edexcel

# Mark Scheme (Results)

## Summer 2015

## Pearson Edexcel GCSE in ICT (5IT03)
## Paper 01 Exploring Digital Design

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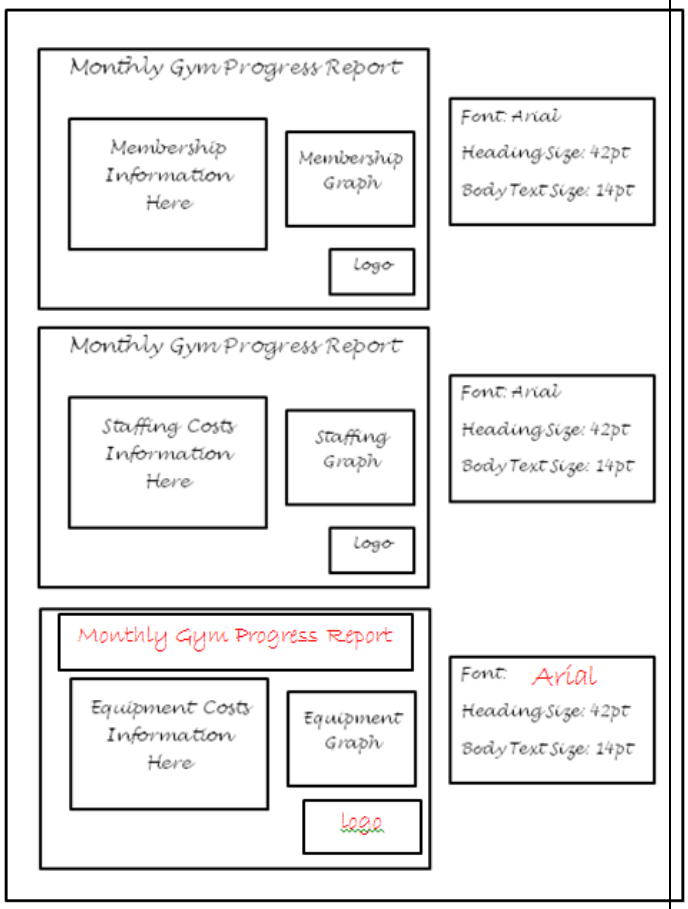
**General Marking Guidance**

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **1** |  | | | |
| **1(a)** | Award **one** mark each for inclusion in storyboard of:<br><br>• 'Monthly Gym Progress Report' at top of slide<br>• Logo in same place as other slides (bottom right)<br>• Font: Arial<br><br>3 x1 | | For all items allow any recognisable spelling<br><br>Accept title and logo with or without border | **3** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **1 (b) (i)** | Any **three** improvements from:<br><br>**1.** Use less text<br>**2.** 'May' and '2015' on same line / Sensible line break in 'Sales Figures (May 2015)'<br>**3.** Format text using bullet points<br>**4.** Present sales figures as a graph or table<br>**5.** Present information and sales figures consistently (both with border / both without)<br>**6.** Add sub-heading (to text) e.g. merchandise sales<br>**7.** Spread text out / better use of white space<br><br>3x1 | | | **3** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **1 (b) (ii)** | Any **three** ways from:<br><br>1. Create / use a template / master slide<br>2. Use same **font** type / styles / sizes throughout<br>3. Use consistent navigation features<br>4. Use consistent transitions<br>5. Logo on all slides<br>6. Use same colour scheme throughout<br><br>3x1 | | Looking for answers relating to internal consistency within a presentation<br><br>'Use house style' gains one mark max if no other feature of house style credited | **3** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **1 (biii)** | D | | | **1** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **1 (c) (i)** | Any **two** reasons from:<br><br>(Clip-art / cartoon) image is not formal enough / would not suit and adult audience (for a business presentation) (1)<br>Cartoon image / not a real gym user / does not show a specific item (1)<br>(Cartoon Image) does not give a positive representation of the gym (1)<br><br>2x1 | | | **2** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **1 (c) (ii)** | D | | | **1** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **1 (c) (iii)** | C | | | **1** |

