

Algorithms and computational thinking [U1_L1]

Question	Answer	Notes																								
1	<ul style="list-style-type: none"> TICK KEYWORDS 																									
2	<ul style="list-style-type: none"> Algorithmic thinking is the process of trying to apply this to a problem and coming up with a step by step solution. 																									
3	<ul style="list-style-type: none"> Computational thinking = Trying to think like a computer scientist Abstraction = Removing any information that is not required Decomposition = Breaking down a problem into smaller parts 																									
4	<table border="1"> <thead> <tr> <th>Information</th> <th>Important</th> <th>Could be ignored</th> </tr> </thead> <tbody> <tr> <td>The name of the place you are going</td> <td>✓</td> <td></td> </tr> <tr> <td>What the scenery is like</td> <td></td> <td>✓</td> </tr> <tr> <td>How you will buy your train ticket</td> <td>✓</td> <td></td> </tr> <tr> <td>What time your train leaves the station</td> <td>✓</td> <td></td> </tr> <tr> <td>What the weather will be like on the day</td> <td></td> <td>✓</td> </tr> <tr> <td>How many other passengers there are</td> <td></td> <td>✓</td> </tr> <tr> <td>How you will get to the train station</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Information	Important	Could be ignored	The name of the place you are going	✓		What the scenery is like		✓	How you will buy your train ticket	✓		What time your train leaves the station	✓		What the weather will be like on the day		✓	How many other passengers there are		✓	How you will get to the train station	✓		
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How you will get to the train station	✓																									
5	Include any of the following: <ul style="list-style-type: none"> Turning on console Inserting disc Using menu Selecting game Playing game 																									
6	Include any of the following: <ul style="list-style-type: none"> Abstraction: <ul style="list-style-type: none"> To remove buildings and trees from the navigation system To remove any other distractions or non-essential details Decomposition: <ul style="list-style-type: none"> To create a navigation system To monitor the engine and fuel level To drive safely and comfortably 																									
7	Include any three of the following: <ul style="list-style-type: none"> Website developer Software engineer Database designer App or video game developer Hardware engineer 	Any other similar career is ok.																								

Question	Answer	Notes
8_Q1	Add	
8_Q2	False	
8_Q3	Algorithm	
8_Q4	called Rover	
8_Q5	True	

Sorting algorithms [U1_L2]

Question	Answer	Notes					
1	<ul style="list-style-type: none"> TICK KEYWORDS 						
2	A sorting algorithm sorts a sequence into a correct or useful order.						
3	Ascending order is from the lowest to highest number. Descending order is from highest to lowest.						
4	Include any three of the following: <ul style="list-style-type: none"> Digital music streaming services Digital film and television services Online shopping sites Contact or address books in our smart devices Messaging and email applications 						
5	Correct order: <ol style="list-style-type: none"> The first two values are compared and swapped if not in order. The next two values are compared and swapped if not in order. This is repeated until the end of the sequence is reached. The first pass ends. The process is then repeated until no more values need to be swapped. 						
6	<table border="1" style="width: 100%;"> <thead> <tr> <th>First pass</th> </tr> </thead> <tbody> <tr> <td>1, 6, 3, 4, 7 becomes 1, 6, 3, 4, 7</td> </tr> <tr> <td>1, 6, 3, 4, 7 becomes 1, 3, 6, 4, 7</td> </tr> <tr> <td>1, 3, 6, 4, 7 becomes 1, 3, 4, 6, 7</td> </tr> <tr> <td>1, 3, 4, 6, 7 becomes 1, 3, 4, 6, 7</td> </tr> </tbody> </table>	First pass	1, 6, 3, 4, 7 becomes 1, 6, 3, 4, 7	1, 6, 3, 4, 7 becomes 1, 3, 6, 4, 7	1, 3, 6, 4, 7 becomes 1, 3, 4, 6, 7	1, 3, 4, 6, 7 becomes 1, 3, 4, 6, 7	
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7	A second pass is still needed so that the algorithm can confirm that the data is sorted.						

Question	Answer	Notes / Marks
8_Q1	true	
8_Q2	Train timetable	
8_Q3	Pass	
8_Q4	a fizzy drink	
8_Q5	false	

Creating a bubble sort program [U1_L3]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	Pseudocode is the creation of program-like code that programmers use to plan programs. It cannot be run by a computer, but a programmer will then use it as a starting point.	
3		
4	The number of items in the list	
5	The # symbol is used to add useful notes or comments by the programmer to help annotate the program.	
6	<ul style="list-style-type: none"> = equal to > greater than + addition 	
7	Include any three of the following: <ul style="list-style-type: none"> By artists By song title By year of release By album title By rating 	

Question	Answer	Notes / Marks
8_Q1	True	
8_Q2	High-level programming languages	
8_Q3	Maybe	
8_Q4	Compares two values	
8_Q5	False	

Creating a merge sort program [U1_L4]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	A merge sort divides a jumbled sequence in half again and again until only single values remain. These values are then compared against each other and merged back together in the correct order.	
3	<p>The diagram shows the following steps:</p> <ul style="list-style-type: none"> Initial list: [5, 2, 3, 8, 4, 1, 9, 6] Step 1: [5, 2, 3, 8] and [4, 1, 9, 6] Step 2: [5, 2], [3, 8], [4, 1], [9, 6] Step 3: [5], [2], [3], [8], [4], [1], [9], [6] Step 4: [2, 5], [3, 8], [1, 4], [6, 9] Step 5: [2, 3, 5, 8] and [1, 4, 6, 9] Final sorted list: [1, 2, 3, 4, 5, 6, 8, 9] 	
4	<pre> IF list length = 1 THEN list is sorted IF list length > 1 THEN divide list in half each half = sub-list REPEAT UNTIL sub-list length = 1 MERGE sub-list and SORT REPEAT UNTIL list is sorted END IF </pre>	
5	<p>Credit sensible answers, including any of the following:</p> <ul style="list-style-type: none"> To sort music libraries To sort employee data in a large company To sort information on a museum collection To sort contacts in a smartphone address book 	
6	A subprogram is a block of code that can be reused either within the same program or in several different programs.	
Question	Answer	Notes / Marks
7_Q1	1	
7_Q2	True	
7_Q3	sub-list	
7_Q4	REPEAT UNTIL	
7_Q5	Divide and conquer	

Linear search algorithms [U1_L5]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	A linear search is a sequential search algorithm. This means it searches for a specific value by comparing it to each value in a list one at a time. It will start at the first value, then the next until it either finds a match or reaches the end of the list.	
3	Include any three of the following: <ul style="list-style-type: none"> Searching homework research. Searching for gift ideas within an online shop. Looking for a favourite film star within a streaming service. Looking for a photo taken in a particular city on your smartphone. 	Any similar answer is ok.
4	<pre> OUTPUT "Please enter the number of the film you wish to see" INPUT user enters number of film SET INPUT TO filmChoice SET length TO 10 SET counter TO 1 WHILE counter <= length IF filmChoice = counter THEN OUTPUT name of film ELSE SET counter TO counter + 1 END IF END WHILE </pre>	
5	<ul style="list-style-type: none"> Variable 1: answer Variable 2: choice 	
6	<pre> #Python Linear Search print("I'm going to guess your favourite number.") choice = 0 answer = "n" while answer == "n": choice = choice + 1 answer = input("Is it " + str(choice) + "? (y/n):") print("I knew " + str(choice) + " was your favourite number.") </pre>	See file: WB_Linear Search_L5.py

Question	Answer	Notes / Marks
7_Q1	Serial search	
7_Q2	True	
7_Q3	PRINT	
7_Q4	Abstraction	
7_Q5	False	

Binary search algorithms [U1_L6 & L7]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	Correct order <ol style="list-style-type: none"> The specific value to be found is compared to the median (middle) value in the list. If the specific value is lower than the median, the second half of the list is ignored and the process is repeated with the first half. If the specific value is higher than the median, the first half of the list is ignored and the process is repeated with the second half. 	

	4. This process is repeated until the desired value has been found.																													
3	<table border="1"> <tr> <td>2</td><td>12</td><td>22</td><td>30</td><td>35</td><td>41</td><td>47</td> </tr> <tr> <td>2</td><td>12</td><td>22</td><td>30</td><td>35</td><td>41</td><td>47</td> </tr> <tr> <td>2</td><td>12</td><td>22</td><td>30</td><td>35</td><td>41</td><td>47</td> </tr> <tr> <td>2</td><td>12</td><td>22</td><td>30</td><td>35</td><td>41</td><td>47</td> </tr> </table>	2	12	22	30	35	41	47	2	12	22	30	35	41	47	2	12	22	30	35	41	47	2	12	22	30	35	41	47	
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4	3																													
5	<ul style="list-style-type: none"> Block 1: Set the search value to 42 Block 2: If the midpoint of the numbers being searched is equal to the search value, then declare 42 has been found. 																													

Question	Answer	Notes / Marks
6_Q1	True	
6_Q2	Middle	
6_Q3	0	
6_Q4	True	
6_Q5	True	

Comparing algorithms [U1_L8 & L9]

Question	Answer	Notes																		
1	<ul style="list-style-type: none"> TICK KEYWORDS 																			
2	A large number of repetitive calculations are being carried out, using up memory, and preventing other processes from running.																			
3	<table border="1"> <thead> <tr> <th>Statement</th> <th>Bubble</th> <th>Merge</th> </tr> </thead> <tbody> <tr> <td>A simple but slow algorithm.</td> <td>✓</td> <td></td> </tr> <tr> <td>Ideal for large data sets.</td> <td></td> <td>✓</td> </tr> <tr> <td>A complex algorithm, requiring more programming skills.</td> <td></td> <td>✓</td> </tr> <tr> <td>Not very efficient due to the number of repetitions needed.</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Statement	Bubble	Merge	A simple but slow algorithm.	✓		Ideal for large data sets.		✓	A complex algorithm, requiring more programming skills.		✓	Not very efficient due to the number of repetitions needed.	✓					
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7	Part of any algorithm that repeats over and over until it reaches the required result.																			

Question	Answer	Notes / Marks
8_Q1	True	
8_Q2	1,000	
8_Q3	It is efficient	
8_Q4	False	
8_Q5	False	

Error checking and testing [U1_L10]

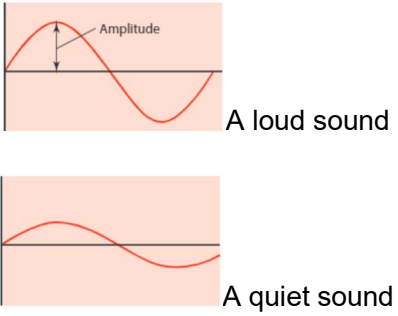
Question	Answer	Notes															
1	<ul style="list-style-type: none"> TICK KEYWORDS 																
2	<ul style="list-style-type: none"> Errors will stop any program working. 																
3	Logic error: a fault with the design of the program itself. The program may run but produce an incorrect output.																
4	Syntax error: a mistake within a program that causes the program to stop running by breaking one of its rules.																
5	<table border="1"> <thead> <tr> <th>Error</th> <th>Logic</th> <th>Syntax</th> </tr> </thead> <tbody> <tr> <td>Using an x instead of a * for a multiplication calculation.</td> <td></td> <td>✓</td> </tr> <tr> <td>Referring to the wrong sub-program.</td> <td>✓</td> <td></td> </tr> <tr> <td>Missing a day of the week in a calendar program</td> <td>✓</td> <td></td> </tr> <tr> <td>Changing the sentence case of a variable in the same program.</td> <td></td> <td>✓</td> </tr> </tbody> </table>	Error	Logic	Syntax	Using an x instead of a * for a multiplication calculation.		✓	Referring to the wrong sub-program.	✓		Missing a day of the week in a calendar program	✓		Changing the sentence case of a variable in the same program.		✓	
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Missing a day of the week in a calendar program	✓																
Changing the sentence case of a variable in the same program.		✓															
6	Include any three of the following (or similar): <ul style="list-style-type: none"> Check that program specific functions are spelt correctly. Check sentence case, especially in functions and variables, Print instead of print for example. Check characters and symbols, ; instead of : or x instead of *. Check indentation, especially after an IF statement. Proofread a printed copy by hand if possible and ask a peer to read as well. 																
7	<table border="1"> <thead> <tr> <th>Software feature</th> <th>Test data/text</th> <th><u>Expected output/result</u></th> <th><u>Actual output/result</u></th> <th><u>Action required</u></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Software feature	Test data/text	<u>Expected output/result</u>	<u>Actual output/result</u>	<u>Action required</u>											
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Question	Answer	Notes / Marks
8_Q1	False	
8_Q2	Syntax	
8_Q3	==	
8_Q4	True	
8_Q5	Logic	

End of Unit Typical 4 Mark Questions

Question	Key points to look for in answer	Notes
1	<p>Binary search:</p> <ul style="list-style-type: none"> • The desired value is compared to the median (middle) value in the list. • If the value is lower than the median, the second half of the list is ignored and the process is repeated with the first half. • If the value is higher than the median, the first half of the list is ignored and the process is repeated with the second half. • This process is repeated until the desired value has been found. <p>Linear search:</p> <ul style="list-style-type: none"> • This searches for a specific value by comparing it to each value in a list one at a time. • It starts at the first value, then keeps going until it either finds a match or reaches the end of the list. 	Any variation of this is ok.
2	<ul style="list-style-type: none"> • A binary search is the most appropriate, since it is efficient for large data sets and can be quickly narrowed down. • A merge sort is the most appropriate sorting algorithm, since it is faster than a bubble sort and would require less processing power. 	

