



GCSE MARKING SCHEME

**INFORMATION AND COMMUNICATION
TECHNOLOGY**

JANUARY 2013

INTRODUCTION

The marking schemes which follow were those used by WJEC for the January 2013 examination in GCSE INFORMATION AND COMMUNICATION TECHNOLOGY. They were finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conferences were held shortly after the papers were taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conferences was to ensure that the marking schemes were interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conferences, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about these marking schemes.

UNIT 1

| Question | Answer | Max mark | | | | |
|----------|--|----------|---|----------|-----|----------|
| 1(a) | <p>One mark for each for each correctly ticked answer</p> <table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">2 ✓</td> <td rowspan="3" style="border: 1px solid black; padding: 10px; text-align: center;"> <i>If tick all boxes no marks If tick four boxes then max two marks</i> </td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">3 ✓</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">4 ✓</td> </tr> </table> | 2 ✓ | <i>If tick all boxes no marks If tick four boxes then max two marks</i> | 3 ✓ | 4 ✓ | 3 |
| 2 ✓ | <i>If tick all boxes no marks If tick four boxes then max two marks</i> | | | | | |
| 3 ✓ | | | | | | |
| 4 ✓ | | | | | | |
| 1(b) | <p>One mark for correct ticked box</p> <table style="border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">2 ✓</td> <td style="border: 1px solid black; padding: 10px; text-align: center;"> <i>If more than one box is ticked - no mark</i> </td> </tr> </table> | 2 ✓ | <i>If more than one box is ticked - no mark</i> | 1 | | |
| 2 ✓ | <i>If more than one box is ticked - no mark</i> | | | | | |
| 1(c) | <p>1 mark for type of software x 2 1 mark for use (purpose or data <u>not audience alone</u> x 2)</p> <p>NO BRAND NAMES NOTE parts must match but do not penalise second if first part wrong</p> <p>Database Store details of participants / pupils / marshals / sponsors / parents / etc Search for particular records / runners in year 7 Sort on a named field / on age NOT just 'store data' NOT info NOT keep data safe</p> <p>Computer Control Tags for runners / automatic counters / etc</p> <p>Data logging Recording distances / times / etc</p> <p>Spreadsheets Profit/loss / how much money they make / produce a graph of income / keep track of the money</p> <p>Presentation software / slideshow / multimedia software Make a presentation to: display movies / animations to put in presentation on website / TV train marshals advertise the fun run / advertise route NOT just 'to advertise' - too general and could be DTP NOT just 'to show advertising' NOT just 'to create a presentation' Must at least have a second part that is related to the fun run or presentation software e.g. advertise the fun run with animations and sound would be ok NOT just create videos NOT just take photos / show photos/look through pictures NOT 'create website / create slideshow / create presentation' needs qualification NOT anything that could be word processing software e.g. letters</p> <p>Web authoring Create / maintain website to advertise the fun run</p> <p>Photo editing / graphics Edit photos / touch up pictures to improve them Draw map of course / create logos / images</p> <p>Desktop Publishing/DTP Posters to advertise the fun run, leaflets for parents to inform them of the fun run, flyers</p> <p>Virus protection/firewall software Protect personal data</p> | 4 | | | | |

| | | |
|------|--|---|
| 3(d) | <p>Can access the Internet from all over the home Fewer / No wires Many devices can access the wi fi Don't have to damage walls</p> <p>NOT can be used anywhere – must be the idea of within range NOT just general advantages of broadband e.g. fast speeds</p> | 1 |
| 4(a) | <p>One mark for one of the following output devices: Mobile phone screen Camera screen Digital photo frame Printer Speaker Projector Monitor/Screen</p> <p>NOT Flash, webcam, digital camera, or USB</p> | 1 |
| 4(b) | <p>One mark for naming each <u>different</u> feature and an example of how used x 4 Crop – to remove unwanted parts of the image / make image smaller Zoom – to focus on a certain part of the photo Remove red-eye – for people who wear contact lenses or have red eyes Copy / clone image – to use as a border Add text – to add a caption to an image Edit colours - to make black and white Resize / enlarge / reduce image – to make a photograph fit a frame Change image format / compression – to make a smaller file size Rotate image – to make it stand out Edit brightness – to make a photograph clearer Borders/frames – to draw attention to the content Lighting effects – to emphasise an important aspect Airbrushing – to soften the edges of a photograph Lasoo – to select a specific part of an image</p> <p>NOT add an effect – too vague Accept any reasonable example but NOT the same or similar twice</p> | 4 |
| 5(a) | <p><u>Real-time communication</u>: Chat / talk to friends / Make new friends / Keep in touch with old (school) friends / Make friends in other countries / talk to friends and family <u>Delayed time messaging</u></p> <ul style="list-style-type: none"> • Email / messages • Comments / wall post • Tweet <p><u>Status</u></p> <ul style="list-style-type: none"> • Check friends status/Update status <p><u>Services</u></p> <ul style="list-style-type: none"> • Reminders • Advertise events, services and products • Games • Join group / join a specific interest group • Videoconferencing NOT Skype <p><u>Location</u> Locate friends / gps / share location</p> | 2 |

