



Mark Scheme (Results)

Summer 2025

Pearson Edexcel International Advanced  
Subsidiary in Information Technology (WIT11)  
Paper 1

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Summer 2025

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Question number	Answer	Additional guidance	Mark
1(a)(i)	<p>Award <b>one</b> mark for any of the following up to a maximum of <b>two</b> marks:</p> <ul style="list-style-type: none"> <li>• There is no/weak physical public infrastructure/broadband/service available / remote location (1)</li> <li>• There is <b>no money</b> to buy/replace/upgrade computers/smartphones/devices/services (1)</li> <li>• Lack of knowledge/inability to adapt to new technology (due to age) (1)</li> <li>• Cultural/religious/language/censorship/governmental issues (1)</li> <li>• Physical/mental/age-related disability (1)</li> </ul>	<p>Award marks where a response can be mapped to an individual bullet</p> <p>Award example if it can be mapped to a single bullet</p> <p>Do not award the same bullet twice</p> <p>Do not award MP1 where the meaning of the term 'device' is not clearly public infrastructure</p> <p>Do not award MP2 for lack of 'devices' without a tie to money</p>	<b>2</b>

Question number	Answer	Additional guidance	Mark
1(a)(ii)	<p><b>The only correct answer is B</b></p> <p><i>A is not correct because <b>convergence</b> is the concept of different technologies being packaged together into a single device.</i></p> <p><i>C is not correct because <b>digital media</b> is the physical medium over which network packets are transmitted</i></p> <p><i>D is not correct because <b>unstructured data</b> is data that requires interpretation</i></p>		<b>1</b>

Question number	Answer	Additional guidance	Mark
1(a)(iii)	<p>Award <b>one</b> mark for any of the following:</p> <ul style="list-style-type: none"> <li>• Convert human readable URLs/web page identifiers to network/IP addresses (1)</li> <li>• Look up the (domain in the) URL to get the IP address of the server (that will be sent a request for a web page) (1)</li> <li>• Maintains a database/table of IP addresses and their associated domain names/URLs (1)</li> </ul>	Needs the concept of mapping between URL and IP address	<b>1</b>

Question number	Answer	Additional guidance	Mark
1(b)	<p>Award <b>one</b> mark for any of the following up to a maximum of <b>two</b> marks:</p> <ul style="list-style-type: none"> <li>• All nodes have equal status/act as both a server and a client</li> <li>• There is no (central) server / decentralised / no computer has control over the network (1)</li> <li>• Nodes store their own files/control printers (1)</li> <li>• Nodes mark shared resources as public (1)</li> <li>• It does not require specialist knowledge/technicians to set up (1)</li> <li>• Should one node fail, the access to the public resources on other nodes is not affected (1)</li> </ul>	<p>Accept peer/computer instead of node</p> <p>Award marks where a response can be mapped to an individual bullet</p> <p>Allow Bluetooth for bullet 2</p> <p>Do not award:</p> <ul style="list-style-type: none"> <li>• Cost</li> <li>• Speed</li> <li>• Scalability</li> <li>• Need/no need for wired/wireless</li> </ul>	<b>2</b>