Digitising sound [U2_L1]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	<ul style="list-style-type: none"> Device: Microphone Media: Vinyl, Cassette tapes, Magnetic tape systems 	
3	To <u>convert</u> an analogue sound to a <u>digital</u> sound, <u>sampling</u> is used. Sampling records a digital version of the sound at regular <u>time</u> intervals throughout the recording. The <u>shorter</u> the intervals, the more <u>accurate</u> the recording.	
4	<ul style="list-style-type: none"> Sample rate: The number times the audio is measured and recorded in one second. More recordings each second creates a more accurate recording. Bit depth: The number of bits used to store each sample. The more bits that are used, the longer the binary sequence, increasing the quality. 	
5	<ul style="list-style-type: none"> x axis on a waveform – shows time passing in seconds (or frequency) y axis on a waveform – shows the amplitude or loudness of the sound waveform – the shape of a sound wave, shown as a curve 	
6		
7	<ul style="list-style-type: none"> A mono track only has one channel or track A stereo has two channels or tracks. 	

Question	Answer	Notes / Marks
8_Q1	44,100 Hz	
8_Q2	samples per second	
8_Q3	Audacity	
8_Q4	digital	
8_Q5	true	

Calculating audio file sizes [U2_L2 & 3]

Question	Answer	Notes									
1	<ul style="list-style-type: none"> TICK KEYWORDS 										
2	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>File size</td> <td>=</td> <td>Sample rate</td> <td>x</td> <td>Bit depth</td> <td>x</td> <td>Number of channels</td> <td>x</td> <td>File length</td> </tr> </table>	File size	=	Sample rate	x	Bit depth	x	Number of channels	x	File length	
File size	=	Sample rate	x	Bit depth	x	Number of channels	x	File length			
3	<ul style="list-style-type: none"> Small file size Quick to download Compatible with lots of devices 										
4	<ul style="list-style-type: none"> Example 1: <ul style="list-style-type: none"> Calculation: $44100 \times 16 \times 2 \times 15$ File size (Mbit): 21168000 bits (21 Mbit) Example 2: <ul style="list-style-type: none"> Calculation: $44100 \times 16 \times 2 \times 60$ File size (Mbit): 31752000 bits (31 Mbit) 										
5	<p>Include any two of each:</p> <table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;">Advantages of compressed audio</th> <th style="width: 50%;">Disadvantages of compressed audio</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Smaller file sizes Easier to upload and download form the Internet. Ideal for portable devices. </td> <td> <ul style="list-style-type: none"> Once data is removed, it cannot be restored, losing quality. Listeners are missing out on the original audio. </td> </tr> </tbody> </table>	Advantages of compressed audio	Disadvantages of compressed audio	<ul style="list-style-type: none"> Smaller file sizes Easier to upload and download form the Internet. Ideal for portable devices. 	<ul style="list-style-type: none"> Once data is removed, it cannot be restored, losing quality. Listeners are missing out on the original audio. 						
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Question	Answer	Notes / Marks
6_Q1	1,000,000	
6_Q2	stereo	
6_Q3	WAV	
6_Q4	true	
6_Q5	8	

Storage devices and storage media [U1_L4]

Question	Answer	Notes																								
1	<ul style="list-style-type: none"> TICK KEYWORDS 																									
2	<ul style="list-style-type: none"> Only storage media can store data. A storage device reads and writes data to storage media. 																									
3	Include any three of the following: <ul style="list-style-type: none"> An internal hard drive A CD/DVD/Blu-ray drive A portable hard drive 	Also any similar device is ok.																								
4	Include any three of the following: <ul style="list-style-type: none"> CD/DVD/Blu-ray discs Magnetic hard discs Magnetic tapes Portable flash drives USB pen/sticks Memory cards 	Also any similar device is ok.																								
5	<ul style="list-style-type: none"> Magnetic – uses spinning magnetic discs that contain data Optical – uses a laser to read tiny patterns on the disc Solid-state – stores data on memory chips 																									
6	<table border="1"> <thead> <tr> <th>Storage type</th> <th>Gigabytes</th> <th>Terabytes</th> </tr> </thead> <tbody> <tr> <td>An internal magnetic hard drive</td> <td></td> <td>✓</td> </tr> <tr> <td>A portable hard drive</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>Magnetic tape</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>A DVD</td> <td>✓</td> <td></td> </tr> <tr> <td>A Blu-ray disc</td> <td>✓</td> <td></td> </tr> <tr> <td>A USB pen drive</td> <td>✓</td> <td></td> </tr> <tr> <td>An SSD drive</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>	Storage type	Gigabytes	Terabytes	An internal magnetic hard drive		✓	A portable hard drive	✓	✓	Magnetic tape	✓	✓	A DVD	✓		A Blu-ray disc	✓		A USB pen drive	✓		An SSD drive	✓	✓	
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An SSD drive	✓	✓																								
7	Include any three of the following: <ul style="list-style-type: none"> CD DVD Blu-ray Re-writable DVD 																									

Question	Answer	Notes / Marks
8_Q1	magnetic	
8_Q2	USB stick	
8_Q3	false	
8_Q4	true	
8_Q5	700	

Storage device and storage media characteristics [U2_L5 & L6]

Question	Answer	Notes	
1	<ul style="list-style-type: none"> TICK KEYWORDS 		
2	<ul style="list-style-type: none"> Local storage describes any storage in the same place as the user. Cloud storage is accessing high-capacity data storage via the Internet. 		
3	Include any one of each: <ul style="list-style-type: none"> Advantages: <ul style="list-style-type: none"> Access to files from any location Shared and collaborative working Disadvantages: <ul style="list-style-type: none"> Access is limited to locations with Internet access. Speed is limited to network speed 	Any similar answer is ok.	
4	It allows different devices and technology to be compared by one factor.		
5	Statement	Optical storage	Magnetic storage
	Capacity is limited to agreed standards	✓	
	It can be used with most desktop computers	✓	✓
	The mechanical parts may fail over time		✓
	The storage media have moving parts	✓	
	Not all storage types are rewritable	✓	
	It has high capacity and a low cost per GB		✓
6	Statement	Solid-state storage	Cloud storage
	It has an unlimited capacity		✓
	It has no moving parts, so it is ideal for portable devices	✓	
	It requires internet access		✓
	The storage media have moving parts	✓	
	It has fast read and write access speeds	✓	
	The access speed is determined by the speed of the network		✓
7	Include any three of the following: <ul style="list-style-type: none"> Smart televisions and audio equipment Games consoles and entertainment systems Kitchen appliances with multiple programme options 	Any similar answer is ok.	

Question	Answer	Notes / Marks
8_Q1	Magnetic drive	
8_Q2	False	
8_Q3	Solid-state drives	
8_Q4	False	
8_Q5	True	

Portable storage [U2_L7]

Question	Answer	Notes		
1	<ul style="list-style-type: none"> TICK KEYWORDS 			
2	Portable storage describes any device or media that can be easily transported from one location to another or used on the move.			
3	Include any two of the following: <ul style="list-style-type: none"> Copying files from one computer to copy onto another. Working remotely, away from a place of work. Working on the move, on a train or bus. 			
4	Include any four of the following: <ul style="list-style-type: none"> USB pens/sticks. Portable hard drives, both magnetic and solid-state drive. Solid state memory cards. A laptop, containing storage. A smartphone or tablet. A portable gaming device. A GPS device, used for navigation. A digital camera or drone. A portable music player. 	Any similar answer is ok.		
5	Most likely answer should refer to the chance of dropping or losing the device or memory card while on the move.			
6	Include any three of each:			
	Advantages	Disadvantages		
	Many are pocket size and easy to carry.	Portable devices can be lost, potentially losing important information.		
	Ability to transfer documents and files without network or Internet access.	Portable devices often have limited capacity.		
	Compatible with most computer devices.	Some devices do not have sockets for connecting portable devices.		
	Some portable storage devices include security options such as password access or fingerprint access.	Large capacity portable storage can be very expensive.		
Available in a wide range of capacity sizes.	Can be used to accidentally transfer computer viruses.			
7	Scenario	Optical disc	Solid-state memory card	Portable magnetic hard drive
	An IT technician backing up all files from a desktop computer			✓
	A singer handing out free copies of a music album at a live music performance	✓		
	A reporter carrying extra memory for a digital camera		✓	
Question	Answer	Notes / Marks		
8_Q1	True			
8_Q2	True			
8_Q3	True			
8_Q4	microSD			
8_Q5	Solid-state memory card			

User storage requirements [U2_L8]

Question	Answer	Notes																
1	<ul style="list-style-type: none"> TICK KEYWORDS 																	
2	Include any three of the following: <ul style="list-style-type: none"> What is the purpose of the system? What data is going to be stored? How much data is going to be stored? How often will it be accessed? How quickly will data need to be accessed. What budget does the system have? 																	
3	<table border="1"> <thead> <tr> <th>Scenario</th> <th>Type of storage</th> <th>Reason</th> </tr> </thead> <tbody> <tr> <td>An engineer is working from home on complex 3D computer models. She needs to be able to easily transport the large files to her office.</td> <td>magnetic drive</td> <td>High capacity, reliable, and portable.</td> </tr> <tr> <td>A photographer is using a digital camera to take high-quality images of an event. He needs to carry extra storage so that he does not run out.</td> <td>microSD card</td> <td>Works on the move, durable, extremely portable.</td> </tr> </tbody> </table>	Scenario	Type of storage	Reason	An engineer is working from home on complex 3D computer models. She needs to be able to easily transport the large files to her office.	magnetic drive	High capacity, reliable, and portable.	A photographer is using a digital camera to take high-quality images of an event. He needs to carry extra storage so that he does not run out.	microSD card	Works on the move, durable, extremely portable.								
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A photographer is using a digital camera to take high-quality images of an event. He needs to carry extra storage so that he does not run out.	microSD card	Works on the move, durable, extremely portable.																
4	Include any of the following: <ul style="list-style-type: none"> Magnetic tape in cassettes would wear out over time, whereas CDs were much more durable. CDs would jump or skip as people moved, whereas solid-state drives do not. 																	
5	<ul style="list-style-type: none"> A backup is a copy of all important files and documents to another location. This copy can then be kept safe in case any files need to be restored. 																	
6	<ul style="list-style-type: none"> Full = a complete copy of all relevant files and documents Differential = a copy of only the changed data following a full backup Incremental = Regularly timed backups that only save data that has changed since the previous backup 																	
7	<table border="1"> <thead> <tr> <th>Scenario</th> <th>Portability</th> <th>Speed of access</th> <th>Ability to share and collaborate</th> </tr> </thead> <tbody> <tr> <td>A class is working on a joint project with another class in another country.</td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>A freelance designer is working with multiple clients, dividing her time between her own office and her clients' offices.</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>A large office needs a daily backup system in place so that any accidentally deleted documents can be recovered.</td> <td></td> <td>✓</td> <td></td> </tr> </tbody> </table>	Scenario	Portability	Speed of access	Ability to share and collaborate	A class is working on a joint project with another class in another country.			✓	A freelance designer is working with multiple clients, dividing her time between her own office and her clients' offices.	✓			A large office needs a daily backup system in place so that any accidentally deleted documents can be recovered.		✓		
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A large office needs a daily backup system in place so that any accidentally deleted documents can be recovered.		✓																