| | | |
|------|--|----------|
| 5(b) | <p>Answer must state what the danger is</p> <p>Paedophiles / grooming Identity theft Cyber bullying Employers may use content against you Hate sites Trolling</p> <p>NOT Viruses/hacking/health problems - must be specific to social networking NOT just 'People might not be who they say they are' NOT just you don't know who you are talking to – must be qualified with a consequence (e.g.) You don't know who you are talking to so you might arrange to meet them and they attack you.</p> | 1 |
| 6a) | <p>One mark each for up to two sensors:</p> <p>Heat/temperature sensor/ thermistor Air Pressure sensor Rain / rainfall Wind (speed) / Wind (direction) Light sensor Humidity / moisture Sunshine hours / irradiance Electrochemical sensor</p> | 2 |
| 6(b) | <p>Knowledge Information Data</p> | 3 |
| 6(c) | <p>One mark each for two of:</p> <p>Using icons / graphics / weather symbols Video / animations / simulations / games Text / messages about the weather Numbers / spreadsheets / tables / database Maps / satellite Graphs / charts</p> | 2 |
| 7(a) | 8 | 1 |
| 7(b) | 7 | 1 |
| 7(c) | To uniquely identify the player / to make each record unique / unique identifier | 1 |
| 7(d) | Number / integer | 1 |
| 7(e) | <p>One mark for:</p> <p>The date of birth (DOB) is incorrect for A Evans / There are not 38 days in March / There are only 31 days in March / 38/03/1975 NOTE: DOB needs to identify the record</p> <p>Check if the database has been annotated to show the error i.e. identification of the months as being wrong by circling, etc</p> <p>One mark for each of:</p> <p>Range check / Drop down list (1) The day should be between 1 and 31. (1)</p> | 3 |

| 7(f) | <p>One mark for each correct field and search criteria x2 One mark if both fields are correct but search criteria incorrect One mark if both search criteria are correct but fields are incorrect Search criteria must be spelt correctly</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Logical Operator</th> <th>Search Criteria</th> </tr> </thead> <tbody> <tr> <td>Player Type</td> <td>=</td> <td>Junior</td> </tr> <tr> <td>Fees Paid</td> <td>=</td> <td>No</td> </tr> </tbody> </table> | Field | Logical Operator | Search Criteria | Player Type | = | Junior | Fees Paid | = | No | 2 |
|---|---|-----------------|---|-----------------|-------------|---|--------|-----------|---|----|----------|
| Field | Logical Operator | Search Criteria | | | | | | | | | |
| Player Type | = | Junior | | | | | | | | | |
| Fees Paid | = | No | | | | | | | | | |
| 7g) | 1126 Correct answer only | 1 | | | | | | | | | |
| 8(a) | October | 1 | | | | | | | | | |
| 8(b) | A =SUM(C2:G2) | 1 | | | | | | | | | |
| 8(c) | <p>One mark for: = B7-H7 or = B7-(C7+D7+E7+F7+G7) (Needs brackets) = B7-SUM(C7:G7) (= not necessary)</p> | 1 | | | | | | | | | |
| 8(d) | <p>One mark each for two of:</p> <p>Accurate/correct calculations Automatic re-calculation Save formula and data Do 'what ifs' Draw graphs Replication NOT 'can do sums' NOT 'faster' NOT 'easier' NOT just Automatic calculations</p> | 2 | | | | | | | | | |
| 8(e) | <p>One mark for:</p> <table border="1"> <tr> <td>3✓</td> </tr> </table> <table border="1"> <tr> <td><i>If more than one box is ticked - no mark</i></td> </tr> </table> | 3✓ | <i>If more than one box is ticked - no mark</i> | 1 | | | | | | | |
| 3✓ | | | | | | | | | | | |
| <i>If more than one box is ticked - no mark</i> | | | | | | | | | | | |

