instead of the age labels.
- Some candidates did not select non-contiguous data and as a result included all the data for the ages 20 to 70.
- A few candidates charted the data for only the two ages 20 and 70 instead of including all ages from 20 to 70.
- Some candidates had capitalisation or typographical errors in the legend labels suggesting the data had not been selected from the data supplied in the source file.
- A small number of candidates presented a bar chart instead of a line chart.

### Question 24

#### Comprehensive responses

- Most candidates labelled the chart accurately with the correct labels on the correct axis.

#### Limited responses

- Some candidates had capitalisation or typographical errors in the labels.
- Some candidates did not attempt to label the chart.

### Question 25

#### Comprehensive responses

- Most candidates placed the chart on the correct slide to the right of the bullets.
- Most candidates displayed the chart with all the data fully visible, no words split and the chart and its contents did not overlap other slide items.

#### Limited responses

- Some candidates placed the chart to the left of the bullets.
- A few candidates placed the chart above or below the bulleted text instead of making room for it to the right of the bullets.
- Some candidates placed the chart on the wrong slide.

### Question 26

#### Comprehensive responses

- Most candidates created a working email link on the correct text with the correct subject line.
- Most candidates provided screenshot evidence clearly showing the linked text, email address and subject.

#### Limited responses

- Some candidates did not apply the link to the correct two words in the source text with a number applying the link to the single word '*trainer*'.
- A few candidates incorrectly applied the link to the slide title '*Using your monthly report*'.
- Some candidates did not key the email address exactly as shown on the question paper.
- Some candidates omitted the subject line, or it contained date entry or capitalisation errors.
- Some candidates did not provide adequate screenshot evidence to demonstrate the link on the correct text. Some provided a screenshot of the text underlined with no evidence of the email link.

## **Question 27**

### **Comprehensive responses**

- Most candidates printed the full presentation in portrait orientation with two slides each filling half the page.

### **Limited responses**

- Some candidates printed the full presentation as single page slides.
- A few candidates printed the full presentation in landscape orientation.

## **Task 5 – Printing the Evidence Document**

### **Comprehensive responses**

- Most candidates printed their evidence document with identification details on every page and the screenshots of sufficient size and clarity to be assessed.

### **Limited responses**

- Some candidates did not include their identification details on every page of the evidence document.
- Some candidates submitted screenshots that were too small and/or faint to be read even using magnification devices.
- Some candidates cropped their screenshots and in doing so removed essential evidence.
- A small number of candidates did not print and submit their evidence document.

# INFORMATION AND COMMUNICATION TECHNOLOGY

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**Paper 0417/31**  
**Practical Test**

## **Key messages**

For this paper the main issues to note are as follows:

- candidates need to understand the importance of following the instructions given in the question paper
- candidates need to take greater care with the accuracy of data entry.

### **What candidates did well**

- Candidates submitted evidence documents with screenshots of naming a cell, restricting data entry in cells, the new folder, html source and the web page in the browser.
- Candidates produced printouts of spreadsheets showing the values and the use of formula.
- Many candidates provided the required spreadsheet printouts using the specified orientation.
- Many candidates produced a screenshot of the web page in the browser window.

### **What candidates needed to improve**

- Screenshots of the evidence needed to be large enough to enable Examiners to read the work without the use of magnification devices.
- Candidates needed to provide a printout of the spreadsheet showing the formula used.
- Several responses used values in the spreadsheet formula. Candidates need to understand the formula should contain references to the cells that contain the values.
- Candidates need to avoid over cropping the browser screenshot and removing the evidence of the address bar.
- Candidates need to understand how to apply data validation to spreadsheet cells to restrict data entry.

## ***Spreadsheets***

### **What candidates did well**

- The spreadsheet was formatted to meet the layout shown in the image.
- The guidance for the formulas was followed.
- The spreadsheet values were printed and spreadsheet formulae with all cells fully visible.

### **What candidates needed to improve**

- Candidates needed to understand how to apply data validation to cells.
- Candidates needed to understand how to name a cell and use the named cell within formula.
- Candidates needed to understand that formulae should include cell references to the data and not the values.
- Candidates need to understand the correct order of mathematical operations (BODMAS) when constructing formula.

## ***File management***

### **What candidates did well**

- Many candidates named the folder accurately.
- Screenshots were provided showing the correct files with the correct information.

### **What candidates needed to improve**

- Candidates need to include the correct information. Some candidates confused height and width with frame height and frame width.
- Screenshots need to be large enough for Examiners to read without the use of magnification devices.

### **Website authoring**

#### **What candidates did well**

- The table structure was created using a single table.
- Many candidates included the html source in the evidence document.

#### **What candidates needed to improve**

- Candidates needed to understand the order of priority when attaching stylesheets to a web page.
- When creating stylesheets candidates needed to understand the difference between defining a style and a class.
- Screenshots need to be large enough for Examiners to read without the use of magnification devices.