Question	Answer	Notes / Marks
8_Q1	Magnetic	
8_Q2	True	
8_Q3	Partial	
8_Q4	User needs	
8_Q5	False	

Storage needs of an organisation [U2_L9 & L10]

Question	Answer	Notes																
1	<ul style="list-style-type: none"> TICK KEYWORDS 																	
2	<p>The below are sample answers, any reasonable answer may be argued.</p> <table border="1"> <thead> <tr> <th>Employee</th> <th>Main storage</th> <th>Additional storage</th> <th>Reasons for suggestions</th> </tr> </thead> <tbody> <tr> <td>Employees working in the office</td> <td>Magnetic drives</td> <td>USB pen drives Optical disc</td> <td> <ul style="list-style-type: none"> Magnetic drives allow for high capacity in desktop computers. Pen drives easy to swap Optical disc may be used for quickly sharing files. </td> </tr> <tr> <td>Remote employees</td> <td>Solid-state drive</td> <td>Portable solid-state drives</td> <td> <ul style="list-style-type: none"> SSD within laptops for faster access, also works well if moving to the office. </td> </tr> <tr> <td>Travelling employee</td> <td>Solid-state drive</td> <td>Portable solid-state drives</td> <td> <ul style="list-style-type: none"> SSD within laptops for faster access on the move and less prone to vibration. </td> </tr> </tbody> </table>	Employee	Main storage	Additional storage	Reasons for suggestions	Employees working in the office	Magnetic drives	USB pen drives Optical disc	<ul style="list-style-type: none"> Magnetic drives allow for high capacity in desktop computers. Pen drives easy to swap Optical disc may be used for quickly sharing files. 	Remote employees	Solid-state drive	Portable solid-state drives	<ul style="list-style-type: none"> SSD within laptops for faster access, also works well if moving to the office. 	Travelling employee	Solid-state drive	Portable solid-state drives	<ul style="list-style-type: none"> SSD within laptops for faster access on the move and less prone to vibration. 	
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Travelling employee	Solid-state drive	Portable solid-state drives	<ul style="list-style-type: none"> SSD within laptops for faster access on the move and less prone to vibration. 															
3	<p>Include any of the following:</p> <ul style="list-style-type: none"> A magnetic drive or magnetic tape could be used for office backup but then stored off-site. Home and remote workers could backup their work to a cloud-based system. 																	
4	<p>Include any three of the following:</p> <ul style="list-style-type: none"> Shared backup system, allowing office and remote workers to access same system. Collaborative working, working on shared documents shared online. Online messaging systems for communication between employees. 																	

Question	Answer	Notes / Marks
5_Q1	USB stick	
5_Q2	Operating system	
5_Q3	True	
5_Q4	False	
5_Q5	Solid-state	

End of Unit Typical 4 Mark Questions

Question	Key points to look for in answer	Notes
1	<ul style="list-style-type: none"> • Choice: uncompressed audio • Reasons: <ul style="list-style-type: none"> ○ No loss in quality, especially with archived material ○ It can be compressed later if required. ○ Once lost, data cannot be restored. • Differences: <ul style="list-style-type: none"> ○ File sizes smaller with compressed audio ○ Smaller file sizes can be emailed or streamed. ○ Uncompressed audio doesn't lose any original data. 	
2	<ul style="list-style-type: none"> • Optical storage <ul style="list-style-type: none"> ○ Advantages: <ul style="list-style-type: none"> ▪ Cheap, durable, easily available. ○ Disadvantages: <ul style="list-style-type: none"> ▪ Easily damaged, often read-only, limited capacity • Magnetic storage <ul style="list-style-type: none"> ○ Advantages: <ul style="list-style-type: none"> ▪ Cheap, durable, easily available, high capacity ○ Disadvantages: <ul style="list-style-type: none"> ▪ Limited life-span, slower than SSD • Solid state drives <ul style="list-style-type: none"> ○ Advantages: <ul style="list-style-type: none"> ▪ Fast, reliable, small size ○ Disadvantages: <ul style="list-style-type: none"> ▪ Expensive, lower capacities than magnetic drives 	

The computer input and output system [U3_L1]

Question	Answer	Notes															
1	<ul style="list-style-type: none"> TICK KEYWORDS 																
2	<pre> graph LR A[INPUT] --> B[PROCESS] B --> C[OUTPUT] </pre>																
3	<ul style="list-style-type: none"> Input: Information or data that is fed into the computer system Process: Calculations or processing carried out by the CPU Output: The resulting data is presented to the user, either visually or audibly 																
4	Include any four of the following: <ul style="list-style-type: none"> Keyboards Mouse Touch or track pad Controllers and joysticks Scanners (Text, image, barcodes) Digital cameras and camcorders Webcams Microphones Sensors (Temperature, light, pressure) 	Any other suitable device is ok.															
5	Include any of the following: <ul style="list-style-type: none"> Monitors, screens, televisions Speakers Printers (inkjet, laser, 3D) Projectors Robots 	Any other suitable device is ok.															
6	<table border="1"> <thead> <tr> <th>Scenario</th> <th>Input or output?</th> <th>Choice of device</th> </tr> </thead> <tbody> <tr> <td>Viewing a 3D model of a video game character</td> <td>Output</td> <td>Monitor, projector</td> </tr> <tr> <td>Opening a document on a laptop</td> <td>Input</td> <td>Mouse, trackpad</td> </tr> <tr> <td>Submitting a copy of a word-processed report on paper</td> <td>Output</td> <td>Printer</td> </tr> <tr> <td>Checking prices of products on a supermarket shelf</td> <td>Input</td> <td>Barcode scanner</td> </tr> </tbody> </table>	Scenario	Input or output?	Choice of device	Viewing a 3D model of a video game character	Output	Monitor, projector	Opening a document on a laptop	Input	Mouse, trackpad	Submitting a copy of a word-processed report on paper	Output	Printer	Checking prices of products on a supermarket shelf	Input	Barcode scanner	
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Opening a document on a laptop	Input	Mouse, trackpad															
Submitting a copy of a word-processed report on paper	Output	Printer															
Checking prices of products on a supermarket shelf	Input	Barcode scanner															
7	Include any two of the following: <ul style="list-style-type: none"> Touch screen devices Storage devices Virtually reality headsets An interactive white board 	Any other suitable device is ok.															

Question	Answer	Notes / Marks
8_Q1	Central Processing Unit	
8_Q2	Trackpad	
8_Q3	Graphical User Interface	
8_Q4	Virtual reality headset	
8_Q5	Game controller	

Computer components [U3_L2]

Question	Answer	Notes																
1	<ul style="list-style-type: none"> TICK KEYWORDS 																	
2	Include any of the following: <ul style="list-style-type: none"> Gaming computers may include more RAM. Gaming computers may have a larger screen and speakers. An office computer may be smaller. A gaming computer will need a larger hard drive for storing games. A gaming computer may include a joypad. A gaming computer will have a more powerful graphics card.																	
3	<table border="1"> <thead> <tr> <th>Component</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>CPU</td> <td>The 'brain' of every computer; processes input signals and sends data to output devices</td> </tr> <tr> <td>Hard drive</td> <td>Used for long-term storage; holds the operating system, software and user documents</td> </tr> <tr> <td>Graphics (video) card</td> <td>Used to connect to a display device, such as a monitor or projector</td> </tr> <tr> <td>RAM</td> <td>Random access memory: short-term memory, used to store current data and processes</td> </tr> <tr> <td>ROM</td> <td>Read-only memory: used to store essential system information</td> </tr> <tr> <td>Connectors/ports</td> <td>Required to connect external peripherals, including most input and output devices</td> </tr> <tr> <td>Motherboard</td> <td>The main circuit board, to which all of the key components connect</td> </tr> </tbody> </table>	Component	Description	CPU	The 'brain' of every computer; processes input signals and sends data to output devices	Hard drive	Used for long-term storage; holds the operating system, software and user documents	Graphics (video) card	Used to connect to a display device, such as a monitor or projector	RAM	Random access memory: short-term memory, used to store current data and processes	ROM	Read-only memory: used to store essential system information	Connectors/ports	Required to connect external peripherals, including most input and output devices	Motherboard	The main circuit board, to which all of the key components connect	
Component	Description																	
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ROM	Read-only memory: used to store essential system information																	
Connectors/ports	Required to connect external peripherals, including most input and output devices																	
Motherboard	The main circuit board, to which all of the key components connect																	
4	<ul style="list-style-type: none"> Power supply: Converts mains electricity to a suitable level for the computer. CPU fan: prevents the CPU from overheating. 																	
5																		

Question	Answer	Notes / Marks
6_Q1	Motherboard	
6_Q2	False	
6_Q3	Brain	
6_Q4	True	
6_Q5	Graphics card	

High- and low-level programming languages [U3_L3 & L4]

Question	Answer	Notes																					
1	<ul style="list-style-type: none"> TICK KEYWORDS 																						
2	<ul style="list-style-type: none"> A high-level computer language is designed to be understood and written by a human using key words that we will understand. High-level computer languages cannot be directly understood by a computer. A translator must be used to convert it to a computer-friendly format. 																						
3	Include any two of the following: <ul style="list-style-type: none"> A low-level language can be understood directly by a computer. There are multiple high-level languages, unlike low-level. Low-level languages cannot be read by a human. A translator must convert a high-level language to a low-level language. 																						
4	It is a website designed to visually show the process of a modern computer, including the CPU, RAM, inputs, and outputs.																						
5	<table border="1"> <thead> <tr> <th>Scenario</th> <th>High level</th> <th>Low level</th> </tr> </thead> <tbody> <tr> <td>C++</td> <td>✓</td> <td></td> </tr> <tr> <td>Machine code</td> <td></td> <td>✓</td> </tr> <tr> <td>Java</td> <td>✓</td> <td></td> </tr> <tr> <td>Python</td> <td>✓</td> <td></td> </tr> <tr> <td>Assembly language</td> <td></td> <td>✓</td> </tr> <tr> <td>Swift</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Scenario	High level	Low level	C++	✓		Machine code		✓	Java	✓		Python	✓		Assembly language		✓	Swift	✓		
Scenario	High level	Low level																					
C++	✓																						
Machine code		✓																					
Java	✓																						
Python	✓																						
Assembly language		✓																					
Swift	✓																						
6	Include one of each of the following: <ul style="list-style-type: none"> Advantages <ul style="list-style-type: none"> Much easier to learn and understand Lots of choice Lots of online support and tutorials to help learn. Disadvantages <ul style="list-style-type: none"> Can be difficult to choose one. Needs to be translated before a computer can read it. 																						
7	Include one of each of the following: <ul style="list-style-type: none"> Advantages <ul style="list-style-type: none"> Requires little translation. Used with older computer-controlled devices. Disadvantages <ul style="list-style-type: none"> Very difficult to learn and understand and spot problems. Lots of different variations between processors. 																						