Question number	Answer	Additional guidance	Mark																																																														
1(c)	<p>Award <b>one</b> mark for each <b>two</b> correct cells:</p> <table border="1" data-bbox="329 304 1317 1086"> <thead> <tr> <th colspan="2" data-bbox="329 304 560 651"></th> <th colspan="4" data-bbox="566 304 1317 368">Component description</th> </tr> <tr> <th colspan="2" data-bbox="329 651 560 1086" rowspan="7">Network component</th> <th data-bbox="566 368 750 651">Works at the <b>physical layer</b> of the OSI model</th> <th data-bbox="757 368 940 651"><b>Filters</b> traffic to allow some to pass and others not to pass</th> <th data-bbox="947 368 1131 651">Forwards <b>all</b> network traffic</th> <th data-bbox="1137 368 1317 651">Filters and forwards traffic between two <b>different</b> network protocols</th> </tr> </thead> <tbody> <tr> <td data-bbox="418 655 560 719">Hub</td> <td data-bbox="566 655 750 719">✓</td> <td data-bbox="757 655 940 719"></td> <td data-bbox="947 655 1131 719">✓</td> <td data-bbox="1137 655 1317 719"></td> </tr> <tr> <td data-bbox="418 724 560 788">Repeater</td> <td data-bbox="566 724 750 788">✓</td> <td data-bbox="757 724 940 788"></td> <td data-bbox="947 724 1131 788">✓</td> <td data-bbox="1137 724 1317 788"></td> </tr> <tr> <td data-bbox="418 793 560 857">Switch</td> <td data-bbox="566 793 750 857"></td> <td data-bbox="757 793 940 857">✓</td> <td data-bbox="947 793 1131 857"></td> <td data-bbox="1137 793 1317 857"></td> </tr> <tr> <td data-bbox="418 861 560 925">Bridge</td> <td data-bbox="566 861 750 925"></td> <td data-bbox="757 861 940 925">✓</td> <td data-bbox="947 861 1131 925"></td> <td data-bbox="1137 861 1317 925"></td> </tr> <tr> <td data-bbox="418 930 560 994">Router</td> <td data-bbox="566 930 750 994"></td> <td data-bbox="757 930 940 994">✓</td> <td data-bbox="947 930 1131 994"></td> <td data-bbox="1137 930 1317 994"></td> </tr> <tr> <td data-bbox="418 999 560 1086">Gateway</td> <td data-bbox="566 999 750 1086"></td> <td data-bbox="757 999 940 1086">✓</td> <td data-bbox="947 999 1131 1086"></td> <td data-bbox="1137 999 1317 1086">✓</td> </tr> </tbody> </table>			Component description				Network component		Works at the <b>physical layer</b> of the OSI model	<b>Filters</b> traffic to allow some to pass and others not to pass	Forwards <b>all</b> network traffic	Filters and forwards traffic between two <b>different</b> network protocols	Hub	✓		✓		Repeater	✓		✓		Switch		✓			Bridge		✓			Router		✓			Gateway		✓		✓	<p>Ignore shaded cell (Gateway column 2), as provided in the question paper.</p> <p>If the number of ticks added by the candidate is <b>8 or fewer</b> mark the ticks in line with the image in the table above.</p> <p>If the number of ticks added by the candidate is <b>more than 8</b>, do not award any marks for rows where the number of ticks added by the candidate exceeds the number of ticks in that row in the mark scheme.</p> <p>Use the table below to identify the mark awarded from the number of correct ticks.</p> <table border="1" data-bbox="1382 943 1711 1359"> <thead> <tr> <th data-bbox="1382 943 1541 1015">Number of ticks</th> <th data-bbox="1541 943 1711 1015">Mark awarded</th> </tr> </thead> <tbody> <tr><td data-bbox="1382 1019 1541 1054">0</td><td data-bbox="1541 1019 1711 1054">0</td></tr> <tr><td data-bbox="1382 1059 1541 1094">1</td><td data-bbox="1541 1059 1711 1094">0</td></tr> <tr><td data-bbox="1382 1099 1541 1134">2</td><td data-bbox="1541 1099 1711 1134">1</td></tr> <tr><td data-bbox="1382 1139 1541 1174">3</td><td data-bbox="1541 1139 1711 1174">1</td></tr> <tr><td data-bbox="1382 1179 1541 1214">4</td><td data-bbox="1541 1179 1711 1214">2</td></tr> <tr><td data-bbox="1382 1219 1541 1254">5</td><td data-bbox="1541 1219 1711 1254">2</td></tr> <tr><td data-bbox="1382 1259 1541 1294">6</td><td data-bbox="1541 1259 1711 1294">3</td></tr> <tr><td data-bbox="1382 1299 1541 1334">7</td><td data-bbox="1541 1299 1711 1334">3</td></tr> <tr><td data-bbox="1382 1339 1541 1359">8</td><td data-bbox="1541 1339 1711 1359">4</td></tr> </tbody> </table>	Number of ticks	Mark awarded	0	0	1	0	2	1	3	1	4	2	5	2	6	3	7	3	8	4	<b>4</b>
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1(d)	<p>Award <b>two</b> marks for a linked explanation such as:</p> <p>Award one mark for one of:</p> <ul style="list-style-type: none"> <li>• Kris's account is accessed (using the credentials/login and password) (1)</li> <li>• Kris's account details may be sold/passed on/shared (1)</li> </ul> <p>AND one of:</p> <ul style="list-style-type: none"> <li>• in order to access information/data that he/she should not have access to (1)</li> <li>• in order to change information/data on Kris's files/storage (1)</li> <li>• in order to cause harm to the school network/computer (planting malware) (1)</li> <li>• in order to change/access information/data with intent to commit another crime (identity theft) (1)</li> </ul>	<p>For both marks, the expansion must follow/associate with the statement.</p> <p>Award an example of malicious behaviour for second mark, if it can be mapped to one of the latter bullets</p> <p>Do not award 'hacked'</p>	<b>2</b>

Question number	Answer	Additional guidance	Mark
1(e)	<p>Award <b>two</b> marks for a linked description such as:</p> <ul style="list-style-type: none"> <li>• VOIP is responsible for delivery of voice communications/phone calls (1) whereas SIP is responsible for making/keeping/terminating real-time communication sessions/connections (1)</li> <li>• VOIP is specifically for voice communications/phone (1) whereas SIP is used in other/video/messaging content (1)</li> </ul>	<p>For both marks, the expansion must follow/associate with the statement.</p> <p>The second mark is awarded for a comparison.</p>	<b>2</b>

