



2009 Computing

Intermediate 2

Finalised Marking Instructions

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**2009 Computing
Intermediate 2**

SECTION I Attempt ALL questions in this section		Marking guidelines
1.	State one benefit of networking computers.	<ul style="list-style-type: none"> • Share files • Share hardware/peripherals eg printers • Can access files on any computer • Security of files • Communication <p>1 mark</p>
2.	Explain the difference between storing data in RAM and storing data on backing storage.	<ul style="list-style-type: none"> • Backing storage stores data permanently And • RAM is not permanent <p>1 mark (both needed)</p>
3.	Name the part of the processor responsible for carrying out calculations.	ALU 1 mark
4.	Name the software that controls the process of saving files to disk.	Operating system 1 mark
5.	Name one optical storage medium that allows the user to save files but not delete them.	CD-R, DVD-R, DVD+R, CD recordable, DVD recordable, Blu-ray-R 1 mark
6.	Name an input device which is built into a palmtop computer.	Touchscreen, microphone, keyboard(with explanation) 1 mark
7.	Each character on the keyboard has its own ASCII code. The ASCII code for one of the <i>control characters</i> is 13.	
(a)	Convert the decimal number 13 into a binary number.	1101 1 mark
(b)	Describe the function of “control characters”.	A non-printing character that causes an effect 1 mark (both parts)
8.	Explain the purpose of the <i>analysis</i> stage in the software development process.	<ul style="list-style-type: none"> • Have a clear understanding of exactly what the program is required to do. • Produce a program specification. <p>1 mark</p>

9.	State one advantage of writing programs in a high level language rather than in machine code.	<ul style="list-style-type: none"> Easier to understand Easier to edit Portability <p>1 mark any one</p>
10.	Name the stage of the software development process at which the <i>user interface</i> is created.	Implementation 1 mark
11.	Complete the following <i>complex condition</i> that displays a message “Slow Down” for cars whose speed is over 30, but below 35. IF _____ THEN display “Slow Down”.	Speed > 30 And Speed < 35 2 marks for all correct 1 mark for one error 0 marks otherwise
12.	A hospital uses a program to store the length of time each person waits to see a doctor. The program reports the longest waiting time. State which one of the following standard algorithms the program would use: <ul style="list-style-type: none"> Input validation Find maximum Find minimum Count occurrences Linear Search 	Find maximum 1 mark
13.	Name the type of loop that a program would use to implement an <i>input validation</i> algorithm.	Conditional loop 1 mark
		(15)

[END OF SECTION I]

SECTION II Attempt ALL questions in this section			Marking guidelines
14.	Marek is writing a program to calculate the average weekly rainfall. The design for this program can be represented as follows: 1. set total to zero 2. loop 7 times 3. get day's rainfall from user 4. add rainfall to total 5. end loop 6. calculate average rainfall 7. display average rainfall		
(a)	(i)	Name the design notation that has been used above.	Pseudocode 1 mark
	(ii)	Name and describe a graphical design notation.	<ul style="list-style-type: none"> • Structure diagram (1) with description or diagram (1) • Flow chart (1) with description or diagram (1) 2 marks
(b)	Steps 2 and 5 are the beginning and the end of a <i>fixed loop</i> . Explain why a “fixed loop” is being used here.		The code within the loop must be repeated seven times, once for each day of the week 1 mark
(c)	Marek uses an <i>editor</i> at the implementation stage of the software development process.		
	(i)	State the purpose of an “editor” at the implementation stage.	<ul style="list-style-type: none"> • To allow the user to enter source code • To allow the user to edit source code 1 mark
	(ii)	State where the program is stored before it is saved to backing storage.	RAM 1 mark
(d)	Describe two methods that Marek could use to ensure that his code is <i>readable</i> .		<ul style="list-style-type: none"> • Meaningful variable names • Meaningful procedure names • Internal commentary • Indentation • Use of white space • Modularity 2 marks