Question	Answer	Notes / Marks
8_Q1	Python	
8_Q2	True	
8_Q3	Translator	
8_Q4	True	
8_Q5	Machine code	

RISC and CISC processors [U3_L5]

Question	Answer	Notes																								
1	<ul style="list-style-type: none"> TICK KEYWORDS 																									
2	<ul style="list-style-type: none"> Reduced Instruction Set Computer Complex Instruction Set Computer 																									
3	RISC and CISC are both types of computer architecture. Computer architecture describes a set of <u>rules</u> , methods, and <u>hardware</u> elements of any specific computer <u>system</u> . Different <u>manufacturers</u> can then design processors to fit a specific <u>architecture</u> .																									
4	Include any three of the following: <ul style="list-style-type: none"> Laptops Tablets Smartphones Games consoles Desktop computers 																									
5	Include any three of the following: <ul style="list-style-type: none"> Earlier electronic devices: <ul style="list-style-type: none"> Computers Calculators Stereo systems Video games 																									
6	<table border="1"> <thead> <tr> <th>Statement</th> <th>RISC</th> <th>CISC</th> </tr> </thead> <tbody> <tr> <td>Used in modern electronic devices</td> <td>✓</td> <td></td> </tr> <tr> <td>Used in early electronic devices</td> <td></td> <td>✓</td> </tr> <tr> <td>Requires fast RAM to function efficiently</td> <td>✓</td> <td></td> </tr> <tr> <td>Has low manufacturing costs due to mass production</td> <td>✓</td> <td></td> </tr> <tr> <td>Uses the most power when running</td> <td></td> <td>✓</td> </tr> <tr> <td>Requires very little RAM</td> <td></td> <td>✓</td> </tr> <tr> <td>Is designed to carry out repeated single instructions</td> <td></td> <td>✓</td> </tr> </tbody> </table>		Statement	RISC	CISC	Used in modern electronic devices	✓		Used in early electronic devices		✓	Requires fast RAM to function efficiently	✓		Has low manufacturing costs due to mass production	✓		Uses the most power when running		✓	Requires very little RAM		✓	Is designed to carry out repeated single instructions		✓
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Question	Answer	Notes / Marks
7_Q1	True	
7_Q2	1990s	
7_Q3	RISC	
7_Q4	False	
7_Q5	True	

BIOS and ROM [U3_L6]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	<ul style="list-style-type: none"> Basic input/output system 	
3	It holds the sequence of commands for successfully starting up, or booting, a computer system.	
4	<ul style="list-style-type: none"> Boot order = Tells the computer which hard drive contains the operating system Secure boot control = Allows a password to be added to prevent unauthorised access to the computer Device control = Allows connected devices, such as sound or network cards, to be disabled System settings = The date and time of the BIOS Overclocking = Can speed up a CPU beyond its original design 	
5	<ul style="list-style-type: none"> ROM describes a programmable chip within a computer system that can store important information. 	
6	<ul style="list-style-type: none"> Volatile Non-volatile 	
7	Include any of the following: <ul style="list-style-type: none"> Microwave to store controls Commands in a printer 	Any similar answer is ok.

Question	Answer	Notes / Marks
8_Q1	UEFI	
8_Q2	True	
8_Q3	Firmware	
8_Q4	Read-only memory	
8_Q5	RAM	

Random access memory [U3_L7]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	<ul style="list-style-type: none"> Random access memory 	
3	Random access memory is the short-term memory of any computer system, storing current instructions and calculations.	
4	Include any two of the following: <ul style="list-style-type: none"> Instructions are being carried out by the CPU Files, documents, and applications are stored and accessed from the hard drive. Current instructions and data being processed by the CPU is held in RAM. 	Any similar answer is ok.
5	Include any three of the following: <ul style="list-style-type: none"> Running multiple web pages Streaming music or video Checking emails Using office-based software Playing a game Updating the operating system 	Any similar answer is ok.
6	Include any of the following: <ul style="list-style-type: none"> Find the RAM or memory monitor utility, normally part of any operating system. See if any particular application is using lots of RAM and close or remove it. Check start-up programs are launching that are not needed. 	

Question	Answer	Notes / Marks
7_Q1	DDR	
7_Q2	False	
7_Q3	16 GB	
7_Q4	Short-term memory	
7_Q5	True	

Virtual memory [U3_L8]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	Include any of the following: <ul style="list-style-type: none"> Virtual memory is a function built into most operating systems that is used if too much RAM is being used and the computer is in danger of crashing. At this point the operating system will create additional 'virtual' memory to support the RAM. 	
3	<ol style="list-style-type: none"> The computer is slowing down, and RAM is almost full. Part of the hard drive that is not being used is designated as temporary RAM. Non-essential RAM data is transferred to this virtual memory on the hard drive. This frees up normal RAM and the computer functions normally. 	
4	Include any two of the following: <ul style="list-style-type: none"> Virtual memory is free, providing there is space on hard drive. Allows more processes to continue. Ideal for temporarily increasing RAM for occasional use. 	
5	Include any two of the following: <ul style="list-style-type: none"> Read/write access is slower to a hard drive than to RAM directly. The more virtual memory is used, the smaller the hard drive space. If too much virtual memory is used, the whole system will slow down. 	
6	Include any three of the following: <ul style="list-style-type: none"> How many applications are being run at the same time, can any be closed? Restart the machine and check how many applications are automatically starting, can these be disabled? Look through the installed programs list, can any be removed that aren't being used. If memory issues are a common problem, can more RAM be installed? 	

Question	Answer	Notes / Marks
8_Q1	Swapping	
8_Q2	Operating system	
8_Q3	False	
8_Q4	True	
8_Q5	True	

Users' memory requirements [U3_L9 & 10]

Question	Answer	Notes												
1	<ul style="list-style-type: none"> TICK KEYWORDS 													
2	Include any three of the following: <ul style="list-style-type: none"> Storing operating systems and applications Storing users' files and documents A location for CPU calculations and application processes A means of transferring data from one computer to another. 													
3	1. Optical disc 2. Magnetic drive 3. Solid state drive													
4	Include any three of the following: <ul style="list-style-type: none"> RAM ROM Hard drive CPU Optical drive BIOS 													
5	<ul style="list-style-type: none"> When purchasing a new computer, it is essential to consider more than just the <u>speed</u> of the <u>CPU</u> and the size of the <u>hard</u> drive. Make sure to look at the <u>RAM</u> specification and ask if it can be <u>upgraded</u>. 													
6	<table border="1"> <thead> <tr> <th>Scenario</th> <th>Hard drive type</th> <th>RAM</th> <th>External memory</th> </tr> </thead> <tbody> <tr> <td>A student is moving to university and taking their laptop with them. They will be writing reports and carrying out research, along with social media use.</td> <td> <ul style="list-style-type: none"> A laptop on the move works best with a solid-state drive. 2TB will probably be enough. </td> <td> <ul style="list-style-type: none"> The tasks described are not very RAM intensive but at least 8GB is recommended to prevent any slowdowns in the future. </td> <td> <ul style="list-style-type: none"> An external drive to back up work in case the laptop is lost is recommended. </td> </tr> <tr> <td>A special effects designer is working remotely on effects for a new sci-fi television show. They are collaborating with other designers around the world.</td> <td> Effect files will be very large. <ul style="list-style-type: none"> Due to the size needed, a magnetic drive of around 8TB is recommended. A solid-state drive of this size would be very expensive. </td> <td> Rendering high quality models is very intensive and so as much RAM as possible would be recommended. <ul style="list-style-type: none"> 32GB of RAM would be suitable. </td> <td> <ul style="list-style-type: none"> It sounds like external memory is not required for this scenario. However a cloud based system is recommended for collaborating. </td> </tr> </tbody> </table>	Scenario	Hard drive type	RAM	External memory	A student is moving to university and taking their laptop with them. They will be writing reports and carrying out research, along with social media use.	<ul style="list-style-type: none"> A laptop on the move works best with a solid-state drive. 2TB will probably be enough. 	<ul style="list-style-type: none"> The tasks described are not very RAM intensive but at least 8GB is recommended to prevent any slowdowns in the future. 	<ul style="list-style-type: none"> An external drive to back up work in case the laptop is lost is recommended. 	A special effects designer is working remotely on effects for a new sci-fi television show. They are collaborating with other designers around the world.	Effect files will be very large. <ul style="list-style-type: none"> Due to the size needed, a magnetic drive of around 8TB is recommended. A solid-state drive of this size would be very expensive. 	Rendering high quality models is very intensive and so as much RAM as possible would be recommended. <ul style="list-style-type: none"> 32GB of RAM would be suitable. 	<ul style="list-style-type: none"> It sounds like external memory is not required for this scenario. However a cloud based system is recommended for collaborating. 	
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Question	Answer	Notes / Marks
7_Q1	False	
7_Q2	Gigabytes	
7_Q3	Terabytes	
7_Q4	False	
7_Q5	True	

End of Unit Typical 4 Mark Questions

Question	Key points to look for in answer	Notes
1	<ul style="list-style-type: none"> • Volatile: any data stored on a volatile chip will disappear once the power is removed, when the power is returned it will be empty. • RAM is volatile. • Non-volatile: data is permanently stored until it is purposely removed or edited, even if the power is removed. • ROM is non-volatile. 	
2	<ul style="list-style-type: none"> • BIOS stands for basic input/output system. • It holds the sequence of commands for successfully starting up, or booting, a computer system. • These commands are held in a ROM chip and can be accessed as the computer starts • BIOS Tools: <ul style="list-style-type: none"> ○ Boot order: Selects the hard drive with the operating system if multiple drives are fitted. ○ Secure boot control: Adding a password to prevent unauthorised access to the computer. ○ Device control: connected devices, such as sound or network cards can be disabled. ○ System setting: the date and time of the BIOS. ○ Overclocking: Used to speed up a CPU beyond its original design. 	

Network types [U4_L1]

Question	Answer	Notes												
1	<ul style="list-style-type: none"> TICK KEYWORDS 													
2	<ul style="list-style-type: none"> A network is the connection, either wired or wirelessly, of two or more computer devices that can communicate and share data between them. 													
3	<ul style="list-style-type: none"> LAN = a network that covers a small area WAN = a network designed to span a large geographical area. PAN = a small network created around one person 													
4	Include any two of the following: <ul style="list-style-type: none"> Games consoles connected for online gaming Smart speakers connecting to each other and the internet Bluetooth speakers and headsets Smart televisions, streaming films, and television. 	Any similar answer is ok.												
5	Include any two of the following: <ul style="list-style-type: none"> Laptops Smartphones Smartwatches Wireless headphones 	Any similar answer is ok.												
6	Any of the following: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Network type</th> <th style="width: 35%;">Advantages</th> <th style="width: 50%;">Disadvantages</th> </tr> </thead> <tbody> <tr> <td>LAN</td> <td> <ul style="list-style-type: none"> Allows collaborative working in an office or school. Allows a single Wi-Fi connection to be shared. </td> <td> <ul style="list-style-type: none"> Limited to one location. If the internet fails, it impacts all devices. </td> </tr> <tr> <td>WAN</td> <td> <ul style="list-style-type: none"> Allows collaborative working between multiple locations. Ideal for large organisations. </td> <td> <ul style="list-style-type: none"> Requires technical expertise to set up. A virus can spread between multiple locations. </td> </tr> <tr> <td>PAN</td> <td> <ul style="list-style-type: none"> Ideal for working on the move. Requires little technical knowledge. </td> <td> <ul style="list-style-type: none"> Devices can be more expensive. Risk of hacking from other users. </td> </tr> </tbody> </table>	Network type	Advantages	Disadvantages	LAN	<ul style="list-style-type: none"> Allows collaborative working in an office or school. Allows a single Wi-Fi connection to be shared. 	<ul style="list-style-type: none"> Limited to one location. If the internet fails, it impacts all devices. 	WAN	<ul style="list-style-type: none"> Allows collaborative working between multiple locations. Ideal for large organisations. 	<ul style="list-style-type: none"> Requires technical expertise to set up. A virus can spread between multiple locations. 	PAN	<ul style="list-style-type: none"> Ideal for working on the move. Requires little technical knowledge. 	<ul style="list-style-type: none"> Devices can be more expensive. Risk of hacking from other users. 	
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7	Include any one of the following: <ul style="list-style-type: none"> Working on a train Being on holiday and wanting to check emails on a laptop Sharing an Internet connection in a car. 	Any similar answer is ok.												