**Total for Question 1 – 14 marks**

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **2 (a)** | Any **four** improvements from:<br><br>1. Making it easier to follow instructions (make numbered / bulleted list)<br>2. **Explanation** text bigger / easier to read<br>3. Add additional function buttons (e.g. 'menu', 'mute / toggle audio', accessibility function)<br>4. Place a border around text / image<br>5. Use video / animated image / more than one image of exercise<br>6. Add name of exercise<br>7. Add icons to control buttons<br>8. Have app use full screen / hide the notifications bar<br>9. Make logo smaller (to allow more space for text)<br>10. Centre title<br>4x1 | Responses relating to using/adding colour | | **4** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **2 (b) (i)** | Any **one** multimedia feature from:<br><br>1. Video / video player<br>2. Text<br>3. Logo / image<br>1x1 | 'sound' | | **1** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **2 (b) (ii)** | Any **one** interactive feature from:<br><br>1. Button (Home / play / pause / stop)<br>2. Video controls<br>3. Link / hyperlink (to website)<br>1x1 | 'website' on its own<br><br>Volume control | | **1** |

<table>
<tr><th>Question Number</th><th>Answer</th><th>Do not accept</th><th>Additional Guidance</th><th>Mark</th></tr>
<tr><td>2 (c) (i)</td><td>Award one mark for identification of an audio type AND one mark for a suitable example of use within the app.<br><br>
<table>
<tr><th>Audio Type</th><th>Example use</th></tr>
<tr><td>Sound effect (1)</td><td>• Click / feedback sound on navigation buttons (1)<br>• Transition sounds between screens (1)</td></tr>
<tr><td>Sound track (1)</td><td>• Background music to training videos (1)<br>• Beat or similar to give rhythm / timing of exercise (1)</td></tr>
<tr><td>Voice-over / Narration (1)</td><td>• Trainer instructions on training videos (1)<br>• Read the text on a screen (1)<br>• Accessibility (e.g. for a blind user) (1)</td></tr>
</table>
1+1</td><td></td><td>Award mark for a suitable explanation of example use if ‘type’ not identified</td><td>2</td></tr>
</table>

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **2 (c) (ii)** | Any **two** reasons for using an audio codec:<br><br>1. Ensure audio file is in a common format / is supported by a range of devices<br>2. Can specify target file size of audio file<br>3. Can specify / alter sound quality (to suit needs)<br>4. Ensure there are no format licensing problems<br>5. File can be downloaded more quickly<br><br>2x1 | Reduce overall file size of app (in question) | | **2** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **2 (d) (i)** | Any **one** audio type from:<br>• 3gp<br>• aac<br>• au<br>• aud<br>• flac<br>• mp3<br>• m4a<br>• m4p<br>• oga<br>• ogg<br>• Wav<br>• wv<br>• wma<br>• webm<br>1x1 | | Accept appropriate proprietary names (e.g. Real Audio)<br><br>Credit any appropriate additional audio file format | **1** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **2 (d) (ii)** | Any **one** video type from:<br>• 3gp<br>• 3g2<br>• avi<br>• asf<br>• bin<br>• divx /.dvx<br>• f4v<br>• flv<br>• mpg / mpeg / mp4<br>• m2v<br>• m4v<br>• mov<br>• swf<br>• wmv<br>• ogg<br>• ogv<br>• webm<br>• nsv<br>• vob<br>• mkv<br>• qt<br>1x1 | | Accept appropriate proprietary names (e.g. Quicktime)<br><br>Credit any appropriate additional Video file format | **1** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **2 (e)** | Explanation such as:<br>1. Makes it more compatible (1) so can be used with a wider range of devices / operating systems (1)<br>2. No need to install additional software (1) making it more accessible / less complicated for users (1)<br><br>1+1 | | Award **one** mark for 'can be used on more devices' (or similar)<br><br>Allow 'readable' for compatible. | **2** |