Question number	Answer	Additional guidance	Mark										
1(f)	<p>Award <b>one</b> mark for each correct cell:</p> <table border="1" data-bbox="371 304 1503 810"> <thead> <tr> <th data-bbox="371 304 490 368">Label</th> <th data-bbox="490 304 1503 368">Name</th> </tr> </thead> <tbody> <tr> <td data-bbox="371 368 490 480"><b>A</b></td> <td data-bbox="490 368 1503 480">MAC (address) / Media control (address) / Physical (address)</td> </tr> <tr> <td data-bbox="371 480 490 592"><b>B</b></td> <td data-bbox="490 480 1503 592">IPv6 (address) / Internet protocol version 6 (address)</td> </tr> <tr> <td data-bbox="371 592 490 703"><b>C</b></td> <td data-bbox="490 592 1503 703">IPv4 (address) / Internet protocol version 4 (address)</td> </tr> <tr> <td data-bbox="371 703 490 810"><b>D</b></td> <td data-bbox="490 703 1503 810">DHCP (server) (address) / Dynamic host configuration protocol (server) (address)</td> </tr> </tbody> </table>	Label	Name	<b>A</b>	MAC (address) / Media control (address) / Physical (address)	<b>B</b>	IPv6 (address) / Internet protocol version 6 (address)	<b>C</b>	IPv4 (address) / Internet protocol version 4 (address)	<b>D</b>	DHCP (server) (address) / Dynamic host configuration protocol (server) (address)	<p>Do not award address/IP/IP address alone for any cell</p> <p>Do not award 'machine address' for MAC</p> <p>Allow secondary gateway for label D</p> <p>Ignore 'preferred' for label B and C if given in the answer</p>	<b>4</b>
Label	Name												
<b>A</b>	MAC (address) / Media control (address) / Physical (address)												
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2(a)(i)	<p>Award <b>one</b> mark for any of the following up to a maximum of <b>two</b> marks:</p> <ul style="list-style-type: none"> <li>• Rectangle - Static (1) <ul style="list-style-type: none"> <li>○ E-Commerce logo</li> <li>○ Help</li> <li>○ Find a store</li> <li>○ The magnifying glass icon</li> <li>○ Labels (Home, Women, Men, Boys, Girls) / any part of labels</li> <li>○ Text boxes (Size Guides, Here are conversions ...)</li> <li>○ Table (size guides) / any part of the table</li> </ul> </li> <li>• Circle/Ellipse - Dynamic (1) <ul style="list-style-type: none"> <li>○ Marquee (20% off all winter coats)</li> <li>○ Profile name (Sally N.)</li> <li>○ Items in cart (2 items)</li> <li>○ Search box</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• If rectangle and circle are indistinguishable than award no marks</li> <li>• If multiple rectangles only identify multiple static content, then award one mark for static</li> <li>• If multiple circles only identify multiple dynamic content, then award one mark for dynamic</li> <li>• In every other case, mark the response as prose. Start at the upper left corner and read across the page. Award marks as encountered. Stop when either two marks are awarded, one mark is awarded and an inaccurate response is encountered, or two inaccurate responses are encountered.</li> <li>• Where a response provides annotation (circle, rectangle) to clarify drawing, use the annotation only</li> </ul>	2

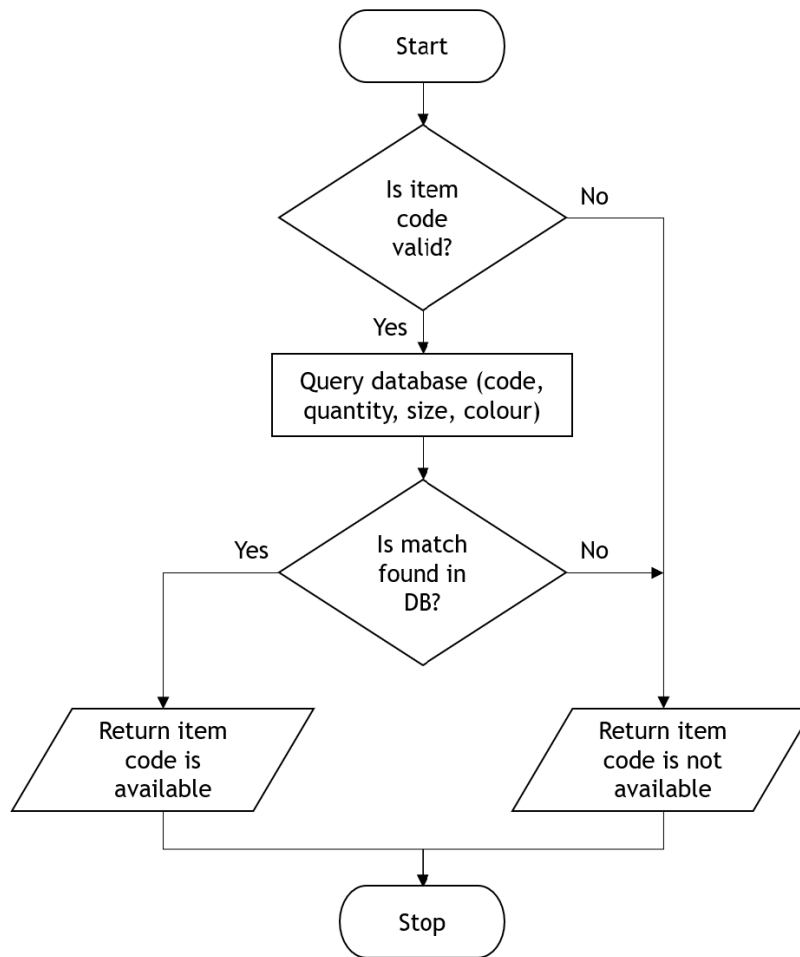
Question number	Answer	Additional guidance	Mark
2(a)(ii)	<p>Award <b>one</b> mark for any of the following up to a maximum of <b>two</b> marks:</p> <ul style="list-style-type: none"> <li>• Limited sight/blindness/colour-blindness (daltonism)/visual impairments (1)</li> <li>• Cognitive impairments/learning difficulties (1)</li> <li>• Deafness/hearing loss (1)</li> <li>• Cultural differences/language translation/reading direction (1)</li> </ul>	<p>Award an example if mapped to a single bullet</p> <p>Do not award:</p> <ul style="list-style-type: none"> <li>• Limited motor control, as it is in the question</li> <li>• Age, because age in itself is not a barrier</li> <li>• Lack of knowledge around using browser/page/technology</li> </ul>	2