Question	Answer	Notes / Marks
8_Q1	WAN	
8_Q2	PAN	
8_Q3	Local area network	
8_Q4	Wide area network	
8_Q5	Smart	

Network layouts [U4_L2]

Question	Answer	Notes												
1	<ul style="list-style-type: none"> TICK KEYWORDS 													
2	<ul style="list-style-type: none"> It is the arrangement of network compatible devices in a single network. 													
3	<ul style="list-style-type: none"> Point to point = Two compatible devices connected to each other Bus = A single network cable to with multiple devices are connected Ring = Multiple devices connected together in a closed loop Star = A network with multiple devices around a single point Mesh = A network in which every device is connected to every other device 													
4	Include any of the following: <ul style="list-style-type: none"> A laptop to a smartphone A computer to another computer A tablet to a controller 	Any similar answer is ok.												
5	<table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>Point-to-point network</td> <td>Bus network</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>Ring network</td> <td>Star network</td> <td>Mesh network</td> </tr> </table>				Point-to-point network	Bus network					Ring network	Star network	Mesh network	
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6	Include any of the following: <ul style="list-style-type: none"> Allows communication to be made between any two points. Allows communication even if multiple connection points have failed. 													

Question	Answer	Notes / Marks
8_Q1	Topology	
8_Q2	Hybrid	
8_Q3	Server	
8_Q4	Star	
8_Q5	True	

Advantages and disadvantages of networks [U4_L3]

Question	Answer	Notes																		
1	<ul style="list-style-type: none"> TICK KEYWORDS 																			
2	Include any of the following: <ul style="list-style-type: none"> Creating a mobile hotspot. Accessing a router at home 	Any similar answer is ok.																		
3	Include any two of the following. <table border="1" style="width: 100%;"> <thead> <tr> <th>Advantages</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Files can easily be shared An Internet connection can be shared between multiple devices Multiple computers can be updated at once. Printers can be shared. Documents can be shared on a central file storage area. Users can access their work on multiple computers </td> </tr> </tbody> </table>	Advantages	<ul style="list-style-type: none"> Files can easily be shared An Internet connection can be shared between multiple devices Multiple computers can be updated at once. Printers can be shared. Documents can be shared on a central file storage area. Users can access their work on multiple computers 																	
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Question	Answer	Notes / Marks
8_Q1	True	
8_Q2	Mesh	
8_Q3	Mesh	
8_Q4	Bus	
8_Q5	Point-to-point	

Network scenarios [U4_L4]

Question	Answer	Notes						
1	<ul style="list-style-type: none"> TICK KEYWORDS 							
2	Include any two of the following: <ul style="list-style-type: none"> Do the users have any specific needs? What type of layout or topology should be used? Will it be wired or wireless or a mix? What type of network, LAN or WAN is most appropriate? 	Any similar answer is ok.						
3	<table border="1"> <thead> <tr> <th>Scenario</th> <th>Network type and layout</th> <th>Reasons</th> </tr> </thead> <tbody> <tr> <td>A student has started a gaming club at home. Friends bring their laptops and tablets to socialise and play network games together rather than with strangers online.</td> <td>Local Area Network (LAN) Star network</td> <td>A router at the centre of the network can supply a wireless signal for visiting friends and around the home. A switch can be added for multiple wired connections if required.</td> </tr> </tbody> </table>	Scenario	Network type and layout	Reasons	A student has started a gaming club at home. Friends bring their laptops and tablets to socialise and play network games together rather than with strangers online.	Local Area Network (LAN) Star network	A router at the centre of the network can supply a wireless signal for visiting friends and around the home. A switch can be added for multiple wired connections if required.	
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7	Include any two of the following: <ul style="list-style-type: none"> How might the network grow in the future? Will new users be added? Can security be updated? Will future devices be compatible? 	Any similar answer is ok.						

Question	Answer	Notes / Marks
8_Q1	Network layout	
8_Q2	False	
8_Q3	Router	
8_Q4	LAN	
8_Q5	False	

Open-source and proprietary software [U4_L5]

Question	Answer	Notes																												
1	<ul style="list-style-type: none"> TICK KEYWORDS 																													
2	<ul style="list-style-type: none"> Freeware = Available at no cost to the user but with some conditions Open source = Freely available at no cost and includes very few conditions of use Proprietary = Paid for and licenced from a commercial organisation 																													
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7	<p>Include any three of the following, or any found online:</p> <ul style="list-style-type: none"> Apache Open Office Linux GIMP, Paint.net, Blender The Battle for Wesnoth, 0 A.D. VLC 	<p>Lots more examples can be found at:</p> <p>https://en.wikipedia.org/wiki/Open-source_software</p>																												

Question	Answer	Notes / Marks
8_Q1	Linux	
8_Q2	Proprietary	
8_Q3	False	
8_Q4	Open source	
8_Q5	False	

Types of software licence [U4_L6]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	Include any three of the following: <ul style="list-style-type: none"> Who will be using the software? How much money can be spent? How many computers will it be installed on? Is technical support important? Which operating system will it need to run on? 	Any similar answer is ok.
3	<ul style="list-style-type: none"> In the past software was bought on physical floppy discs or CD-ROMs, now the majority of software is downloaded from the internet. 	
4	<ul style="list-style-type: none"> Concurrent use licence = A licence that is based on the number of users accessing the software at once EULA = Users are licensees, who cannot copy, modify or share the software GNU General Public Licence = Guarantees end users the freedom to run, study, share and modify the software Non-perpetual licences = Subscription-based software with a monthly or annual licensing fee 	
5	<ul style="list-style-type: none"> Perpetual licence = Allows an individual to use a program indefinitely Proprietary licence = A contract between the licensor and purchaser, establishing the purchaser's right to use the software Site licence = Allows the user to install software on several computers at the same time Workstation licence = Grants a user the right to run an application on a specific machine 	
6	<ol style="list-style-type: none"> Perpetual lasts forever but a non-perpetual licence lasts only as long as the fee is being paid. Workstation is linked to one specific computer, but site is for any computer within the organisation. 	
7	Include any one of the following of each: <ul style="list-style-type: none"> Advantage: <ul style="list-style-type: none"> Can access large library Library is constantly updated Can access anywhere with Internet access Disadvantage: <ul style="list-style-type: none"> Limited to Internet access Access removed if payment stopped Cannot keep any media after account closed 	

Question	Answer	Notes / Marks
8_Q1	True	
8_Q2	Site	
8_Q3	Open source	
8_Q4	Non-perpetual	
8_Q5	True	

Remote working [U4_L7]

Question	Answer	Notes				
1	<ul style="list-style-type: none"> TICK KEYWORDS 					
2	<ul style="list-style-type: none"> Remote working, also known as home working, is the process of working away from an organisation's normal place of business. 					
3	Include any three of the following: <ul style="list-style-type: none"> A reliable internet connection A desktop computer A laptop A web cam, microphone and speakers for video calls. Office stationery and resources A printer A scanner or digital camera 	Any similar answer is ok.				
4	Include any three of each the following: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Advantages</th> <th style="width: 50%;">Disadvantages</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Family flexibility, the ability to reduce childcare and adjust working hours. Reduction in commuting, reducing traffic and pollution. Employers' reduction in office space and equipment costs. New home-based jobs have been created, especially in relation to computer science. Employers can hire new employees from around the world. People might not have to move to a city for a particular role. </td> <td> <ul style="list-style-type: none"> A blur around working hours, receiving emails and calls at unsociable hours. The need to have a reliable internet connection. Home computing may need to be upgraded or shared with the family. Computer security will need upgrading to professional standards. People can feel unrewarded or disconnected from their employers and work colleagues. Increased home bills for energy, equipment and internet connections. It may be required to store important or sensitive information at home. </td> </tr> </tbody> </table>	Advantages	Disadvantages	<ul style="list-style-type: none"> Family flexibility, the ability to reduce childcare and adjust working hours. Reduction in commuting, reducing traffic and pollution. Employers' reduction in office space and equipment costs. New home-based jobs have been created, especially in relation to computer science. Employers can hire new employees from around the world. People might not have to move to a city for a particular role. 	<ul style="list-style-type: none"> A blur around working hours, receiving emails and calls at unsociable hours. The need to have a reliable internet connection. Home computing may need to be upgraded or shared with the family. Computer security will need upgrading to professional standards. People can feel unrewarded or disconnected from their employers and work colleagues. Increased home bills for energy, equipment and internet connections. It may be required to store important or sensitive information at home. 	
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5	<ul style="list-style-type: none"> If the role involves physical or interpersonal interactivity then it is difficult to do this remotely or from home. 					
6	Include any three of the following: <ul style="list-style-type: none"> Should workers be expected to work extra hours and respond to emails day and night? Should employees receive compensation (money) if they have had to upgrade their home equipment and internet connection? If equipment or the internet fails, whose responsibility is it? Is it acceptable for employers to install software that monitors whether an employee is working or not? Is it safe for work documentation to be stored at home? What happens if there is a data breach and data is lost while at home? 					
7	The rise in remote working has made countries look carefully at their technology <u>infrastructure</u> . Some employees might not have a <u>reliable</u> internet connection. Others may need to have a <u>laptop</u> or tablet provided if they don't have their own. Some people may miss out on <u>job</u> opportunities if they don't have <u>access</u> to technology.					

Question	Answer	Notes / Marks
8_Q1	Home working	
8_Q2	means of transport	
8_Q3	True	
8_Q4	Video calling	
8_Q5	True	

Copyright and ethics [U4_L8]

Question	Answer	Notes						
1	<ul style="list-style-type: none"> TICK KEYWORDS 							
2	<ul style="list-style-type: none"> Illegal: any action that goes against the legal rules defined by law. Unethical: going against the moral rules of right and wrong agreed by any society. 							
3	<ul style="list-style-type: none"> Copyright = The legal right of ownership for the creator of any printed, published, filmed or recorded piece of work Copyright laws = Describe the legal protection that a creator has and what happens to people who break copyright Ethics = Moral rules that describe what we believe is right and wrong within a civilised society 							
4	<p>Include any one of each for of the following:</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>In support of free download sites</th> <th>Against free download sites</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Many people can't afford expensive streaming services. Much of the content may be old or difficult to find legally. The internet is free, why shouldn't all content be </td> <td> <ul style="list-style-type: none"> The sites are sometimes run by criminals. Where were these files taken from? Viruses can be spread. The original creators cannot be paid for their work. </td> </tr> </tbody> </table>	In support of free download sites	Against free download sites	<ul style="list-style-type: none"> Many people can't afford expensive streaming services. Much of the content may be old or difficult to find legally. The internet is free, why shouldn't all content be 	<ul style="list-style-type: none"> The sites are sometimes run by criminals. Where were these files taken from? Viruses can be spread. The original creators cannot be paid for their work. 			
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5	<table border="1" style="width: 100%;"> <thead> <tr> <th>Scenario</th> <th>Copyright considerations</th> <th>Ethical considerations</th> </tr> </thead> <tbody> <tr> <td> <p>A politician has created a broadcast designed to attract voters to vote for her.</p> <p>She has used clips from popular films and songs in her video.</p> </td> <td> <p>Taking clips for such a non-personal use would break copyright.</p> <p>The creators of the films and music should be asked for permission to use their content.</p> </td> <td> <p>The politician might argue that she is not making a commercial video.</p> <p>The original creators might also not want their work associated with the video or any political cause.</p> </td> </tr> </tbody> </table>	Scenario	Copyright considerations	Ethical considerations	<p>A politician has created a broadcast designed to attract voters to vote for her.</p> <p>She has used clips from popular films and songs in her video.</p>	<p>Taking clips for such a non-personal use would break copyright.</p> <p>The creators of the films and music should be asked for permission to use their content.</p>	<p>The politician might argue that she is not making a commercial video.</p> <p>The original creators might also not want their work associated with the video or any political cause.</p>	
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6	<ul style="list-style-type: none"> Students' choice, the answer should fit in with the discussion points outlined in the textbook. 							
7	<p>Include any one of the following:</p> <ul style="list-style-type: none"> Sharing content with a friend Downloading content from a website that looks legitimate Following a link recommended online. 							