| 9 | <p>One mark for each hazard and matching prevention.</p> <table border="1"> <thead> <tr> <th>Health hazard</th> <th>Prevention</th> </tr> </thead> <tbody> <tr> <td>Neck strain</td> <td>Have eyes at same level as screen Adjust monitor height / screen at suitable angle Use <u>adjustable</u> chairs NOT comfortable chair NOT correct posture NOT sit up straight</td> </tr> <tr> <td>Repetitive strain injury / Carpal tunnel syndrome / wrist ache / wrist strain NOT arthritis</td> <td>Wrist and feet supports / arm supports Ergonomic keyboards Regular joint exercise Key in with your wrist straight NOT just 'take breaks' must have time element</td> </tr> <tr> <td>Epileptic fits</td> <td>Screens to reduce screen flicker</td> </tr> <tr> <td>Radiation</td> <td>Screen filters</td> </tr> <tr> <td>Headaches</td> <td>Take regular breaks / screen filters NOT take breaks NOT short breaks - must have time element</td> </tr> <tr> <td>Circulation problems</td> <td>Take regular breaks NOT take breaks - must have time element</td> </tr> <tr> <td>Back problems / back ache</td> <td>Use <u>adjustable</u> chairs / foot supports Take regular breaks NOT comfortable chair NOT correct posture NOT sit up straight</td> </tr> <tr> <td>Eye strain / Straining of eyes Eye damage / sore eyes Eye + negative effect NOT 'square eyes' NOT eye problems</td> <td>Screen filters / take regular breaks / have eyes at same level as screen / adjust angle of screen / eyes at safe distance / look away / refocus eyes NOT Don't sit too close / don't sit too far away NOT wear glasses / go to opticians</td> </tr> <tr> <td colspan="2"> <p>Do not give same prevention twice Prevention must match for second mark NOT get fat / heart disease NOT Don't sit / spend too long at computer NOT electrocution NOT trip up over cables NOT spill drinks NOT Bacteria NOT couch potato syndrome</p> </td> </tr> </tbody> </table> | Health hazard | Prevention | Neck strain | Have eyes at same level as screen Adjust monitor height / screen at suitable angle Use <u>adjustable</u> chairs NOT comfortable chair NOT correct posture NOT sit up straight | Repetitive strain injury / Carpal tunnel syndrome / wrist ache / wrist strain NOT arthritis | Wrist and feet supports / arm supports Ergonomic keyboards Regular joint exercise Key in with your wrist straight NOT just 'take breaks' must have time element | Epileptic fits | Screens to reduce screen flicker | Radiation | Screen filters | Headaches | Take regular breaks / screen filters NOT take breaks NOT short breaks - must have time element | Circulation problems | Take regular breaks NOT take breaks - must have time element | Back problems / back ache | Use <u>adjustable</u> chairs / foot supports Take regular breaks NOT comfortable chair NOT correct posture NOT sit up straight | Eye strain / Straining of eyes Eye damage / sore eyes Eye + negative effect NOT 'square eyes' NOT eye problems | Screen filters / take regular breaks / have eyes at same level as screen / adjust angle of screen / eyes at safe distance / look away / refocus eyes NOT Don't sit too close / don't sit too far away NOT wear glasses / go to opticians | <p>Do not give same prevention twice Prevention must match for second mark NOT get fat / heart disease NOT Don't sit / spend too long at computer NOT electrocution NOT trip up over cables NOT spill drinks NOT Bacteria NOT couch potato syndrome</p> | | 6 |
|--|--|---------------|------------|-------------|---|---|--|----------------|----------------------------------|-----------|----------------|-----------|---|----------------------|--|---------------------------|--|--|---|--|--|---|
| Health hazard | Prevention | | | | | | | | | | | | | | | | | | | | | |
| Neck strain | Have eyes at same level as screen Adjust monitor height / screen at suitable angle Use <u>adjustable</u> chairs NOT comfortable chair NOT correct posture NOT sit up straight | | | | | | | | | | | | | | | | | | | | | |
| Repetitive strain injury / Carpal tunnel syndrome / wrist ache / wrist strain NOT arthritis | Wrist and feet supports / arm supports Ergonomic keyboards Regular joint exercise Key in with your wrist straight NOT just 'take breaks' must have time element | | | | | | | | | | | | | | | | | | | | | |
| Epileptic fits | Screens to reduce screen flicker | | | | | | | | | | | | | | | | | | | | | |
| Radiation | Screen filters | | | | | | | | | | | | | | | | | | | | | |
| Headaches | Take regular breaks / screen filters NOT take breaks NOT short breaks - must have time element | | | | | | | | | | | | | | | | | | | | | |
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| <p>Do not give same prevention twice Prevention must match for second mark NOT get fat / heart disease NOT Don't sit / spend too long at computer NOT electrocution NOT trip up over cables NOT spill drinks NOT Bacteria NOT couch potato syndrome</p> | | | | | | | | | | | | | | | | | | | | | | |
| 10(a) | <p>Two marks for any of: Date of concert Venue/destination Cost Method of payment / credit card details Order reference number Name of group/artist No of tickets purchased/required <u>Location in theatre:</u> Seat number / type of seat (standard / VIP) / stall or circle Do you have an online account / previous customer Promotion code / voucher / discount code</p> <p>Any reasonable answer but NOT contact details / email / address / postcode, etc NOT Date of birth / age / gender NOT have you paid</p> | 2 | | | | | | | | | | | | | | | | | | | | |

