Mark Scheme (Results)

Summer 2015

Pearson Edexcel GCSE in ICT (5IT01)
Paper 01 Living in a Digital World

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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 1

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01a(i)** | Desktop D | | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01a(ii)** | Desktop A | | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01a(iii)** | Desktop D | | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01b** | Any **one** from:<br>1. Eye strain<br>2. Eyesight damage<br>3. Headaches | Eye damage (without mentioning 'sight') | Effects on health related to eyes must be related to strain / vision / sight | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01c(i)** | Any **two** from:<br>1. Processor<br>2. RAM<br>3. Motherboard<br>4. Storage / Hard drive<br>5. Optical drive<br><br>6. Monitor/Screen size/type/number(multiple)<br>7. Mouse / Graphics tablet<br>8. User interface<br>9. Expansion capability<br>10. Applications / software<br>11. Performance (*see below*)<br><br>Only accept 'performance' if no mark has already been awarded from 1st group. | Screen resolution<br>'Screen' without clarification | Accept proprietary names for software. | **(2)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01c (ii)** | B | | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01d** | Any **three** from:<br>1. USB<br>2. Firewire<br>3. Ethernet<br>4. Audio / Auxiliary cable<br>5. Thunderbolt<br>6. Lightning<br>7. Serial (PS/2, Mini-DIN)<br>8. Parallel<br>9. VGA<br>10. HDMI<br>11. Displayport<br>12. DVI<br>13. eSATA | 'Cable' on its own | | **(3)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01e** | Any **one** from:<br><br>1. Limited storage / takes up a lot of storage<br>2. More storage online<br>3. No remote access<br>4. Data loss, if device damaged/lost | | Accept advantages of storing online as well as disadvantages of storing locally | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01f (i)** | Any **one** from:<br><br>1. To direct data / network traffic<br>2. To allow devices to share an internet/intranet connection<br><br>Accept: To provide internet access<br><br><br>3. To allow devices to share data | | Modern routers usually contain a modem to provide internet access and a switch to allow devices to share data. | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q01f (ii)** | Any **two** from:<br>1. More than 5 characters long<br>2. **Mix** of numbers / letters<br>3. **Mix** of case<br>4. (Includes) special characters<br>5. Not a word linked to Sarah (e.g. not her name / Date of birth)<br>6. Not a common word | • Numbers (on its own)<br>• Letters (on its own) | 1 mark max for giving an example of a correctly formed password.<br>A reference to numbers **and** letters anywhere in the response is enough to gain a mark. | **(2)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q02a** | Any **three** advantages from: <br> 1. Access from anywhere (with connection) <br> 2. Can be shared <br> 3. Synchronise with other devices <br> 4. Don't need to install local software | Access any time | | **(3)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q02b (i)** | B | | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q02b(ii)** | C | | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q02c (i)** | An explanation to include **two** from:<br>1. (Appropriate keywords) are used to match (1)<br>2. image files' metadata/descriptions (1)<br>3. to produce fewer results (1),<br>4. which are more relevant / valid (1) | | | **(2)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q02c (ii)** | Any **three** from:<br>1. Location<br>2. (File) size<br>3. (File) type<br>4. Dimensions<br>5. Colour<br>6. Author<br>7. Copyright licence<br>8. Rating/Popularity/Views/Likes | | | **(3)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| Q02d | C | | | (1) |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| Q02e | Any **one** from:<br>1. Document creation / collaboration<br>2. Online data storage<br>3. Backup<br>4. Email services<br>5. Hosted applications<br>6. Database processing<br>7. Technical support services | Google (on its own)<br>Apple (on its own)<br>etc. | Accept proprietary names | (1) |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| Q02f | Any **two** from:<br>1. Creates more pollution (from increased power consumption) / global warming<br>2. Reduces pollution (from commuting)<br>3. Uses more resources (fuels)<br>4. Uses fewer resources (paper) | Uses more/less energy | Candidates may give both negative and positive impacts if they are qualified.<br>1 mark max if neither point is qualified.<br>e.g. 1 mark awarded for:<br>- reduces pollution<br>- increases pollution | (2) |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| Q03a (i) | D | | | (1) |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| Q03a(ii) | A description to include:<br><br>Encoding/scrambling data (1)<br>so that it can only be accessed with the key / code / can't be accessed without the key / code (1) | | | (2) |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| Q03b | A description to include:<br><br>Sarah's data / information / phone can be accessed / hacked (by unauthorised users) (1) and used for criminal purposes / to breach her privacy (e.g. read her emails) (1) | Sarah can be hacked (without specifying what can be hacked) | 'Access her emails' is not enough for both marks.<br><br>'Access and read her emails' would gain both marks. | (2) |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| Q03c | D | | | (1) |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q03d(i)** | An explanation to include **four** from:<br>1. She is concerned by / doesn't recognise the link / sender (1)<br>2. the link could run a virus / open a phishing site, (1)<br>3. which can put her system / data at risk (1)<br>4. (security) definitions change (1)<br>5. as new threats are released (1)<br>6. and her definitions may be out of date (1) | | Candidates may use the term 'malware' instead of 'virus' | **(4)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q03d(ii)** | Any **two** from:<br>1. **Anti**virus<br>2. **Anti**spyware<br>3. **Anti**phishing<br>4. Firewall<br>5. Spam filter<br>6. Encryption | Proprietary names | **Anti**malware can be awarded a mark if no mark has already been awarded for mark point 1, 2 or 3 | **(2)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q03e(i)** | An explanation to include **three** from:<br>Streaming video requires **lots of** data / bandwidth (1) reducing the bandwidth available to other users (1) negatively affecting the experience of other users (1) | | 'Negatively affecting the experience' may be articulated as 'low internet speed', etc. | **(3)** |