Question number	Answer	Additional guidance	Mark
2(b)(i)	<p>Award <b>one</b> mark for any of the following, up to a maximum of <b>two</b> marks:</p> <ul style="list-style-type: none"> <li>• (Promotional) media/video/song/articles/post/information/story on a web page (1)</li> <li>• Resembles the (editorial) style of the web page/e-commerce company (1)</li> <li>• Provided by a (third-party) organisation that has relevance/relationship/connection to the website/e-commerce company (1)</li> <li>• A mutually beneficial relationship between the content provider and the website owner/e-commerce company (1)</li> <li>• May have an indication/banner/badge/name indicating the sponsor (1)</li> <li>• Is displayed for a limited amount of time (1)</li> </ul>	<p>Do not award:</p> <ul style="list-style-type: none"> <li>• Advertising, as it is given in the question</li> <li>• A fee is paid to the website, as it is given in the question</li> <li>• Mechanisms for delivering sponsored content, including cookies</li> <li>• Data collection/analysis/marketing done as a result of having it/clicking on it</li> </ul>	2

Question number	Answer	Additional guidance	Mark
2(b)(ii)	<p>Award up to <b>two</b> marks for a linked explanation, such as:</p> <ul style="list-style-type: none"> <li>• Pay-per-click advertising (1) because the advertiser pays the website each time a user clicks on the advertisement hyperlink (1)</li> <li>• Target advertising (1) because the data can be used to predict what users might be interested in / offers can be sent to users (1)</li> <li>• Sell customer data (to third parties) (1) because it can be used to identify/predict trends/to target advertisements (1)</li> <li>• Set up a pay-wall (1) so that users must pay to view some content/sign up to a subscription (1)</li> <li>• Analyse the customer buying data (1) so that they will know how much stock of an item to buy to meet demand (1)</li> </ul>	For both marks, the expansion must follow/associate with the statement.	2

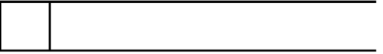
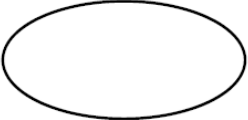

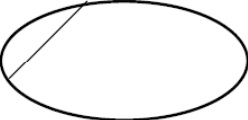




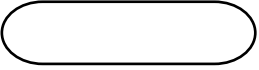
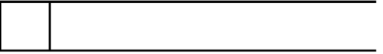
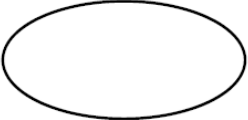

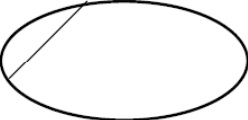




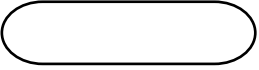
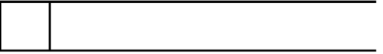
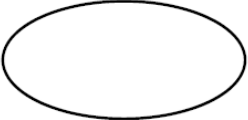

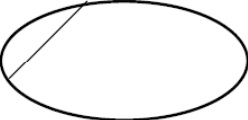




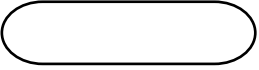
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2(c)(i)	<p>Award <b>two</b> marks for a linked explanation such as:</p> <ul style="list-style-type: none"> <li>• Flowcharts are easily understood/are used to train employees (1) because they use symbols (and words)/they are a visual representation (1)</li> <li>• Mistakes can be easily identified (1) because each part of the process is shown/described/decomposed separately (1)</li> <li>• Implementation of processes is more efficient/easier (1) because the events/items are presented in sequence/relation to each other (1)</li> <li>• Bottlenecks in a process can be identified (1) because flowcharts show how a process works from start to finish (1)</li> <li>• A program can be written to implement a process (1) because a flowchart breaks processes down into clearly defined steps (1)</li> </ul>	For both marks, the expansion must follow/associate with the statement.	2

Question number	Answer	Additional guidance	Mark
2(c)(ii)	<p>Award <b>one</b> mark for any of the following:</p> <p><b>Logic of the problem</b></p> <ul style="list-style-type: none"> <li>• At least one test of the two tests available (is code valid, is item in stock) (1)</li> <li>• One or both tests are constructed so that they can be answered Yes/No (1)</li> <li>• Accurate and functional solution (1) <ul style="list-style-type: none"> <li>○ Product code must be validated and kept out of check for in stock</li> <li>○ Product code, colour, size, and quantity must be checked in database</li> <li>○ Available and not available message must follow accurately from tests, including keeping invalid product code out of database</li> </ul> </li> </ul> <p><b>Use of notation (regardless of logic)</b></p> <ul style="list-style-type: none"> <li>• Symbols (Appendix 7) used correctly throughout (1) <ul style="list-style-type: none"> <li>○ Fully connected, no hanging symbols</li> <li>○ One in arrow and one out arrow (except decision)</li> <li>○ One in arrow and two out arrows (decision only)</li> <li>○ Decision has Yes/No labels</li> <li>○ Single start and single stop</li> </ul> </li> </ul>	<p>For Bullet 1, the use of database can be implied, e.g. 'in stock'.</p> <p>For Bullet 3:</p> <ul style="list-style-type: none"> <li>• The use of database must be explicit, e.g. 'in database' or 'database queried'.</li> <li>• Action after invalid product code may be a loop back to the top or to the 'unavailable' message, but processing should not continue to checking availability</li> </ul>	4