Question	Answer	Notes / Marks
8_Q1	True	
8_Q2	Ideas	
8_Q3	Fair use	
8_Q4	False	
8_Q5	Illegal	

Cybercrime [U4_L9]

Question	Answer	Notes								
1	<ul style="list-style-type: none"> TICK KEYWORDS 									
2	<ul style="list-style-type: none"> Cybercrime describes any sort of crime or criminal activity that is carried out using a computer 									
3	<p>Include any three of the following:</p> <ul style="list-style-type: none"> A reliable, fast internet connection The ability to hide IP addresses using virtual private networks Remote working and portable devices The ability to create and edit websites The ability to send mass emails and text messages The ability to 'spoof' or fake telephone numbers. 									
4	<ul style="list-style-type: none"> Phishing scam = Users receive a fake message from a bank or other company, which claims they need to confirm their details – these details are then stolen Ransomware = Places a virus on the computer that locks all files until a payment is made to the software creator Cryptocurrency scams = Fake websites claiming to sell currencies, such as Bitcoin. Illegal websites = Sites selling illegal items, criminal material and stolen confidential information 									
5	<p>The examples below are provided as a guide, any suitable example can be provided.</p> <table border="1"> <thead> <tr> <th>Phishing scam</th> <th>Ransomware</th> </tr> </thead> <tbody> <tr> <td>Emailing a family, pretending to be their credit card company. It claims there has been suspicious activity on the card and they should click the secure link to urgently check their account. The link is fake, and their login details are stolen.</td> <td>A hospital has lots of computers around the building and some have had their security settings updated. They received emails that contained links to a ransomware program that locked it and all other machines on the same network. They could not be unlocked until a ransom payment is paid or an expert removes it.</td> </tr> <tr> <th>Cryptocurrency scams</th> <th>Illegal material</th> </tr> <tr> <td>Users receive messages claiming a website provides an easy and safe way to buy and sell cryptocurrency without technical knowledge. The site is a scam that takes financial information and closes after stealing information from thousands of users.</td> <td>Wanting to see what the dark web is about; young users explore and find a website selling items they don't realise are stolen. They purchase items and are then contacted by the authorities, who were monitoring the site and its customers.</td> </tr> </tbody> </table>	Phishing scam	Ransomware	Emailing a family, pretending to be their credit card company. It claims there has been suspicious activity on the card and they should click the secure link to urgently check their account. The link is fake, and their login details are stolen.	A hospital has lots of computers around the building and some have had their security settings updated. They received emails that contained links to a ransomware program that locked it and all other machines on the same network. They could not be unlocked until a ransom payment is paid or an expert removes it.	Cryptocurrency scams	Illegal material	Users receive messages claiming a website provides an easy and safe way to buy and sell cryptocurrency without technical knowledge. The site is a scam that takes financial information and closes after stealing information from thousands of users.	Wanting to see what the dark web is about; young users explore and find a website selling items they don't realise are stolen. They purchase items and are then contacted by the authorities, who were monitoring the site and its customers.	
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6	<p>Include any four of the following:</p> <ul style="list-style-type: none"> Never give away personal information either online or on the telephone. Make sure to use strong passwords and never share or duplicate them. Avoid websites claiming to give away free downloads or products. Install advertising and trackers blockers onto your computer or smartphone. Do not install software or smartphone apps from non-reputable sources. Ensure operating system security and antivirus software is always up to date. 									
7	<ul style="list-style-type: none"> Younger people often now have lessons and advice on cybercrime at school, something the older generation never had access to. Younger people have grown up with internet access, whereas to older people, it is a relatively new technology. 									
Question	Answer	Notes / Marks								
8_Q1	False									
8_Q2	Ransomware									
8_Q3	Dark web									
8_Q4	True									
8_Q5	Yahoo									

The digital divide [U4_L10]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	<ul style="list-style-type: none"> The digital divide is the gap between those that have access to technology and those that do not or choose not to use it. 	
3	Include any two of the following: <ul style="list-style-type: none"> The industrial and technological level between countries. Different social and economic groups within the same country. Opinions on technology between age groups. Opinions on technology between different cultural or religious groups. 	
4	<ul style="list-style-type: none"> Information rich: knowing about the world, important events and how society is run allows people to make informed decisions. Information poor: not being able to access useful information, or knowing where to look if they need to, increases inequality and people missing out. 	
5	Include any one of the following of each: <ul style="list-style-type: none"> Advantage: <ul style="list-style-type: none"> Ability to contact more people than traditional media platforms. Instant and interactive communication. Disadvantage: <ul style="list-style-type: none"> Facts cannot be quickly checked. Users may confuse opinion with factual news 	
6	<ul style="list-style-type: none"> Online shopping = Many services are moving online, and are often at lower prices than in stores Employment = Job applications are often online, and many roles require basic computing skills Democracy = Being able to listen to a wide range of opinions helps people make informed choices Economic growth = Advertising online gives businesses an advantage over those that cannot advertise online Social isolation = This decreases when people are able to stay in touch with friends and family around the world 	
7	Include any four of the following: <ul style="list-style-type: none"> Provide better access in rural areas. Making devices and services cheaper to access. Teach all ages about technology and its opportunities. Share resources around the world. Consider all people, not just able-bodied users. 	Any similar answer is ok.

Question	Answer	Notes / Marks
8_Q1	True	
8_Q2	News organisations	
8_Q3	False	
8_Q4	75 per cent	
8_Q5	True	

End of Unit Typical 4 Mark Questions

Question	Key points to look for in answer	Notes
1	<ul style="list-style-type: none"> • PAN = a small network created around one person. • Devices: <ul style="list-style-type: none"> ○ Laptops ○ Smartphones ○ Smart watches ○ Smart glasses ○ Wireless headphones ○ Smart clothing 	
2	<ul style="list-style-type: none"> • Advantages: <ul style="list-style-type: none"> ○ No need to commute to work. ○ Flexibility around family life. ○ Save money on travel and work attire. • Disadvantages: <ul style="list-style-type: none"> ○ Requires a reliable internet connection. ○ Requires computer devices at home. ○ Feel disconnected from office and work friends. ○ Increased energy usage at home. ○ May not fit with family life and home design. 	

Databases and data types [U5_L1]

Question	Answer	Notes																																																																							
1	<ul style="list-style-type: none"> TICK KEYWORDS 																																																																								
2	<ul style="list-style-type: none"> A database is an organised collection of electronic data that can be searched, analysed, filtered and presented. 																																																																								
3	Include any three of the following: <ul style="list-style-type: none"> The personal and academic records of students in a school. Customer details and purchases. Libraries of books, films or music. Government registration systems including drivers, voters and medical records. 	Any similar answer is ok.																																																																							
4	<ul style="list-style-type: none"> Record: one complete entry in a database Field: one part of a record Table: a list of similar records Form: an screen for entering data into a database 																																																																								
5	Include any two of the following: <ul style="list-style-type: none"> Microsoft Access Apache Open Office Base FileMaker Pro Libre Office Base 	Other examples also exist.																																																																							
6	<p>1. Record 2. Field 3. Database</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Product</th> <th>Brand</th> <th>Cost (US\$)</th> <th>Type</th> <th>In stock</th> </tr> </thead> <tbody> <tr> <td>D001</td> <td>SWBB</td> <td>\$9.99</td> <td>T-Shirt</td> <td>Y</td> </tr> <tr> <td>D002</td> <td>STNG</td> <td>\$17.49</td> <td>Jeans</td> <td>Y</td> </tr> <tr> <td>D003</td> <td>STDSN</td> <td>\$21.00</td> <td>Sweater</td> <td>N</td> </tr> <tr> <td>D004</td> <td>FS</td> <td>\$34.00</td> <td>Trainers</td> <td>N</td> </tr> </tbody> </table>	Product	Brand	Cost (US\$)	Type	In stock	D001	SWBB	\$9.99	T-Shirt	Y	D002	STNG	\$17.49	Jeans	Y	D003	STDSN	\$21.00	Sweater	N	D004	FS	\$34.00	Trainers	N	Accept Table for 3 as this is a database consisting of a single table.																																														
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Question	Answer	Notes / Marks
8_Q1	True	
8_Q2	Adobe Photoshop	
8_Q3	Fields	
8_Q4	Alphanumeric	
8_Q5	Text	

Setting up a database [U5_L2]

Question	Answer	Notes										
1	<ul style="list-style-type: none"> TICK KEYWORDS 											
2	Include any two of the following: <ul style="list-style-type: none"> What information do I want to collect? What fields should be created? Will answers fit into a datatype? How could it be analysed? 	Any similar answer is ok.										
3	<table border="1"> <thead> <tr> <th>Field Name</th> <th>Data type</th> </tr> </thead> <tbody> <tr> <td>Name of sport</td> <td>Alphanumeric</td> </tr> <tr> <td>Year first played</td> <td>Integer</td> </tr> <tr> <td>Country of origin</td> <td>Alphanumeric</td> </tr> <tr> <td>Number of players</td> <td>Integer</td> </tr> </tbody> </table>	Field Name	Data type	Name of sport	Alphanumeric	Year first played	Integer	Country of origin	Alphanumeric	Number of players	Integer	
Field Name	Data type											
Name of sport	Alphanumeric											
Year first played	Integer											
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Number of players	Integer											
4	<ul style="list-style-type: none"> The primary key of any database is a unique field in which the value cannot be repeated. 											

Question	Answer	Notes / Marks
4_Q1	False	
4_Q2	ID number	
4_Q3	When you start	
4_Q4	True	
4_Q5	Date and time	

Using a data entry form [U5_L3]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	Include any three of the following: <ul style="list-style-type: none"> Is it easy for a range of users to access? Does it clearly state the responses to be entered? Does it have a clean, attractive layout? 	Any similar answer is ok.
3	Sketch should look something like this: <div style="border: 1px solid black; background-color: #cccccc; padding: 20px; margin: 10px auto; width: 60%;"> <div style="border: 1px solid black; width: 80%; margin: 5px auto;"> <input style="width: 95%; height: 20px;" type="text"/> </div> <div style="border: 1px solid black; width: 80%; margin: 5px auto;"> <input style="width: 95%; height: 20px;" type="text"/> </div> <div style="border: 1px solid black; width: 80%; margin: 5px auto;"> <input style="width: 95%; height: 20px;" type="text"/> </div> <div style="border: 1px solid black; width: 80%; margin: 5px auto;"> <input style="width: 95%; height: 20px;" type="text"/> </div> </div>	

Question	Answer	Notes / Marks
4_Q1	User-friendly	
4_Q2	True	
4_Q3	True	
4_Q4	Wizard	
4_Q5	False	

Data entry and database reports [U5_L4 & 5]

Question	Answer	Notes															
1	<ul style="list-style-type: none"> TICK KEYWORDS 																
2	<ul style="list-style-type: none"> Primary data is collected directly from an original source and secondary data is collected from an existing source. 																
3	Include any two of each of the following: <ul style="list-style-type: none"> Primary: <ul style="list-style-type: none"> Interview Live recording (sound, video) In-person survey Secondary: <ul style="list-style-type: none"> Internet research TV/Radio recordings Books Newspapers 	Any similar answer is ok.															
4	<table border="1"> <thead> <tr> <th>Example</th> <th>Quantitative</th> <th>Qualitative</th> </tr> </thead> <tbody> <tr> <td>An opinion on a news event</td> <td></td> <td>✓</td> </tr> <tr> <td>A rating score of a film</td> <td>✓</td> <td></td> </tr> <tr> <td>A user review of an online store</td> <td></td> <td>✓</td> </tr> <tr> <td>Asking someone their age</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Example	Quantitative	Qualitative	An opinion on a news event		✓	A rating score of a film	✓		A user review of an online store		✓	Asking someone their age	✓		
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A rating score of a film	✓																
A user review of an online store		✓															
Asking someone their age	✓																
5	<ul style="list-style-type: none"> A database report is a printed or on-screen extract from a database in a user-friendly document. Selected fields and data entries are filtered and presented for a specific purpose. 																
6	Include any three of the following: <ul style="list-style-type: none"> Who is the report for? What fields should be included? What formatting and layout is appropriate? Should a template be used? 																
7	Parcel or envelope labels ✓ A summary report of product stock ✓ A poster for a new product A business card with contact details ✓																

Question	Answer	Notes / Marks
8_Q1	False	
8_Q2	YouTube video	
8_Q3	Quantitative	
8_Q4	True	
8_Q5	False	

Relational databases [U5_L6]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	<ul style="list-style-type: none"> the primary key 	
3	<ul style="list-style-type: none"> A relational database contains two or more tables and relationships can be created between them. 	
4	<ul style="list-style-type: none"> A flat-file database contains only one table, a relational database contains two or more. 	
5	Students should use boxes, lines or arrows to link the 'Customer ID' field in all three tables.	
6	Teachers do not need to see students' medical records, only their academic results. Likewise, a school nurse would not need to see students' academic results.	