| | | |
|-----------|---|----------|
| 10(b)(i) | <p>One mark for any two advantages to customer from: <i>Do NOT accept anything which could be done by phone</i> Avoids double booking (ONLY accept once) Can book 24/7 (ONLY accept once) Can choose seat Compare prices to get best deal Easier for <u>disabled</u> who don't have to leave home to book Read online reviews before booking Can check availability before booking Save on travel costs (must be qualified) e.g. of going to the theatre to book Save travel <u>time</u> (must be qualified) e.g. rather than going to the theatre to book / Do not have to queue inside a theatre On-line discounts Can select alternative performances E-tickets / print tickets / tickets arrive instantly / tickets do not get lost in post Can get advanced notification and pre general release options Can set up <u>online quick buy accounts</u> so faster to buy tickets</p> <p>NOT just faster/faster to buy NOT just easy/'easier to book' NOT 'do not have to leave the comfort of your home'/'do it from home' must be qualified</p> | 2 |
| 10(b)(ii) | <p>One mark for advantage to company from: Avoids double booking (Do NOT give if accepted for 10(b)(i)) Easier to deal with queries from customers Wider audience Can book 24/7 / anytime (Do NOT give if accepted for 10(b)(i)) Look at <u>up to date</u> sales patterns Can target customers with email offers</p> <p>NOT less staff NOT money goes straight into account NOT make more money</p> | 1 |

| | | |
|----|--|---|
| 11 | <p>Teachers can upload content – Presentations, assignments, revision, lesson plans to support other teachers</p> <p>Messaging: Communicate between teachers and students / teachers and teachers / put up notices / bulletins / blogs / podcasts / forums</p> <p>Homework can be set and received</p> <p>Tests / quizzes / revision / fun learning games / online assessment / Self-assessment / instant feedback on tests / Teachers can generate reports / test results</p> <p>Simulations</p> <p>Online tutorials / videos</p> <p>Tracking Teacher can use log to track pupil work record / can track pupil progress over time NOT in the sense that a teacher can watch what you are doing in real-time</p> <p>Condone the following as uses: Can access from home or <u>anywhere</u> with internet access / e-mail your work home Keep <u>up to date</u> if <u>home ill</u> / teachers can send work home if ill Learning can <u>take place anytime</u>, <u>Flexible working</u> Go over it again as many times as you want / work at their own pace Parents can check pupil progress</p> <p>NOT registration Vague answers like interactive learning / faster access / helpful / easy, should not be given credit</p> | 3 |
| 12 | <p>7-9 marks Candidates give a clear, coherent answer fully and accurately describing three registration methods giving different advantages and disadvantages. They use appropriate terminology and accurate spelling, punctuation and grammar.</p> <p>4-6 marks Candidates describe aspects of two different registration methods and some advantages and disadvantages but responses lack clarity. There are a few errors in spelling, punctuation and grammar</p> <p>1-3 marks Candidates simply give a brief description of one or more registration methods and may not give advantages or disadvantages. The response lacks clarity and there are significant errors in spelling, punctuation and grammar.</p> <p>0 marks No valid response.</p> <p>Guidance For each method - One mark for description of how data is captured and one mark for an advantage or a disadvantage. Up to three marks available for further advantages or disadvantages.</p> <p>Indicative content</p> <p>Smart Cards / Swipe cards Plastic cards that contain a chip / cards are swiped through a reader</p> <p>Advantages Can be used for many other school facilities – e.g. library, canteen and access to buildings Cost can be lower than other methods of registration Instant registration / results get sent to office immediately / real time</p> <p>Disadvantages Can be lost easily Can be used by pupil's friends to swipe them in / truancy</p> <p>Biometric Methods Fingerprint (thumbprint) recognition / retinal scanning / iris recognition ONLY allow one biometric response</p> | 9 |