| Question Number | ˇ<br>[]'Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q03e(ii)** | Any **one** from:<br>1. 3G<br>2. 3.5G<br>3. 4G<br>4. LTE / Long term evolution<br>5. Mobile Broadband<br>6. HSPA / High speed packet access<br>7. HSDPA / High speed download / downlink packet access<br>8. HSUPA / High speed upload / uplink packet access | 2G<br>2.5G | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q04a (i)** | **B** | | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q04a(ii)** | An explanation to include:<br><br>Location / position / movement (1) is available to **unwanted** others (1)<br><br>or<br><br>People can track / locate (1) individuals, for inappropriate purposes (1) | | Responses may include examples of 'inappropriate purposes' such as 'stalking' etc. | **(2)** |

| Question Number | 4 | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q04b** | A description to include:<br><br>Photos / blog / site / page / it will (down)load / appear on screen (1)<br><br>faster / so the user does not have to wait (1) | | | **(2)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q04c** | A description to include **two** from:<br><br>1. Visitors' (like) activity will be seen by friends / connections. (1)<br>2. The likes / photographs go viral / spread (through their networks) (1)<br>3. (therefore) friends are more likely to visit the blog/view the photographs (1)<br>4. (because) friends influence each other (more than organisations do) (1) | | | **(2)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q04d** | An explanation to include **three** from:<br><br>Gathering / using data / information (1) used for targeted marketing (1) raises privacy concerns (1) | 'security' (in place of 'privacy') | | **(3)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q04e** | A description to include:<br><br>To receive regular / automatic (1) (content) updates (1)<br>OR<br>They can be (automatically) sent / subscribe to (1) the most recent content / posts / photos (1) | | | **(2)** |

| Question Number | Answer |
|---|---|
| **Q04f**<br>**QWC**<br>**(i-iii)** | Indicative content for a discussion on the rights and responsibilities associated with digital communication.<br>**Legal:**<br>Freedom of speech / expression is an inherent human right<br>Copyright (and fair use) restricts / provides for the use of content<br>Privacy<br>**Moral / ethical**<br>Consideration of audience<br>Unintended audiences (posts about employers on social media may be read by employers / 'Jokes' can be misinterpreted)<br>Netiquette<br>Censorship (restrictive and protective):<br><ul><li>Political / Cultural</li><li>Ineffectiveness of censorship online</li><li>Self censorship and the responsibility of the individual</li></ul>**Complications:**<br>Existing law was not designed for the digital world and so hard to enforce / interpret (e.g. permanence / records of comments)<br>Right to be forgotten.<br>Anonymity<br>Resultant change in culture and law<br>Nature of digital communication facilitates the wide distribution of content. |