Question number	Answer	Additional guidance	Mark
3(a)	<p>Award <b>one</b> mark for any of the following:</p> <ul style="list-style-type: none"> <li>• The right to do whatever you want to unless it breaks a law/harms some else/infringes on another's rights (1)</li> <li>• Fundamental individual rights/freedoms (1)</li> <li>• Rights/freedoms enshrined by legislation/law/constitution (1)</li> <li>• Rights of a citizen safeguarding certain aspects of their life and behaviours (1)</li> </ul>	Allow an example where it can be clearly mapped to a bullet point	<b>1</b>

Question number	Answer	Additional guidance	Mark
3(b)	<p><b>The only correct answer is B</b></p> <p><i>A is not correct because an <b>ad hoc network</b> is a way to provide communication between devices</i></p> <p><i>C is not correct because <b>cloud storage</b> is the name for accessing only data stored on cloud servers</i></p> <p><i>D is not correct because <b>server-side scripting</b> allows code to be executed on the server at the request of a client</i></p>		<b>1</b>

Question number	Answer	Additional guidance	Mark																
3(c)	<p>Award <b>one</b> mark for each of:</p> <table border="1" data-bbox="369 339 1357 812"> <thead> <tr> <th data-bbox="369 339 826 405">Data store</th> <th data-bbox="826 339 1357 405">Data source</th> </tr> </thead> <tbody> <tr> <td data-bbox="369 405 826 544">  </td> <td data-bbox="826 405 1357 544">  </td> </tr> <tr> <td colspan="2" data-bbox="369 544 1357 592" style="text-align: center;">OR</td> </tr> <tr> <td data-bbox="369 592 826 812">  </td> <td data-bbox="826 592 1357 812"> <p style="text-align: center;">OR</p>  </td> </tr> </tbody> </table> <p>Do not award:</p> <table border="1" data-bbox="369 903 1357 1417"> <thead> <tr> <th data-bbox="369 903 826 968">Data store</th> <th data-bbox="826 903 1357 968">Data source</th> </tr> </thead> <tbody> <tr> <td data-bbox="369 968 826 1070">  </td> <td data-bbox="826 968 1357 1070"> <p>With or without diagonal line</p>  </td> </tr> <tr> <td data-bbox="369 1070 826 1173">  </td> <td data-bbox="826 1070 1357 1173">  </td> </tr> <tr> <td data-bbox="369 1173 826 1417"></td> <td data-bbox="826 1173 1357 1417">  </td> </tr> </tbody> </table>	Data store	Data source			OR			<p style="text-align: center;">OR</p> 	Data store	Data source		<p>With or without diagonal line</p> 					<p>Ignore any annotation/writing on symbols.</p> <p>Allow a more circular data source, instead of the ellipse.</p> <p>Do not award any other symbols.</p> <p>Where more symbols than required are provided, mark from upper-left corner of each cell award the first symbol encountered only</p>	<b>2</b>
Data store	Data source																		
																			
OR																			
	<p style="text-align: center;">OR</p> 																		
Data store	Data source																		
	<p>With or without diagonal line</p> 																		
																			
																			

Question number	Answer	Additional guidance	Mark
3(d)(i)	Award <b>one</b> mark for any of the following: <ul style="list-style-type: none"> <li>• 3 (1)</li> <li>• 7 (1)</li> <li>• 22 (1)</li> </ul>	Mark first response only  Allow equivalent word rather than number  Ignore additional text, such as 'question', 'number', 'no.', '#', etc. on the line, as long as there is a numeric value provided.	<b>1</b>

Question number	Answer	Additional guidance	Mark
3(d)(ii)	Award <b>one</b> mark for any of the following: <ul style="list-style-type: none"> <li>• 23 (1)</li> <li>• 45 (1)</li> </ul>	Mark first response only  Allow equivalent word rather than number  Ignore additional text, such as 'question', 'number', 'no.', '#', etc. on the line, as long as there is a numeric value provided.	<b>1</b>