**Total for Question 2 – 14 marks**

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **3 (a)** | Entity relationship diagram<br><br>1x1 | | Accept 'ERD' or 'ER model'<br><br>Credit responses that show a clear understanding of 'relationships' | **1** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **3 (b)** | Any **three** additions from:<br><br>1. Drop down list for class code<br>2. Option to select date / day / time they wish to book for<br>3. User instructions / example input text<br>4. Accessibility features (e.g. adjustable fonts, 'read out text' button, contrast)<br>5. Add screen title / product name<br>6. Add a link / navigation button to main menu / other parts of the database<br>7. 'Clear form' button<br>3x1 | | Drop down list must specify appropriate use e.g. class code / session time.<br><br>Drop down list can relate to an appropriate suggested addition. (e.g. time) | **3** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **3 (c)** | | | | |
| | Award **one** mark for inclusion of each of the following:<br><br>• Form title (Trainer Information)<br>• 'Name of trainer' - Data entry field<br>• 'Class taught' – Data entry field<br>• Gym logo<br><br>Award **one** mark for inclusion of a suitable feature that makes the form easier to use such as:<br>• Drop down menu<br>• Radio buttons (e.g. class names)<br>• User instructions<br><br>Award **one** 'design' mark for appropriate sizing and positioning of elements<br><br>6x1 | | If any component is missing allow follow through for appropriate sizing of elements for remaining elements<br><br>'ease of use' features such as drop downs and radio buttons must only be awarded if applied to elements identified in the specification. | **6** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **3 (d)** | Any **three** column headings from:<br>1. Expected outcome<br>2. Actual outcome<br>3. Pass / fail<br>4. Intended action / action taken<br>5. Retest result<br>3x1 | | | **3** |

<table>
<tr><th>Question Number</th><th>Answer</th><th>Do not accept</th><th>Additional Guidance</th><th>Mark</th></tr>
<tr><td>3 (e) (i/ii)</td><td>3ei - One mark for a correct characteristic<br><br>3eii - Up to two marks for a linked explanation<br><br>
<table>
<tr><th>Characteristic</th><th>Explanation</th></tr>
<tr><td>Intended user (employee)</td><td>• They will be using the system (1)<br>• Check it is suitable for their skills / education level (1)<br>• Will be able to identify if it does the things their job requires (1)<br>• Be able to compare it to the current system (1)</td></tr>
<tr><td>High ICT skills</td><td>• Check the more advanced features of the program (1)<br>• Check product is designed in an intuitive way / functions in similar ways to other products (1)<br>• More likely to probe for weaknesses / try to find unofficial shortcuts or functions</td></tr>
<tr><td>Low ICT skills</td><td>• Check ease of use (1)<br>• Check robustness of system (1) as low skilled user is more likely to do something unexpected (1)</td></tr>
<tr><td>Has a disability</td><td>• Check accessibility features work correctly (1)<br>• Ensure products complies with DDA / accessibility standards (1)<br>• Ensure all users can complete the tasks the system is designed for (1)</td></tr>
</table>
1 + 1x2</td><td></td><td></td><td>3</td></tr>
</table>

**Total for Question 3 – 16 marks**

<table>
<tr><th>Question Number</th><th>Answer</th><th>Do not accept</th><th>Additional Guidance</th><th>Mark</th></tr>
<tr><td>4 (a)</td><td>Award one mark for one suitable reason for each property.<br><br>
<table>
<tr><th>File property</th><th>Reason for being suitable</th></tr>
<tr><td>File type .gif</td><td>• Common file type (1)<br>• Compatible with most browsers / software (1)<br>• Supports animation (1)</td></tr>
<tr><td>File size. 150KB</td><td>• Will load quickly (1)<br>• Should be easily accessible on a range of devices / connections (1)</td></tr>
</table>
2x1</td><td></td><td></td><td>2</td></tr>
</table>

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **4 (b)** | Any **two** possible ways of testing accessibility from:<br><br>Test on different:<br>1. devices<br>2. screen sizes<br>3. operating systems<br>4. internet connections (3G / 4G / broadband)<br>5. filtering systems (e.g. Net Nanny, Google safe search etc)<br>6. systems with different accessibility settings<br>2x1 | Test on different browsers | | **2** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **4 (c)** | Any **two** disadvantages of using a codec to compress audio from:<br><br>1. May affect sound quality<br>2. May make it incompatible with some platforms / browsers<br>3. User may need to install additional software (to play the sound)<br>2x1 | | | **2** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **4 (d) (i)** | An explanation of why content may get repurposed such as:<br><br>Create consistency (between products / adverts) (1) makes the gym look more professional / enhance brand recognition (1)<br><br>To avoid compatibility issues (1) as asset will have already have been tested (1)<br><br>May avoid copyright issues (1) as permission for use of an asset may have already been obtained (1)<br><br>May reduce (overall) production costs (1) as paid for content is used for multiple products / less production / designer time needed (1)<br><br>Subsequent products can be produced more quickly (1) as time needed to test / create / seek permission to use assets is reduced (1)<br><br>1+1 | 'looks more professional' on its own | | **2** |