Question	Answer	Notes / Marks
7_Q1	1	
7_Q2	False	
7_Q3	Product ID	
7_Q4	Surname	
7_Q5	True	

Database queries [U5_L7]

Question	Answer	Notes																
1	<ul style="list-style-type: none"> TICK KEYWORDS 																	
2	<ul style="list-style-type: none"> A database query is simply trying to find a match for a specific term within a database. 																	
3	Include any two of the following: <ul style="list-style-type: none"> What was the most popular film? How much money did the film make? Who was the most popular film star? How many films were not English language? 	Any similar answer is ok.																
4	<table border="1"> <thead> <tr> <th>Description</th> <th>Operator</th> </tr> </thead> <tbody> <tr> <td>Equal to</td> <td>=</td> </tr> <tr> <td>Less than</td> <td><</td> </tr> <tr> <td>Greater than</td> <td>></td> </tr> <tr> <td>Less than or equal to</td> <td><=</td> </tr> <tr> <td>Greater than or equal to</td> <td>>=</td> </tr> </tbody> </table>	Description	Operator	Equal to	=	Less than	<	Greater than	>	Less than or equal to	<=	Greater than or equal to	>=					
Description	Operator																	
Equal to	=																	
Less than	<																	
Greater than	>																	
Less than or equal to	<=																	
Greater than or equal to	>=																	
5	<ul style="list-style-type: none"> A wildcard symbol is used to replace a character in a query if it is not known. Students' examples will differ, but should use one of the wildcard symbols from the textbook: *, \$ or #. 																	
6	<table border="1"> <thead> <tr> <th>Query description</th> <th>Field</th> <th>Query</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>How many Swoosh brand products are there?</td> <td>Brand</td> <td>=Swoosh</td> <td>2</td> </tr> <tr> <td>How many products are \$20 or less?</td> <td>Cost</td> <td><=20</td> <td>2</td> </tr> <tr> <td>How many products are in stock?</td> <td>In stock</td> <td>=Y</td> <td>2</td> </tr> </tbody> </table>	Query description	Field	Query	Result	How many Swoosh brand products are there?	Brand	=Swoosh	2	How many products are \$20 or less?	Cost	<=20	2	How many products are in stock?	In stock	=Y	2	
Query description	Field	Query	Result															
How many Swoosh brand products are there?	Brand	=Swoosh	2															
How many products are \$20 or less?	Cost	<=20	2															
How many products are in stock?	In stock	=Y	2															
7	<ul style="list-style-type: none"> Students' own answers. 																	

Question	Answer	Notes / Marks
8_Q1	Search	
8_Q2	~	
8_Q3	True	
8_Q4	Not equal to	
8_Q5	False	

Advance reports [U5_L8]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	Include any of the following: <ul style="list-style-type: none"> To meet a specific theme or company branding To focus on a specific selection of fields 	
3	Include any three of the following: <ul style="list-style-type: none"> Formatting text Background colours and effects Adding graphical shapes and images Adding photographs Adding calculated fields, processing the data already contained within a field Adding external data, such as the date or filename 	
4	<ul style="list-style-type: none"> The design is of students' own choice but should include the key elements of the brief. 	

Question	Answer	Notes / Marks
5_Q1	Video	
5_Q2	A presentation	
5_Q3	False	
5_Q4	External	
5_Q5	Calculated	

Advanced database skills and problem solving [U5_L9 & 10]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	Include any two of the following: <ul style="list-style-type: none"> Fields may need adding, removing or editing. Field types may have changed. New reports may be required. Old data may need removing or updating. 	Any similar answer is ok.
3	Include two any of the following: <ul style="list-style-type: none"> incorrectly formatted fields: for example, missing decimal points in a currency field identifying the wrong field as a primary key in a relational database incorrectly naming linked fields accidentally repeated fields incorrect operators used in a query Using a reserved word as a field name Out of date records in a large database may not have been removed. 	
4	<ul style="list-style-type: none"> Reserved words are key terms that cannot be used to name fields within a database. 	

Question	Answer	Notes / Marks
5_Q1	false	
5_Q2	reserved words	
5_Q3	live	
5_Q4	date of birth	
5_Q5	true	

End of Unit Typical 4 Mark Questions

Question	Key points to look for in answer	Notes																
1	<ul style="list-style-type: none"> ● Integer is whole numbers only, no decimal points allowed. ● Alphanumeric can be any mix of characters. ● Real number can have decimal points and also be negative. ● Examples: <ul style="list-style-type: none"> ○ Integer: 54321, -2012 ○ Alphanumeric: Hello World!, H@ckr5, THX1138 ○ Real: 38.27, -94.01 																	
2	<ul style="list-style-type: none"> ● Any two of the following: <table border="1"> <thead> <tr> <th>Operator</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>=</td> <td>Equal to</td> </tr> <tr> <td><</td> <td>Less than</td> </tr> <tr> <td>></td> <td>Greater than</td> </tr> <tr> <td><=</td> <td>Less than or equal to</td> </tr> <tr> <td>>=</td> <td>Greater than or equal to</td> </tr> <tr> <td><></td> <td>Not equal to</td> </tr> <tr> <td>between</td> <td>Between two values</td> </tr> </tbody> </table> ● To search for the cheapest large product. Search all fields for large plant, sorted by price. 	Operator	Description	=	Equal to	<	Less than	>	Greater than	<=	Less than or equal to	>=	Greater than or equal to	<>	Not equal to	between	Between two values	
Operator	Description																	
=	Equal to																	
<	Less than																	
>	Greater than																	
<=	Less than or equal to																	
>=	Greater than or equal to																	
<>	Not equal to																	
between	Between two values																	

An introduction to HTML [U6_L1]

Question	Answer	Notes
1	<ul style="list-style-type: none"> TICK KEYWORDS 	
2	<p>Sir Tim Berners-Lee created HTML and the first web <u>browser</u> to display it in <u>1989</u>. Although the <u>Internet</u> already existed, there wasn't a single <u>agreed</u> standard for displaying <u>content</u>. The web <u>servers</u> and browsers he created allowed anyone to use the Internet in a free and open system.</p>	
3	<p>Include any four of the following:</p> <ul style="list-style-type: none"> Text Images Colour, style and formatting Videos Sound Internal hyperlinks External hyperlinks 	
4		
5	<ul style="list-style-type: none"> Head: contains essential page information, including title, style options and metadata Tags: instructs the browser to display content in a specific way, using <> and </> Title: appears as the title at the top of the browser and is listed in search engines Body: contains all the page content that will be seen by the user Attribute: used to add specific or additional information to a HTML command Hyperlink: a link to another web page within the same site or on an external site Lists: can be either unordered (bullet points) or ordered (numbered) Metadata: background information about the site, read by search engines 	

Question	Answer	Notes / Marks
6_Q1	Paragraph	
6_Q2	realpython.com	
6_Q3	Comments	
6_Q4	Anchor	
6_Q5	False	

HTML Basics [U6_L2]

Question	Answer	Notes																				
1	<ul style="list-style-type: none"> TICK KEYWORDS 																					
2	<div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; width: 60%;"> <pre><!DOCTYPE html> <html> <head> <title> Hats of the World</title> </head> <body> <h1>Hats from around the world</h1> <p>These are some of my favourite hats
There are many more to find.</p> The Flat Cap Fedora Baseball Cap Ushanka </body> </html></pre> </div> <div style="margin-left: 20px;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 10px;">Line break</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 10px;">Unordered list</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 10px;">Browser title</div> <div style="border: 1px solid black; padding: 2px;">Heading</div> </div> </div>																					
3	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">HTML</th> <th>Explanation</th> </tr> </thead> <tbody> <tr> <td><!DOCTYPE html></td> <td>This notifies the web browser to display an HTML document.</td> </tr> <tr> <td><head></head></td> <td>Creates the header area, where the title is stored.</td> </tr> <tr> <td><title></title></td> <td>The title that appears in the browser toolbar.</td> </tr> <tr> <td><body></body></td> <td>The main content area of the page.</td> </tr> <tr> <td><h1></h1></td> <td>Specifies heading style 1 of 6. Heading 1 is the largest.</td> </tr> <tr> <td><p></p></td> <td>Creates a new paragraph.</td> </tr> <tr> <td>
</br></td> <td>Adds a line break, moving text onto a new line.</td> </tr> <tr> <td></td> <td>Creates a bullet point list.</td> </tr> <tr> <td></td> <td>Creates a new bullet point within the list.</td> </tr> </tbody> </table>	HTML	Explanation	<!DOCTYPE html>	This notifies the web browser to display an HTML document.	<head></head>	Creates the header area, where the title is stored.	<title></title>	The title that appears in the browser toolbar.	<body></body>	The main content area of the page.	<h1></h1>	Specifies heading style 1 of 6. Heading 1 is the largest.	<p></p>	Creates a new paragraph.	 </br>	Adds a line break, moving text onto a new line.		Creates a bullet point list.		Creates a new bullet point within the list.	
HTML	Explanation																					
<!DOCTYPE html>	This notifies the web browser to display an HTML document.																					
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<body></body>	The main content area of the page.																					
<h1></h1>	Specifies heading style 1 of 6. Heading 1 is the largest.																					
<p></p>	Creates a new paragraph.																					
 </br>	Adds a line break, moving text onto a new line.																					
	Creates a bullet point list.																					
	Creates a new bullet point within the list.																					
4	<p>Students should use the current HTML as a guide. Their code should look similar to the below:</p> <pre><code> <!DOCTYPE html> <html> <head> <title>Bags of the World</title> </head> <body> <h1>Bags from around the world</h1> <p>These are just a few different types of bag.
There are many more to find.</p> Rucksack Handbag Shoulder bag Picnic box </body> </html> </code></pre>																					
5	<ul style="list-style-type: none"> HTML5 is the most recent of version of HTML. It includes functionality for multiple size devices, online video, audio and animation. It removes the need for multiple plugins when browsing the web. 																					
Question	Answer	Notes / Marks																				
6_Q1	False																					
6_Q2	The Internet Archive																					
6_Q3	<p></p>																					
6_Q4	<body></body>																					
6_Q5	False																					

Designing a simple web page [U6_L3]

Question	Answer	Notes																		
1	<ul style="list-style-type: none"> TICK KEYWORDS 																			
2	<ul style="list-style-type: none"> Students' own choice of topic. 																			
3	<table border="1"> <thead> <tr> <th>Statement</th> <th>Good advice</th> <th>Bad advice</th> </tr> </thead> <tbody> <tr> <td>Use lower-case letters for folders and filenames.</td> <td>✓</td> <td></td> </tr> <tr> <td>Create a folder structure with sub-folders.</td> <td>✓</td> <td></td> </tr> <tr> <td>Save all your files on the desktop.</td> <td></td> <td>✓</td> </tr> <tr> <td>Use upper-case letters for filenames.</td> <td></td> <td>✓</td> </tr> <tr> <td>Avoid using spaces in folder names and filenames.</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Statement	Good advice	Bad advice	Use lower-case letters for folders and filenames.	✓		Create a folder structure with sub-folders.	✓		Save all your files on the desktop.		✓	Use upper-case letters for filenames.		✓	Avoid using spaces in folder names and filenames.	✓		
Statement	Good advice	Bad advice																		
Use lower-case letters for folders and filenames.	✓																			
Create a folder structure with sub-folders.	✓																			
Save all your files on the desktop.		✓																		
Use upper-case letters for filenames.		✓																		
Avoid using spaces in folder names and filenames.	✓																			
4	<ul style="list-style-type: none"> Students should add suitable file and folder names. 																			
5	<ul style="list-style-type: none"> Students' plans should resemble that in textbook. 																			
6	<ul style="list-style-type: none"> Students' HTML should be similar to that in textbook. 																			