Question number	Answer	Additional guidance	Mark												
3(e)	<p>Award one mark for each of the following:</p> <table border="1" data-bbox="394 304 1451 1002"> <tbody> <tr> <td data-bbox="394 304 564 395"><b>Requirement</b></td> <td data-bbox="564 304 1451 395">Create the table containing fields to store the information</td> </tr> <tr> <td data-bbox="394 395 564 587"><b>SQL query</b></td> <td data-bbox="564 395 1451 587">           CREATE TABLE tbl_vehicle (1)            (Appropriate field names, lengths and data types) (1)           <ul style="list-style-type: none"> <li>• vehicleID int</li> <li>• licence_plate varchar(8)</li> <li>• owner int</li> </ul> </td> </tr> <tr> <td data-bbox="394 587 564 678"><b>Requirement</b></td> <td data-bbox="564 587 1451 678">Insert a record for the vehicle into the table</td> </tr> <tr> <td data-bbox="394 678 564 794"><b>SQL query</b></td> <td data-bbox="564 678 1451 794">           INSERT INTO tbl_vehicle (vehicleID, licence_plate, owner) (1)            VALUES (3456, 'WN26 TPX', 263611) (1)         </td> </tr> <tr> <td data-bbox="394 794 564 885"><b>Requirement</b></td> <td data-bbox="564 794 1451 885">Retrieve all the fields for all the records from the table</td> </tr> <tr> <td data-bbox="394 885 564 1002"><b>SQL query</b></td> <td data-bbox="564 885 1451 1002">           SELECT * (1)            FROM tbl_vehicle (1)         </td> </tr> </tbody> </table>	<b>Requirement</b>	Create the table containing fields to store the information	<b>SQL query</b>	CREATE TABLE tbl_vehicle (1) (Appropriate field names, lengths and data types) (1) <ul style="list-style-type: none"> <li>• vehicleID int</li> <li>• licence_plate varchar(8)</li> <li>• owner int</li> </ul>	<b>Requirement</b>	Insert a record for the vehicle into the table	<b>SQL query</b>	INSERT INTO tbl_vehicle (vehicleID, licence_plate, owner) (1) VALUES (3456, 'WN26 TPX', 263611) (1)	<b>Requirement</b>	Retrieve all the fields for all the records from the table	<b>SQL query</b>	SELECT * (1) FROM tbl_vehicle (1)	<p>The order of the parts must be syntactically correct for full marks in any cell, i.e. don't award FROM before SELECT</p> <p>The data type for the fields must match (integer/short integer/long integer/number, varchar/char/string, integer/short integer/long integer).</p> <p>For CREATE, ignore accurate, but extraneous information such as 'primary key', 'NOT NULL', etc.</p> <p>Allow length of licence field to be 7+.</p> <p>In INSERT, where field names are omitted, field values must match those from CREATE (see Example 1).</p> <p>Treat double and single quotes as equivalent.</p>	<b>6</b>
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<b>SQL query</b>	SELECT * (1) FROM tbl_vehicle (1)														

		<p>Allow missing quotes from licence plate (WN26 TPX)</p> <p>Do not allow quotes around numbers</p> <p>Ignore transcription errors.</p> <p>Ignore case.</p> <p>Ignore inclusion or omission of semi-colon (;).</p> <p>Ignore capitalisation.</p>	
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Examples:

```
CREATE TABLE tbl_vehicle (vehicleID int, licence varchar(8), owner int)
INSERT INTO tbl_vehicle VALUES (3456, 'WN26 TPX', 263611)
SELECT * FROM tbl_vehicle
SELECT vehicleID, licence, owner FROM tbl_vehicle
```

```
CREATE TABLE tbl_vehicle (vehicleID int, licence varchar(8), owner int);
INSERT INTO tbl_vehicle (vehicleID, licence, owner) VALUES (3456, 'WN26 TPX', 263611);
SELECT * FROM tbl_vehicle;
SELECT vehicleID, licence, owner FROM tbl_vehicle;
```

Question number	Indicative content	Mark
3(f)	<p><b>Automatic</b></p> <ul style="list-style-type: none"> <li>• Which <ul style="list-style-type: none"> <li>○ Most suitable for anti-malware</li> <li>○ This is the software that keeps the computer safe from unauthorised attacks</li> </ul> </li> <li>• How <ul style="list-style-type: none"> <li>○ Checks if an update is available each time the software is run</li> <li>○ Downloaded in background</li> <li>○ Need access to the Internet</li> <li>○ Need to register</li> <li>○ May have a background task that runs in the computer, perhaps once a day</li> </ul> </li> <li>• Why <ul style="list-style-type: none"> <li>○ Applied when the user says it's a good time or without the user even knowing</li> <li>○ Usually free of charge</li> <li>○ Good to use so that the employees don't have to schedule/remember to do it themselves</li> </ul> </li> </ul> <p><b>Patch</b></p> <ul style="list-style-type: none"> <li>• Which <ul style="list-style-type: none"> <li>○ Most suitable for operating system, anti-malware, and communications software</li> <li>○ These would be most vulnerable to a security issue</li> </ul> </li> <li>• How <ul style="list-style-type: none"> <li>○ May be announced using public channels (web, press)</li> <li>○ Provided by the software manufacturer</li> <li>○ Need to be downloaded by the user</li> </ul> </li> <li>• Why <ul style="list-style-type: none"> <li>○ Applied when the user finds the right time</li> <li>○ Should always be applied when it is a security issue</li> <li>○ Usually free of charge</li> <li>○ As these often are security related, it's in the interest of the employees to always apply these</li> </ul> </li> </ul> <p><b>Example:</b></p>	<b>6</b>

	<p>Registering for automatic updates of the anti-malware software, means the city employees will not have to remember or schedule updating. The software will check each time it is run to see if it needs to be updated. Any updates will be downloaded and installed without the user having to do any work. These may be free or paid for. It means the computer will always be protected with the most up</p> <p>Sometimes, companies announce patches for software. This would be important for the city employees as patches are often related to security issues. For example, the operating system might have a backdoor that wasn't discovered for a while. When it is discovered, the owner of the operating system should release a patch. It is important to always apply security patches. The users would have to apply these themselves or at least answer yes to allow an automatic patch to be installed. Patches are usually free.</p>	
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-2	Demonstrates limited knowledge and understanding, some of which may be inaccurate. Applies understanding with limited coherence to produce a response that lacks development.
Level 2	3-4	Demonstrates knowledge and understanding, which is mostly relevant and may include some inaccuracies. Applies understanding to make some coherent connections and a partially developed response.
Level 3	5-6	Demonstrates accurate and relevant knowledge and understanding throughout. Applies understanding coherently to produce a fully developed response.