| | Level | Mark | Descriptor |
|---|---|---|---|
| | | **0** | No rewardable content |
| | **Level 1** | **1-2** | Candidates will produce brief responses, making a **limited number of simple statements**, probably with a **limited reference** to responsibilities or challenges associated with digital communication. |
| | | | Candidates' responses will be **general**. |
| | | | They have used **everyday language** but their **response lacks clarity and organisation**. Spelling, punctuation and the rules of grammar are used with **limited accuracy**. |
| | **Level 2** | **3-4** | Candidate's responses will be **mostly accurate** and will include **some relevant** responsibilities **or** challenges associated with digital communication. |
| | | | Candidates will have made **some attempt to discuss** the points that they make. |
| | | | They have used **some specialist terms** and their response shows **some focus and organisation**. Spelling, punctuation and the rules of grammar are used with **some accuracy**. |
| | **Level 3** | **5-6** | The candidate will produce a **factually accurate** response that includes relevant responsibilities **and** challenges associated with digital communication. |
| | | | A **discussion** is presented with points developed. |
| | | | They have used **appropriate specialist terms consistently** and the response shows **good focus and organisation**. Spelling, punctuation and the rules of grammar are used with **considerable accuracy**. |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q05a** | • Copyright Design and Patents Act / CDPA<br><br>• Copyright Act | | Ignore year, if given. | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q05b** | Any **three** from:<br>1. Wider audience / Widespread reach of the internet<br>2. Targeted marketing<br>3. Collecting customer's (transactional) data<br>4. Reduced overheads<br>5. Photos can be sold at any time (24/7/365) | Responses related to payment. | | **(3)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q05c(i)** | Any **one** from:<br>1. Lower handling fees / costs<br>2. More customers / more income<br>(Enable users who cannot pay by card to buy photographs)<br>3. Increased customer trust | Cheaper (etc) without expansion | | **(1)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q05c(ii)** | Any **three** from:<br>1. Padlock (symbol)<br>2. 'https' (in address line)<br>3. Colour of address bar<br>4. Verisign® / Norton Secured (etc.) information | | | **(3)** |

| Question Number | Answer | Do not accept | Additional Guidance | Mark |
|---|---|---|---|---|
| **Q05d** | A description to include **four** from:<br>1. Users' previous activity / visits / page views (are stored) (1)<br>2. in cookies, (1)<br>3. read (1)<br>4. then analysed (1)<br>5. then matched (1)<br>6. with other photos that contain similar key data / metadata (1) | | A description of a process requires logically linked responses for maximum marks. Individual statements score 1 marks max.<br><br>Candidates may respond using other examples of transactional data and / or examples of metadata | **(4)** |

| Question Number | Answer |
|---|---|
| **Q05e QWC (i-iii)** | Indicative content for a discussion of the advantages & disadvantages **to Sarah** (photography/travel/blog etc.) of selecting a desktop: |

| Indicative content | Advantages of desktops | Disadvantages of desktops |
|---|---|---|
| **Technology** | Performance of desktop components far outperforms other form factors | Components (processors / hard drive / graphics etc.) are bigger and require more cooling |
| **Portability / New form factors:** | Screen sizes of monitors more suited to image editing. Touchscreen input peripherals are now common making photo work more natural. | Laptops / Tablets / Smartphones: Long battery life, size, weight, user interface, integrated sensors and apps make it easier to work on the move. |
| **Connectivity** | Wired connections are more reliable and often faster. More connectivity options. | - |
| **Upgradability / Servicing** | Desktop form factor is becoming the only one to allow user to do this. | - |
| **Specialism** | Image editing requires the latest performance with increasing demand from new software features that higher quality images. | Convergence removes the need for multiple specialist devices. Many photographers now work purely on mobile digital devices such as smartphones. |
| **Cost** | Desktops can be custom built cheaply | Convergence reduces cost |

| | Level | Mark | Descriptor |
|---|---|---|---|
| | | **0** | No rewardable content |
| | **Level 1** | **1-2** | Candidates will produce brief responses, making a **limited number of simple statements**, probably with a **limited reference** to advantages or disadvantages of desktops or other types of computer. |
| | | | Candidates' responses will be **general and not relevant to Sarah**. |
| | | | They have used **everyday language** but their **response lacks clarity and organisation**. Spelling, punctuation and the rules of grammar are used with **limited accuracy**. |
| | **Level 2** | **3-4** | Candidate's responses will be **mostly accurate** and will include **a number of advantages or disadvantages of desktops**. |
| | | | Candidates will have made **some attempt to form a discussion that is mostly relevant to Sarah** |
| | | | They have used **some specialist terms** and their response shows **some focus and organisation**. Spelling, punctuation and the rules of grammar are used with **some accuracy**. |
| | **Level 3** | **5-6** | The candidate will produce a **factually accurate** response that includes a **range of advantages and disadvantages of desktops and other computers**. |
| | | | A **discussion** that is **directly relevant to Sarah**. |
| | | | They have used **appropriate specialist terms consistently** and the response shows **good focus and organisation**. Spelling, punctuation and the rules of grammar are used with **considerable accuracy**. |