| | | |
|--|--|-----------|
| | <p>Advantages Unique Cannot forget or lose it like a card No-one else can register for you Real time registration</p> <p>Disadvantages Expensive scanners Privacy issues / misuse (DPA) Dirt causes problems</p> <p>OMR Mark made on sheet about whether absent or present</p> <p>Advantages Sheets scanned in Cost can be lower than other methods of registration</p> <p>Disadvantages Damaged sheets or sheets with extra marks causes delays / have to be entered manually</p> <p><u>Online / Computer Registration (data entry into an MIS system NOT SIMS on its own)</u> <u>DO NOT allow if similar to OMR</u> Teacher registers pupils by computer/device/online</p> <p>Advantages Can be accessed by all teaching staff</p> <p>Disadvantages Takes up teaching time / staff time Staff training</p> <p><u>Others include RFID tags or radio systems</u> <u>NOT spreadsheet / database to register pupils</u></p> <p><u>One mark for any of the general advantages and disadvantages</u> <u>General advantages applying to all systems</u> Accurate attendance figures Reduces truancy Attendance figures worked out automatically Always know where pupils are Can study trends and patterns of attendance / know if pupils are frequently late and absent Automatic SMS messages to parents</p> <p><u>General Disadvantages</u> Reliance on system</p> <p>NO repeated advantages and disadvantages</p> | |
| | TOTAL | 80 |

UNIT 3

| | | | | | | | | | | | | | | | | |
|-------|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | <p>One mark for each correct ticked box</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td style="padding: 2px;">1</td><td style="text-align: center; padding: 2px;">✓</td><td style="padding: 2px;">5</td></tr> <tr><td style="padding: 2px;">2</td><td style="padding: 2px;"></td><td style="padding: 2px;">6</td><td style="text-align: center; padding: 2px;">✓</td></tr> <tr><td style="padding: 2px;">3</td><td style="padding: 2px;"></td><td style="padding: 2px;">7</td><td style="text-align: center; padding: 2px;">✓</td></tr> <tr><td style="padding: 2px;">4</td><td style="text-align: center; padding: 2px;">✓</td><td style="padding: 2px;">8</td></tr> </table> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><i>If tick all boxes no marks If tick two boxes in a row, i.e. 1 and 5, 2 and 6, 3 and 7, 4 and 8, then no mark for that row</i></p> </div> | 1 | ✓ | 5 | 2 | | 6 | ✓ | 3 | | 7 | ✓ | 4 | ✓ | 8 | 4 |
| 1 | ✓ | 5 | | | | | | | | | | | | | | |
| 2 | | 6 | ✓ | | | | | | | | | | | | | |
| 3 | | 7 | ✓ | | | | | | | | | | | | | |
| 4 | ✓ | 8 | | | | | | | | | | | | | | |
| 2a | <p>Mouse / Graphics tablet / Light pen / Joystick / Touch screen / Touchpad / Trackball</p> | 1 | | | | | | | | | | | | | | |
| 2b | <p>One mark for each correct ticked box</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td style="padding: 2px;">1</td><td style="text-align: center; padding: 2px;">✓</td><td style="padding: 2px;">5</td></tr> <tr><td style="padding: 2px;">2</td><td style="padding: 2px;"></td><td style="padding: 2px;">6</td><td style="text-align: center; padding: 2px;">✓</td></tr> <tr><td style="padding: 2px;">3</td><td style="text-align: center; padding: 2px;">✓</td><td style="padding: 2px;">7</td></tr> <tr><td style="padding: 2px;">4</td><td style="padding: 2px;"></td><td style="padding: 2px;">8</td><td style="text-align: center; padding: 2px;">✓</td></tr> </table> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><i>If tick all boxes no marks If tick two boxes in a row, i.e. 1 and 5, 2 and 6, 3 and 7, 4 and 8, then no mark for that row</i></p> </div> | 1 | ✓ | 5 | 2 | | 6 | ✓ | 3 | ✓ | 7 | 4 | | 8 | ✓ | 4 |
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| 3 | ✓ | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | |
| 2cii | <p>Any one of:</p> <ul style="list-style-type: none"> • Faster uploads/downloads • Smaller files / saves memory/storage NOT Save space | 1 | | | | | | | | | | | | | | |
| 3a | <p>One mark for each correct letter</p> <p>C D A B</p> | 4 | | | | | | | | | | | | | | |
| 3b | <p>A story board is a plan – 1 mark</p> <p>Any one of: Frame-by-frame Comic book Scene-by-scene Detailing key elements Sequence/order of events</p> | 2 | | | | | | | | | | | | | | |
| 4a | <p>Local Area Network Wide Area Network</p> | 1 1 | | | | | | | | | | | | | | |
| 4aiii | <p>One mark for each correct ticked box</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <tr><td style="padding: 2px;">1</td><td style="text-align: center; padding: 2px;">✓</td><td style="padding: 2px;">5</td></tr> <tr><td style="padding: 2px;">2</td><td style="text-align: center; padding: 2px;">✓</td><td style="padding: 2px;">6</td></tr> <tr><td style="padding: 2px;">3</td><td style="text-align: center; padding: 2px;">✓</td><td style="padding: 2px;">7</td></tr> <tr><td style="padding: 2px;">4</td><td style="padding: 2px;"></td><td style="padding: 2px;">8</td><td style="text-align: center; padding: 2px;">✓</td></tr> </table> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p><i>If tick all boxes no marks If tick two boxes in a row, i.e. 1 and 5, 2 and 6, 3 and 7, 4 and 8, then no mark for that row</i></p> </div> | 1 | ✓ | 5 | 2 | ✓ | 6 | 3 | ✓ | 7 | 4 | | 8 | ✓ | 4 | |
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| 3 | ✓ | 7 | | | | | | | | | | | | | | |
| 4 | | 8 | ✓ | | | | | | | | | | | | | |