### **Comments on specific questions**

#### **Question 1**

##### **Comprehensive responses**

- Candidates entered the correct text in the header of the spreadsheet.
- Candidates entered the correct text in the footer of the spreadsheet.
- Most candidates followed the instructions to enter a space after the text 'Calculated on' followed by the automated date, a space and then the text **at** followed by a space and then the automated date.
- Candidates saved the spreadsheet with the specified name.

##### **Limited responses**

- Some candidates entered a colon after the text 'Calculated by' in the header.
- Some candidates entered a colon after the text 'Calculated on' in the footer.
- Some candidates did not enter spaces between items in the footer.
- In the footer the word **at** was omitted by some candidates.

#### **Question 2**

##### **Comprehensive responses**

- Many responses displayed the formatting of the spreadsheet as given in the question paper.
- Candidates merged the correct cells in the specified rows and added a yellow background to the merged cells.
- Candidates set the font size in row 1 to 28 point and to 18 point in rows 4 and 10.
- Many candidates formatted the cells in column A to be right aligned as shown in the image.
- Many candidates followed the instruction to format the cells in column B to be centre aligned.
- Many candidates followed the instruction to place a thick black border around the merged cell in row 1.
- Text in row 10 was wrapped as shown in the image.

##### **Limited responses**

- Candidates did not add a yellow background to all merged cells. Often row 2 did not include a background fill.
- Some responses did not wrap the text in row 10 as shown in the question paper.
- Some candidates did not align the text to the right in column A or centre align the data in column B.
- Fewer candidates reduced the height of row 3 as shown in the image.

#### **Question 3**

##### **Comprehensive responses**

- Many candidates entered the correct data in the correct cells.

##### **Limited responses**

- A small number of candidates entered text such as '4 metres' and '3.5 metres'.

#### **Question 4**

##### **Comprehensive responses**

- Many candidates used formula that produced the correct outcome. Some candidates used =B5 and =B6. Some candidates used a more complex lookup function to obtain the result.

#### Limited responses

- Some candidates did not use a formula to display the room length and room width and entered the values in the cells.

#### Question 5

##### Comprehensive responses

- Many candidates successfully named the cell and provided a screenshot showing the correct name and cell location in the evidence document.

##### Limited responses

- Some candidates did not name the correct cell and provided evidence of the name as shown in cell A5.

#### Question 6

##### Comprehensive responses

- Many candidates entered formula that produced the correct result.

##### Limited responses

- Some candidates included the use of the SUM function in the formula which was not needed.
- Fewer candidates used the named cell in the formula ( $=\text{Room\_length} * B6$ ).

#### Question 7

##### Comprehensive responses

- Many candidates entered a formula that produced the correct result. Many responses were seen using  $=2 * (B5 + B6)$ , some candidates used  $=2 * B5 + 2 * B6$ .

##### Limited responses

- Fewer candidates used the named cell in the formula  $=2 * (\text{Room\_length} + B6)$ .

#### Question 8

##### Comprehensive responses

- Many candidates successfully entered the correct data in cells B13 and B14.
- Many candidates were able to follow the guidance given and constructed a formula to calculate the area of the room including the bay window.

##### Limited responses

- Some candidates inserted brackets in the wrong place which produced the wrong result for example  $=(B7 + B13) * ((B14) + (B14^2))$ . No brackets were necessary  $=B7 + B13 * B14 + B14^2$  would produce the correct result.

#### Question 9

##### Comprehensive responses

- Many candidates were able to follow the guidance given to enter a formula using the square root function.

##### Limited responses

- Some candidates referenced an incorrect cell when producing the formula.
- Some responses only included the square root brackets around the first part of the formula  $=\text{SQRT}(B14^2) + B14^2$  instead of  $=\text{SQRT}(B14^2 + B14^2)$ .

#### Question 10

##### Comprehensive responses

- Many candidates successfully entered a correct formula from the guidance given to calculate the perimeter of the room including the bay window.

#### Limited responses

- Some candidates misplaced the brackets in the formula  $= (B8-2) * (B14+2) * B16$  which did not produce the correct result. The correct placement of brackets would be  $= B8 - (2 * B14) + (2 * B16)$ .

#### Question 11

##### Comprehensive responses

- Many candidates were able to provide a screenshot to show the correct data validation applied to the correct cell.

##### Limited responses

- Some candidates did not show the cell the data validation had been applied to.
- Some candidates did not set the validation criteria to decimal. Whole number was seen as the criteria to allow.
- Candidates who were not able to restrict the data entry in a cell produced screenshots of cell formatting.
- Some candidates entered formula in the cells in an attempt to restrict the data entry.