<table>
<tr><th>Question Number</th><th>Answer</th><th>Do not accept</th><th>Additional Guidance</th><th>Mark</th></tr>
<tr><td>4 (d) (ii)</td><td>Award one mark for each correct identification of an inappropriate design criteria (max 2) and one mark for each suitable reason (max 2)<br><br>
<table>
<tr><th>Design criteria</th><th>Reason</th></tr>
<tr><td>File type/format</td><td>• May not be compatible with standard target device platform / O.S.<br>• May need to install additional software to run this file<br>• Potential security flaws in swf format</td></tr>
<tr><td>Timings / Timing of poster 2</td><td>• Inconsistent<br>• may give the presentation a ‘disjointed’ feel<br>• Poster 2 may not be displayed long enough to read the poster.</td></tr>
<tr><td>Navigation</td><td>• The advert should be a ‘rolling’ presentation<br>• The advert is designed for continuous play<br>• Would require user input</td></tr>
</table>
4x1</td><td></td><td></td><td>4</td></tr>
</table>

| Question Number | Indicative Content |
|---|---|
| *** 4(e)**<br><br>**QWC** | Candidate provides discussion of how the designer could involve others, throughout the design and development process to ensure that products are fit for purpose.<br><br>Discussion could include:<br><br>• How the system life cycle phases (Investigation, Analysis, Design, Implementation, Testing and Evaluation) influence the product:<br>o Investigation: Carry out research to establish the likes, dislikes and expectations of users<br>o Analysis: Meetings / discussions with client early in design process to establish success criteria, objectives, design principles etc<br>o Design: Use of early design documentation, such as moodboards and storyboards, to establish design parameters<br>o Implementation: Development of multiple different solutions / drafts at early stages of development to allow users to compare solutions and provide feedback on their effectiveness.<br>o Testing: Selection of suitable test users and their use at different stages of the design and development process.<br>o Evaluation: Communication and review by client and designer refine product as needed |

| Level | Mark | Descriptor |
|---|---|---|
| | **0** | No rewardable material. |
| 1 | **1-2** | The response **may** focus on **only one phase** of the design or development process.<br><br>Using a number of **simple statements**, the response includes techniques / processes that are **mostly suitable** for the phase(s) on which the response focuses.<br><br>The response uses everyday language and the response lacks clarity and organisation. Spelling punctuation and the rules of grammar are used with limited accuracy. |
| 2 | **3-4** | The response considers **different phases** of the design and development process<br><br>The response includes **suitable** techniques / processes for the phases considered.<br><br>The candidate uses some specialist terms and the response shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy. |
| 3 | **5-6** | The response **links different phases** of the design and development process (e.g. testing phase checks that the development matches the design)<br><br>The response **describes the use of suitable** techniques/processes for the phases considered.<br><br>The candidate uses specialist terms consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy. |