| | | | | | | | | |
|------|--|--------|-----|-----|---|-----|---|---|
| 4b | Bus / Bus network Condome Line | 1 | | | | | | |
| 4c | (i) Switch (ii) Bridge | 1 1 | | | | | | |
| 4d | Links a LAN to a WAN Links two <u>dissimilar</u> networks Translates between two different <u>types</u> of network | 1 | | | | | | |
| 4e | 1 mark for each stage x 4 MUST be the idea that the process is automatic or computer generated not manual. If answer too vague do not award mark. <ul style="list-style-type: none"> • Scan barcode / product is scanned - must have idea of scanning • Lookup price / match in database / displays or gets price on bill / display price on screen NOT just 'recognises it' • Deduct one from stock level / number of items bought are deducted / NOT just 'stock number updated' - must have idea of reduction • Compare number in stock with re-order level / restock level. If re –order level / restock level reached then..... / gets to a certain level / goes below a certain number NOT just 'when stock gets low' Automatic re-order / computer re-orders / NOT automatically sends a warning to manager | 4 | | | | | | |
| 4f | Any two of: <ul style="list-style-type: none"> • Share software • Share data • Easier to communicate • Central backup • Easier to monitor network activity • Centrally controlled security | 2 | | | | | | |
| 5a | One mark for each correct ticked box <table border="1" style="display: inline-table; vertical-align: top;"> <tr><td>1</td></tr> <tr><td>2 ✓</td></tr> <tr><td>3 ✓</td></tr> <tr><td>4</td></tr> <tr><td>5 ✓</td></tr> <tr><td>6</td></tr> </table> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; width: fit-content;"> <p><i>If tick all boxes no marks</i> <i>If tick five boxes then max one mark</i> <i>If tick four boxes then max two marks</i></p> </div> | 1 | 2 ✓ | 3 ✓ | 4 | 5 ✓ | 6 | 3 |
| 1 | | | | | | | | |
| 2 ✓ | | | | | | | | |
| 3 ✓ | | | | | | | | |
| 4 | | | | | | | | |
| 5 ✓ | | | | | | | | |
| 6 | | | | | | | | |
| 5bi | Digital | 1 | | | | | | |
| 5bii | Analogue | 1 | | | | | | |
| 6a | Check data is sensible / reasonable / within stated ranges | 1 | | | | | | |
| 6b | Validation Technique A: Hash total (1), to add meaningless data (1) NOT unnecessary / irrelevant data Validation Technique B: Batch total (1), to add purposeful data (1) NOT necessary / relevant data | 2 2 | | | | | | |