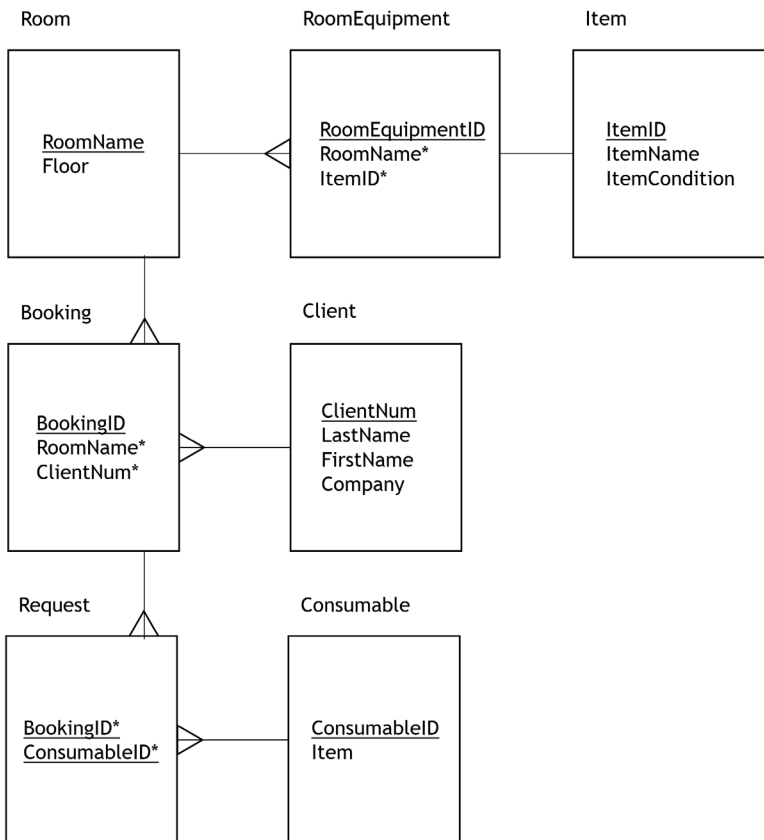
Question number	Answer	Additional guidance	Mark
4(a)	<p>Award up to <b>two</b> marks for a linked description such as:</p> <ul style="list-style-type: none"> <li>• Credentials/biometrics/network login and password (1) which are tied to a set of (access) rights/permissions (1)</li> <li>• Users have credentials/network login and password (1) so that only authorised users can access the network resources/files/data (1)</li> <li>• Group membership (based on job role)/access rights (1) limits the resources/files/data that can be accessed (1)</li> <li>• MAC address filtering/IP address filtering/permitted list/white list/firewall (1) which limits the devices that can access the network/resources/files/data (from outside the network) (1)</li> </ul>	<p>For both marks, the expansion must follow/associate with the statement.</p> <p>Do not allow:</p> <ul style="list-style-type: none"> <li>• Encryption</li> </ul>	<b>2</b>

Question number	Answer	Additional guidance	Mark
4(b)	<p>Award <b>one</b> mark for each of the following:</p> <ul style="list-style-type: none"> <li>Gibibytes to bytes (<math>3.6 \times 1024 \times 1024 \times 1024</math>) anywhere in sequence together (1)</li> <li>Bytes to bits (<math>\times 8</math>) with 3.6 on the same line (1)</li> <li>Speed from Megabits to bits per second (<math>20.58 \times 1000 \times 1000</math>) anywhere in sequence together (1)</li> <li>Completely accurate expression (1)</li> </ul>	<p>Award marks independently.</p> <p>Award multiplication in any order, i.e. the numbers can be in any boxes.</p> <p>Award equivalent expressions</p>	<b>4</b>

$$\frac{3.6 \times 1024 \times 1024 \times 1024 \times 8}{20.58 \times 1000 \times 1000}$$

In boxes	Equivalents that might use all, some, or none of the boxes
$1024 \times 1024 \times 1024$	<ul style="list-style-type: none"> <li><math>1024^3</math></li> <li><math>2^{10} \times 12^{10} \times 2^{10}</math></li> <li><math>2^{20} \times 2^{10}</math></li> <li><math>2^{30}</math></li> </ul>
$1000 \times 1000$	<ul style="list-style-type: none"> <li><math>1000^2</math></li> <li><math>10^3 \times 10^3</math></li> <li><math>10^6</math></li> </ul>
$\frac{1024}{1000}$	<ul style="list-style-type: none"> <li><math>\frac{512}{500}</math></li> <li><math>\frac{256}{250}</math></li> <li><math>\frac{128}{125}</math></li> </ul>
$\frac{8}{1000}$	<ul style="list-style-type: none"> <li><math>\frac{4}{500}</math></li> <li><math>\frac{1}{125}</math></li> </ul>