**Total for Question 4 – 18 marks**

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **5 (a) (i)** | Any **one** feature from:<br><br>1. Adjustable font **type** / **style**<br>2. Adjustable colour scheme<br>3. Read this page / listen to this page<br>4. Alt text<br>5. Screen reader **support**<br><br>1x1 | | Responses must be about an accessibility feature rather than a design features. E.g. 'the font can be changed by the user' not 'use a different font' | **1** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **5 (a) (ii)** | A suitable explanation of why companies should follow accessibility standards such as:<br><br>A moral / ethical obligation (1) to provide access to all (1) to make the site / business more inclusive (1)<br><br>The law / Digital Discrimination Act (DDA) (1) must be followed (1) or they may get fined (1)<br><br>More / wider spread of people (can access the site) (1) increases potential customers (1) which could increase income / improve reputation (1)<br><br>1+1+1 | | Accept 'EU Equal Treatment Directive' as alternative to DDA<br><br>Accept responses that are phrased in the negative e.g. 'if they do not follow the law' / 'excluding people is not ethical' | **3** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **5 (b) (i)** | Any **four** research areas from:<br><br>1. ICT capability<br>2. Familiarity with the gym's website<br>3. Literacy level of potential users<br>4. Typical layout of online surveys<br>(Accept 'design' for layout)<br>5. Types of questions used in similar online surveys<br>6. Number of people that use the gym<br>7. Aspects of the gym to include in the survey (services, facilities etc.)<br>8. Accessibility requirements<br>9. How user usually access the internet (connection / device)<br>10. How the results will be analysed / used<br>11. Who will use the results<br>12. Typical structure (e.g. branching logic) of online surveys<br><br>4x1 | | | **4** |

<table>
<tr><th>Question Number</th><th>Answer</th><th>Do not accept</th><th>Additional Guidance</th><th>Mark</th></tr>
<tr><td>5 (b) (ii)</td><td>Award one mark for a suitable reason for using each piece of test data.<br><br>
<table>
<tr><th>Test Data</th><th>Reason for choosing this test data</th></tr>
<tr><td>4</td><td>• Check that the field accepts numeric data<br>• Check that a validation rule works (4 year old unlikely to be a gym member / filling out the survey)</td></tr>
<tr><td>35</td><td>• Check field accepts valid 2 digit / expected numeric data</td></tr>
<tr><td>At</td><td>• Check field will reject non- numeric data</td></tr>
<tr><td>1000</td><td>• A non valid age (check that the field will reject this / display an error message)<br>• Checking age entered is within an acceptable range</td></tr>
</table>
4x1</td><td></td><td>Allow responses phrased in negative version of the mark scheme examples e.g. ‘At – will check to see if it does not accept letters’</td><td>4</td></tr>
</table>

| Question Number | Indicative Content |
|---|---|
| *** 5(c)**<br><br>**QWC** | Discussion of how the increase in use of mobile technology to access content has impacted on the design, layout and features of digital products.<br><br>Discussion could include:<br><br>• Need to provide mobile alternatives of websites and applications place additional demands on developers (e.g. additional testing, costs etc.)<br>• Varying screen size / use of zoom requires graphics to be scalable<br>• Careful choice of file format in order to:<br>  ○ control asset (and overall product) file size to cope with potentially being accessed on a mobile / 3g connection<br>  ○ ensure compatibility with a range of devices<br>  ○ ensure wide range of devices can access and display content (e.g. some tablet devices do not support flash /.swf files)<br>• Lower performance specifications (e.g. processor speeds, RAM etc) of mobile devices compared to larger computers may affect the level of content and functionality of mobile applications, to ensure the product still runs smoothly and efficiently<br>• Expectation of users for integration of converged technologies (e.g. location based services, camera, torch)<br>• Security features – consideration of how apps secure content as there is a greater risk of the device being lost / stolen due to it being portable<br>• Notifications – providing options to customise how the app uses available notification systems (e.g. vibrate, blink light etc.) |

| Level | Mark | Descriptor |
|---|---|---|
| | **0** | No rewardable material. |
| 1 | **1-2** | The response **includes general statements** related to design / layout / features of digital products.<br><br>The design / layout / features are **not always relevant** to digital content on mobile devices.<br><br>The candidate uses everyday language and the response lacks clarity and organisation. Spelling punctuation and the rules of grammar are used with limited accuracy. |
| 2 | **3-4** | The response **considers** design / layout / features of digital products.<br><br>The design / layout / features are **mostly relevant** to digital content on **mobile** devices.<br><br>The candidate uses some specialist terms and the response shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy. |
| 3 | **5-6** | The response **links** the '**increased use** of mobile devices to **access** digital content' to the design / layout / features of digital products.<br><br>The response includes **relevant** examples of design / layout / features.<br><br>The candidate uses specialist terms consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy. |

**Total for Question 5 – 18 marks**
**Total for Paper – 80 marks**

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