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|------|---|---|
| 8c | <p>Command line (interface)</p> <p><i>Accept CLI</i></p> <p>NOT 'Command prompt' or 'Command'</p> | 1 |
| 8d | <p>Any two of:</p> <ul style="list-style-type: none"> • Each individual has unique biometric characteristics • It's difficult to forge biometric properties • A biometric property of an individual cannot be lost • Biometric properties cannot be shared • Eliminate problems caused by lost IDs or forgotten passwords • Reduce password administration costs • Replaces hard to remember passwords which may be shared or observed by others • Speed of inputting data NOT quicker / faster / easier | 2 |
| 9ai | <p>Any three of:</p> <ul style="list-style-type: none"> • Data holders should protect the data against loss, theft or corruption • Data must be accurate and where relevant kept up to date • Data to be adequate, relevant, not excessive • Not to be transferred outside EU to countries without adequate provision • Data must be fairly and lawfully processed • Data must be processed within the rights of subjects • Data must be deleted when no longer needed • Data can only be used for the purpose collected <p><i>Accept slightly different wording if answer given is clear</i></p> | 3 |
| 9aia | <p>Any two of:</p> <ul style="list-style-type: none"> • the prevention or detection of crime • the capture or prosecution of offenders • the assessment or collection of tax or duty • personal data by an individual for the purposes of their personal, family or household affairs • national security and the armed forces • personal data that is processed only for journalistic, literary or artistic purposes • personal data that is processed only for research, statistical or historical purposes • personal data relating to an individual's physical or mental health • personal data that consists of educational records or relates to social work • personal data relating to human fertilisation and embryology • adoption records • statements of a child's special educational needs • personal data processed for, or in connection with, a corporate finance service • examination marks and personal data contained in examination scripts • personal data processed for the purposes of making judicial, Crown, or Ministerial appointments <p>MUST BE AN EXEMPTION NOT THE PERSON OR ORGANISATION THAT IS EXEMPT</p> | 2 |

| | | |
|-----|---|----|
| 11a | Teleworking means working from home <u>using ICT</u> | 1 |
| 11b | <p>8-10 marks Candidates give a clear, coherent answer giving advantages and disadvantages of teleworking for both the employer and employee. They use appropriate terminology and accurate spelling, punctuation and grammar.</p> <p>4-7 marks Candidates give advantages and disadvantages of teleworking but may not cover both the employer and employee. There are a few errors in spelling, punctuation and grammar.</p> <p>1-3 marks Candidates list some advantages and/or disadvantages of teleworking. The response lacks clarity and there are significant errors in spelling, punctuation and grammar.</p> <p>0 marks No valid response.</p> <p>Indicative content</p> <p>Advantages for the employee</p> <ul style="list-style-type: none"> • No expenses for travelling to work • No time wasted commuting • Employees do not have to relocate for their work / can live anywhere • Convenient for people with a disability • No need for long journeys / traffic / stressful commutes • Work can be fitted around family commitments • Employees can choose their own hours <p>NOT no need to leave home – must be qualified</p> <p>Disadvantages for the employee</p> <ul style="list-style-type: none"> • Employee may feel isolated both living and working at home • The boundary between both home and work is lost • More competition for jobs / Wider geographic range of applicants • Other people living in the house may disturb the employee • Office space required at home • No colleagues to socialise with • Utility bills increase for heating, etc. • Employees may have to pay for and maintain their own equipment <p>Advantages for the employer</p> <ul style="list-style-type: none"> • Fewer backup staff needed, e.g. Cleaners • Staff less likely to spend time off work sick • Less office furniture needed • Less office space needed • Reduced office overheads (gas, electricity, office premises) • Staff may be more productive if they can choose their own hours / work from the comfort of their own home <p>Disadvantages for the employer</p> <ul style="list-style-type: none"> • Hard to monitor how hard staff are working • Harder for managers to manage the work • Increased number of sites for the network may create a security risk • Employers may have to pay for and maintain their employees equipment (NOT TWICE) • Harder to conduct meetings • Change to organisational structure may be needed. <p>Must cover one from each section to gain max marks.</p> | 10 |



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