Question number	Answer	Additional guidance	Mark
4(c)	<p>Award up to <b>twelve</b> marks for:</p> <ol style="list-style-type: none"> <li>1. A single accurate primary key (underline) for any three tables (1)</li> <li>2. A single accurate primary key (underline) for any other three tables (1)</li> <li>3. An accurate composite primary (underline) in Request key (1)</li>   <li>4. Two accurate foreign keys only (asterisk) in RoomEquipment (2)</li> <li>5. Two accurate foreign keys only (asterisk) in Booking (2)</li> <li>6. Two accurate foreign keys only (asterisk) in Request (2)</li>   <li>7. One-to-many relationships for any three relationships (1)</li> <li>8. One-to-many relationship for any other two relationships (1)</li> <li>9. One one-to-one relationship connecting RoomEquipment and Item (1)</li> </ol> <p>Example:</p>	<p>Mark tables with extraneous/additional primary and foreign keys as prose, from the top-left. Mark the number of items required for each mark point only.</p> <p>Field names are given in the question, so should be accurate, but ignore transcription errors, such as missing underscores or addition of underscores</p> <p>Do not award field names that do not exist in the question, such as RoomID or ClientID</p> <p>Do not award if multiple relationships connect tables</p> <p>Ignore inclusion or omission of any non-key fields</p> <p>Allow other notations for keys (PK, FK), if used consistently</p>	<b>12</b>



Parentetical:

Room (RoomName, Floor)  
 RoomEquipment (RoomEquipmentID, RoomName\*, ItemID\*)  
 Item (ItemID, ItemName, ItemCondition)  
 Client (ClientNum, LastName, FirstName, Company)  
 Booking (BookingID, RoomName\*, ClientNum\*)  
 Consumable (ConsumableID, Item)  
 Request (ConsumableID\*, BookingID\*)

Allow other notations for degree of relationships, if consistent and discernible

Ignore labels on relationships, mark the symbols only

Allow follow through for key names only

Question number	Indicative content	Additional guidance	Mark
5	<p><b>Game designers</b></p> <ul style="list-style-type: none"> <li>• High-end GPU for rendering</li> <li>• High levels of RAM</li> <li>• Graphics tablets</li> <li>• Touch screens</li> <li>• High-resolution displays</li> </ul> <p><b>Programmers</b></p> <ul style="list-style-type: none"> <li>• High-end desktops/gaming machines <ul style="list-style-type: none"> <li>○ Fast CPU / floating-point calculations</li> <li>○ Graphics processing (GPU) for rendering</li> </ul> </li> <li>• High-resolution displays</li> <li>• Joystick / game pad</li> </ul> <p><b>Consultants</b></p> <ul style="list-style-type: none"> <li>• Gaming machine</li> <li>• A video capable of showing recorded videos of game play</li> <li>• Microphone</li> <li>• Webcam</li> <li>• Conference speakerphone (Integrated microphone/speaker)</li> </ul> <p><b>Admin staff (accounting, hiring, payroll)</b></p> <ul style="list-style-type: none"> <li>• Lower-spec desktop</li> <li>• Lower-spec laptops with docking stations</li> <li>• Keyboard</li> <li>• Mouse</li> <li>• Monitor</li> <li>• Speakers</li> <li>• Access to shared storage</li> <li>• Access to printers and scanners</li> <li>• Local secondary storage <ul style="list-style-type: none"> <li>○ Magnetic hard disc</li> <li>○ SSD</li> </ul> </li> </ul> <p><b>Storage</b></p>		<b>12</b>

- Network attached storage (NAS)
- Magnetic (hard-drive, tapes), solid-state, optical
- Cloud storage

Example:

All of the employees at Sparkle, including those just doing office work will need access to a computer with a keyboard, mouse, monitor, speakers, printers, scanners, and access to the Internet. They need these to perform jobs like writing letters, contracts, and doing accounts. The employees not involved in actually producing or testing the games won't need high-spec devices.

To make everyone's job easier, Sparkle should have a network with some attached storage that can be accessed by all the employees. Of course, each employee will have different access to the files stored on the server. The printers and scanners could be set up as networked devices so everyone could share them.

The consultants will also need to have webcams and microphones so that they can have virtual meetings with customers. Customers might want to see mock-ups of parts of the game and certainly will want to see the images used, but they don't have to be high-definition, so normal displays with a good resolution should be fine.

The game designers will be working with images a lot, so will need graphics tablets, with a stylus, and touch screens. They probably would like to have big screens with high resolutions to make creating and editing images easy.

The programmers and testers need to have high-end desktop or specialised gaming machines. These will have fast CPUs to do lots of instructions per second. A graphics processing unit (GPU) would be good to make rendering faster. They will also need a joystick or game pad to give input to the game while they're writing or testing the code.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-4	<ul style="list-style-type: none"> <li>• Demonstrates limited knowledge and understanding, some of which may be inaccurate.</li> <li>• Applies understanding with limited coherence to produce a response that lacks development.</li> <li>• Demonstrates limited awareness of competing arguments. Conclusion, if present, is generic or unsupported.</li> </ul>
Level 2	5-8	<ul style="list-style-type: none"> <li>• Demonstrates knowledge and understanding, which is mostly relevant and may include some inaccuracies.</li> <li>• Applies understanding to make some coherent connections and a partially developed response.</li> <li>• Demonstrates some awareness of competing arguments, but this may be unbalanced, and partially supports conclusion with evidence.</li> </ul>
Level 3	9-12	<ul style="list-style-type: none"> <li>• Demonstrates accurate and relevant knowledge and understanding throughout.</li> <li>• Applies understanding coherently to produce a fully developed response.</li> <li>• Demonstrates an awareness of competing arguments and supports conclusion with evidence.</li> </ul>