Question	Answer	Notes / Marks
7_Q1	%20	
7_Q2	False	
7_Q3		
7_Q4	<a href>	
7_Q5	" "	

Testing a web page [U6_L4]

Question	Answer	Notes										
1	<ul style="list-style-type: none"> TICK KEYWORDS 											
2	Include any two of the following: <ul style="list-style-type: none"> It is a working document that contains links, interactive elements and is based on program code. For the website to function correctly, the code must not contain errors. It is also a live document, meaning it needs to be accurate and stay accurate over time. It can be seen by an audience Content should be truthful and accurate. 											
3	Include any four of the following: <ul style="list-style-type: none"> Incorrect syntax, using an incorrect symbol. Not closing tags, for example using an opening <code><h1></code> but forgetting the closing <code></h1></code>. Placing content in the wrong area, page titles outside of the <code><head></code> area for example. Poorly formatted text using lots of <code>
</code> tags, rather than <code><p></code> paragraphs. File and folder names not matching their reference in the code. Missing the <code>.html</code> file extension when creating the file in a text editor. 											
4	<ul style="list-style-type: none"> Code checking is looking for coding errors. Proofreading is making sure the content, text and images are accurate and sensibly laid out. 											
5	<ul style="list-style-type: none"> Content Functionality Navigation Useability Accuracy 											
6	<table border="1"> <thead> <tr> <th>Test number</th> <th>Test description</th> <th>Expected result</th> <th>Actual result</th> <th>Changes required</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Test number	Test description	Expected result	Actual result	Changes required						
Test number	Test description	Expected result	Actual result	Changes required								
7	<table border="1"> <thead> <tr> <th>Error 1</th> <th>Error 2</th> <th>Error 3</th> <th>Error 4</th> </tr> </thead> <tbody> <tr> <td>Missing list closing tag on 'handbag'.</td> <td>Missing letter in <code><a href></code></td> <td>Inconsistent heading styles: h2 and h1</td> <td>Missing closure of unordered list <code></code></td> </tr> </tbody> </table>	Error 1	Error 2	Error 3	Error 4	Missing list closing tag on 'handbag'.	Missing letter in <code><a href></code>	Inconsistent heading styles: h2 and h1	Missing closure of unordered list <code></code>	Errors can be in any order.		
Error 1	Error 2	Error 3	Error 4									
Missing list closing tag on 'handbag'.	Missing letter in <code><a href></code>	Inconsistent heading styles: h2 and h1	Missing closure of unordered list <code></code>									

Question	Answer	Notes / Marks
8_Q1	Poor grammar	
8_Q2	False	
8_Q3	<code></code>	
8_Q4	head	
8_Q5	True	

WYSIWYG Software [U6_L5]

Question	Answer	Notes				
1	<ul style="list-style-type: none"> TICK KEYWORDS 					
2	<ul style="list-style-type: none"> (WYSIWYG) stands for What You See Is What You Get 					
3	<ul style="list-style-type: none"> WYSIWYG is designed so the user can create a website on screen and see straight away how it will look, rather than previewing code within a browser. 					
4	<p>Include any three of the following:</p> <ul style="list-style-type: none"> Drag and drop graphics and images, in the same style of desktop publishing software. Live previews, the ability to see how the page will look within using a browser. File and folder management, making sure links are updated if content is moved. The ability to link to existing online sources, video, and audio. The ability to add web forms, shopping functionality and interactivity. 					
5	<ul style="list-style-type: none"> If WYSIWYG software is used, the website is locally created on a computer and then tested in a browser. Builders such as WordPress are normally web-based, so websites are created within the browser without additional software. 					
6	<p>Include any two of each of the following:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Advantages</th> <th style="width: 50%; text-align: center;">Disadvantages</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> No coding experience required. Visual errors can be quickly spotted. No need to preview in a separate browser. Compatibility for different devices is often included. </td> <td> <ul style="list-style-type: none"> Difficult to make small tweaks as changes often site-wide. Limited choice of themes. Graphical glitches on some browsers difficult to edit. Auto-generated HTML is often much longer than required. </td> </tr> </tbody> </table>	Advantages	Disadvantages	<ul style="list-style-type: none"> No coding experience required. Visual errors can be quickly spotted. No need to preview in a separate browser. Compatibility for different devices is often included. 	<ul style="list-style-type: none"> Difficult to make small tweaks as changes often site-wide. Limited choice of themes. Graphical glitches on some browsers difficult to edit. Auto-generated HTML is often much longer than required. 	
Advantages	Disadvantages					
<ul style="list-style-type: none"> No coding experience required. Visual errors can be quickly spotted. No need to preview in a separate browser. Compatibility for different devices is often included. 	<ul style="list-style-type: none"> Difficult to make small tweaks as changes often site-wide. Limited choice of themes. Graphical glitches on some browsers difficult to edit. Auto-generated HTML is often much longer than required. 					
7	<ul style="list-style-type: none"> Users are not just using desktop computers and laptops. Users are viewing sites on smartphones and tablets. The page needs to adapt to the device to be user-friendly. 					

Question	Answer	Notes / Marks
8_Q1	Excel	
8_Q2	live	
8_Q3	long HTML code	
8_Q4	True	
8_Q5	False	

Multimedia web content [U6_L6]

Question	Answer	Notes																					
1	<ul style="list-style-type: none"> TICK KEYWORDS 																						
2	<ul style="list-style-type: none"> Users now no longer need to wait for downloading pages. With so many websites, designers want their site to stand out. Multimedia content allows access to video, music and games. 																						
3	Include any three of the following: <ul style="list-style-type: none"> High quality photographs and images Music and audio Video and animation Online games and activities 																						
4	<ul style="list-style-type: none"> Answers depend on student choices, below are example answers. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">A microblogging site</th> <th style="width: 33%;">A social network</th> <th style="width: 33%;">An international news site</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Images Videos Animated gifs </td> <td> <ul style="list-style-type: none"> Images Videos Animated gifs Online games </td> <td> <ul style="list-style-type: none"> Images Videos Audio interviews Infographics Crosswords </td> </tr> </tbody> </table>	A microblogging site	A social network	An international news site	<ul style="list-style-type: none"> Images Videos Animated gifs 	<ul style="list-style-type: none"> Images Videos Animated gifs Online games 	<ul style="list-style-type: none"> Images Videos Audio interviews Infographics Crosswords 																
A microblogging site	A social network	An international news site																					
<ul style="list-style-type: none"> Images Videos Animated gifs 	<ul style="list-style-type: none"> Images Videos Animated gifs Online games 	<ul style="list-style-type: none"> Images Videos Audio interviews Infographics Crosswords 																					
5	The content is not copied to the page, it is pulled from its original internet source and played directly from that source within the embed area.																						
6	Include any three of the following: <ul style="list-style-type: none"> Streaming video Streaming music Online games Parts of another web page. 																						
7	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Statement</th> <th style="width: 20%;">Good advice</th> <th style="width: 20%;">Bad advice</th> </tr> </thead> <tbody> <tr> <td>Only choose content that enhances the page and makes it better.</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>Use content appropriate for the target audience, especially with video.</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>Add multiple embedded items to a single page.</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Make sure you have permission to use the content.</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>Link to any content without checking it first.</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>Fill the page with as much content as possible to keep viewers' attention.</td> <td></td> <td style="text-align: center;">✓</td> </tr> </tbody> </table>	Statement	Good advice	Bad advice	Only choose content that enhances the page and makes it better.	✓		Use content appropriate for the target audience, especially with video.	✓		Add multiple embedded items to a single page.		✓	Make sure you have permission to use the content.	✓		Link to any content without checking it first.		✓	Fill the page with as much content as possible to keep viewers' attention.		✓	
Statement	Good advice	Bad advice																					
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Use content appropriate for the target audience, especially with video.	✓																						
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Make sure you have permission to use the content.	✓																						
Link to any content without checking it first.		✓																					
Fill the page with as much content as possible to keep viewers' attention.		✓																					

Question	Answer	Notes / Marks
8_Q1	2000	
8_Q2	Embedded content	
8_Q3	True	
8_Q4	False	
8_Q5	False	

Designing a multiple-page website [U6_L7 & L8]

Question	Answer	Notes																					
1	<ul style="list-style-type: none"> TICK KEYWORDS 																						
2	<ul style="list-style-type: none"> Responsive: the site changes to suit the device Adaptive: includes multiple versions of the same site for different devices. 																						
3	<table border="1"> <thead> <tr> <th>Statement</th> <th>Good advice</th> <th>Bad advice</th> </tr> </thead> <tbody> <tr> <td>Always keep the target audience and their interests in mind.</td> <td>✓</td> <td></td> </tr> <tr> <td>Use as many colours as possible on the same page.</td> <td></td> <td>✓</td> </tr> <tr> <td>Add multiple multimedia items to a single page.</td> <td></td> <td>✓</td> </tr> <tr> <td>Think about the reading ability of your target audience.</td> <td>✓</td> <td></td> </tr> <tr> <td>Steal content from another site.</td> <td></td> <td>✓</td> </tr> <tr> <td>If in doubt, create your own original content.</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Statement	Good advice	Bad advice	Always keep the target audience and their interests in mind.	✓		Use as many colours as possible on the same page.		✓	Add multiple multimedia items to a single page.		✓	Think about the reading ability of your target audience.	✓		Steal content from another site.		✓	If in doubt, create your own original content.	✓		
Statement	Good advice	Bad advice																					
Always keep the target audience and their interests in mind.	✓																						
Use as many colours as possible on the same page.		✓																					
Add multiple multimedia items to a single page.		✓																					
Think about the reading ability of your target audience.	✓																						
Steal content from another site.		✓																					
If in doubt, create your own original content.	✓																						
4	<table border="1"> <thead> <tr> <th>Statement</th> <th>Good advice</th> <th>Bad advice</th> </tr> </thead> <tbody> <tr> <td>Use complex tables with multiple cells and content areas.</td> <td></td> <td>✓</td> </tr> <tr> <td>Make every page completely different</td> <td></td> <td>✓</td> </tr> <tr> <td>Design around a single column</td> <td>✓</td> <td></td> </tr> <tr> <td>Spread content out in every direction.</td> <td></td> <td>✓</td> </tr> <tr> <td>Consider how the page might look on a mobile device.</td> <td>✓</td> <td></td> </tr> <tr> <td>Maintain a similar layout across all pages.</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Statement	Good advice	Bad advice	Use complex tables with multiple cells and content areas.		✓	Make every page completely different		✓	Design around a single column	✓		Spread content out in every direction.		✓	Consider how the page might look on a mobile device.	✓		Maintain a similar layout across all pages.	✓		
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5	<p>Include any two of the following:</p> <ul style="list-style-type: none"> What is the purpose of the site? What is it about? Who is the target audience? What are their interests? What functionality do I want to include? Navigation? Multimedia elements? What functionality will the website need to meet the purpose? Where will the content come from? Original or online sources? What device will the site be viewed on? Desktop, smartphone tablet? What colour theme should be used? How will I create it? HTML coding or WYSIWYG software? 																						
6		Similar common layouts are acceptable.																					
7	<ul style="list-style-type: none"> Many websites follow similar layout that have become familiar to users. Simple layouts work well with different devices. 																						

Question	Answer	Notes / Marks
8_Q1	False	
8_Q2	Menu buttons	

8_Q3	2007	
8_Q4	The banner	
8_Q5	True	

Building a multiple page website [U6_L9 & L10]

[THERE ARE NO ANSWERS FOR THIS PAGE AS IT IS A PRACTICAL TASK]

End of Unit Typical 4 Mark Questions

Question	Key points to look for in answer	Notes
1	<ul style="list-style-type: none"> • Tags are used to format content or instruct the browser to display content in a specific way. • They start with <> and end with </>. • Examples: <ul style="list-style-type: none"> ○ <head></head> - Creates the header area. ○ <title></title> - The browser toolbar title. ○ <body></body> - The main content area of the page. ○ <h1></h1> - Specifies heading style. ○ <p></p> - Creates a new paragraph. ○
</br> - Adds a line break. ○ - Create a bullet point list. ○ - Creates a new bullet point within the list. 	
2	<ul style="list-style-type: none"> • Benefits: <ul style="list-style-type: none"> ○ Existing videos can be added that you didn't create. ○ The embedded videos don't take up server space. ○ Videos can be quickly changed. • Drawbacks: <ul style="list-style-type: none"> ○ If the video is removed or swapped, the link is broken. ○ No control over the content. ○ Need to be aware of copyright. 	