#### Question 12

##### Comprehensive responses

- Many candidates were able to provide a screenshot to show the correct data validation applied to the correct cell.

##### Limited responses

- Some candidates did not show the cell the data validation had been applied to.
- Some candidates did not set the validation criteria to decimal. Whole number was seen as the criteria to allow.
- Candidates who were not able to restrict the data entry in a cell produced screenshots of cell formatting.
- Some candidates entered formula in the cells in an attempt to restrict the data entry.

#### Question 13

##### Comprehensive responses

- Many candidates produced a printout of the spreadsheet formula in landscape orientation with row and column headings displayed and all cells fully visible.

##### Limited responses

- Some candidates did not produce a formula printout.

#### Question 14

##### Comprehensive responses

- Many candidates produced a printout of the spreadsheet showing the values in portrait orientation, on a single page, with no row and column headings displayed and all cells fully visible.

##### Limited responses

- Some candidates confused the instruction not to display row and column headings and removed all the row and column titles within the spreadsheet leaving only the data cells visible.

#### Question 15

##### Comprehensive responses

- Many candidates produced a screenshot showing the correct folder name with all required information displayed.

##### Limited responses

- Some candidates over crop the screenshot resulting in the folder name not being visible.
- Some candidates do not include all the required elements of information in the screenshot.

### Question 16

#### Comprehensive responses

- Many candidates created the table structure correctly using a single table.
- Candidates did not include the letters in the final web page.
- Many candidates included the table borders on the final web page.

#### Limited responses

- Some candidates did not set the width of the table accurately. Where the table width was set to 100 per cent it was not possible to see if the table had been right aligned in the web browser.

### Question 17

#### Comprehensive responses

- Many candidates set the title of the web page accurately in the head of the html markup code.

#### Limited responses

- Several responses used the incorrect word or incorrect case when entering the title for the web page for example Fitter Flooring or Flitter flooring.

### Question 18

#### Comprehensive responses

- Many candidates entered the text accurately in the correct cells and applied the correct heading style.

#### Limited responses

- Some candidates did not enter the text accurately, some missing spaces, inconsistent case or entering specialist for specialists.
- Some responses did not show the text with the correct style applied.

### Question 19

#### Comprehensive responses

- Many candidates entered the text accurately and placed their name, centre number and candidate number on a new line.
- Many responses showed the correct style applied to the text.

#### Limited responses

- Some responses were not accurate. Some candidates included a colon at the end of the first line.
- Some candidates did not place their name, centre number and candidate number on a new line.
- Some responses only included the correct style applied to the first line of text.

### Question 20

#### Comprehensive responses

- Many candidates used the video tag to place the video in the correct cell.
- Many responses included an appropriate automated text-based error message.
- Many candidates included the correct image placed in the correct cell.

#### Limited responses

- Some candidates did not close the video tag.
- Some responses did not use the correct syntax to include the loop attribute.
- Some candidates did not use video and source tags and attempted to place the video using <object> or <embed>.
- Some responses included the src and type attributes in the video tag instead of using a source tag.
- Some candidates omitted type="video/mp4" from the source tag.
- Some candidates did not enter the error message between the <video> and </video> tags.
- An alt message was included by some candidates.

## Question 21

### Comprehensive responses

- Many candidates attached the stylesheet correctly in the head section of the html source code.

### Limited responses

- Some candidates included a file path when attaching the stylesheet which would work on the file structure of their computer. It would not work when the web page was uploaded to a web server.

## Question 22

### Comprehensive responses

- The stylesheet was accurately named by many candidates.
- Many candidates correctly attached the stylesheet in the head section of the html source code.
- Many candidates demonstrated a good understanding of creating a stylesheet for the body.
- Many responses included the element correctly named (body) and using the correct structure to declare the margins and background image.
- Many candidates provided a screenshot in the evidence document showing the contents of the stylesheet.

### Limited responses

- Some responses were not named as required with underscores being replaced with commas or spaces.
- Some candidates did not understand the priority order when attaching to the web page. If the stylesheets are not attached in the correct order the web page will not display as expected in the web browser.
- Some candidates included a file path when attaching the stylesheet which would work on the file structure of their computer. This would not work when the web page was uploaded to a web server.
- Some candidates used an incorrect element name for example `background{}`, when creating the declarations for the margins and the background image.
- Some candidates used separate values for the horizontal and vertical repeat for the background image and only included one direction for example `repeat-x` or `repeat-y`.

## Question 23

### Comprehensive responses

- Many candidates included the html source in their evidence document.
- Many responses in the evidence document showed the full web page displayed in a browser window including the address bar.

### Limited responses

- Some candidates did not include the html source code only providing a link to where the source code is stored which cannot be seen by the Examiner.
- Some candidates over cropped the web browser screenshot so the address bar was no longer visible.
- Some screenshots were too small to be read without the need for magnification devices.