	<p>(e) The program calculates the average rainfall for one week as 18.6 mm. Describe how <i>floating point representation</i> is used to represent real numbers.</p>	<ul style="list-style-type: none"> • Mantissa (1) • Exponent (1) <p>2 marks</p>											
		(10)											
<p>15.</p>	<p>The estate agent PropertyPlus has a catalogue of local properties for sale. A sample page from the catalogue is shown below.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <div style="text-align: center; border-bottom: 1px solid black; margin-bottom: 10px;">  </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Price</td> <td style="border: 1px solid black; padding: 2px;">£120,000</td> <td rowspan="5" style="text-align: center; vertical-align: middle;">  <p style="font-size: small; margin-top: 5px;">Property 1 of 65</p> </td> </tr> <tr> <td>Location</td> <td style="border: 1px solid black; padding: 2px;">East Kirkness</td> </tr> <tr> <td>Rooms</td> <td style="border: 1px solid black; padding: 2px;">2 bedrooms, living room, family kitchen, dining room, bathroom</td> </tr> <tr> <td>Garden</td> <td style="border: 1px solid black; padding: 2px;">Front and rear garden</td> </tr> <tr> <td>Parking</td> <td style="border: 1px solid black; padding: 2px;">Off street parking</td> </tr> </table> </div>	Price	£120,000	 <p style="font-size: small; margin-top: 5px;">Property 1 of 65</p>	Location	East Kirkness	Rooms	2 bedrooms, living room, family kitchen, dining room, bathroom	Garden	Front and rear garden	Parking	Off street parking	
Price	£120,000	 <p style="font-size: small; margin-top: 5px;">Property 1 of 65</p>											
Location	East Kirkness												
Rooms	2 bedrooms, living room, family kitchen, dining room, bathroom												
Garden	Front and rear garden												
Parking	Off street parking												
<p>(a)</p>	<p>From this sample page, identify one object and one operation that may have been carried out on the object.</p>	<p>Object – heading text; operation – font, size of text changed Object – image of house/for sale sign; operation – copied, pasted, scaled, rotated, flipped</p> <p>1 mark (object) 1 mark (operation)</p>											
<p>(b)</p>	<p>The image of the house measures 3 inches by 4 inches and has a resolution of 600 dpi. Calculate the storage requirements for the photograph in kilobytes. Show all working.</p>	<p>$3 \times 4 \times 600 \times 600(1)$ $=4,320,000 \text{ bits}/8 (1)$ $=540,000 \text{ bytes}/1024 (1)$ $=527.3 \text{ kilobytes}$</p> <p>All correct – 3 marks</p>											
<p>(c)</p>	<p>The photograph was taken using a digital camera. The camera was connected to a computer system through an <i>interface</i>. State one function of an “interface”.</p>	<ul style="list-style-type: none"> • Compensates for differences in speed/code/format/voltage between the CPU and the peripheral • Convert from analogue to digital <p>1 mark (accept any one)</p>											
<p>(d)</p>	<p>State one reason why the estate agent might choose a laser printer rather than an inkjet printer to print the catalogue.</p>	<ul style="list-style-type: none"> • Faster output of multiple copies • Cheaper running costs <p>1 mark</p>											

	(e)	PropertyPlus makes its catalogue available online.	
	(i)	Name the type of software that is required to access this catalogue on-line.	<ul style="list-style-type: none"> • Browser • Communications software 1 mark
	(ii)	State an appropriate type of software for protecting a computer system while accessing the Internet.	<ul style="list-style-type: none"> • Firewall • Anti-virus software • Anti-spyware software 1 mark
	(f)	Name the legislation that requires PropertyPlus to protect information held on customers.	Data Protection Act 1 mark
			(10)
16.		Jenna writes a program that will calculate the speed of a car. The algorithm for the program is shown below. 1. Take in distance travelled by car 2. Take in the time needed to travel this distance 3. Calculate the speed of the car 4. Display the speed of the car	
	(a)	State one appropriate data type for the variables used in the program.	<ul style="list-style-type: none"> • Real • Integer • Numeric 1 mark
	(b)	The distance travelled by the car must be under 80 km.	
	(i)	Name the standard algorithm that should be used in this program to ensure that the distance entered is within range.	Input Validation 1 mark
	(ii)	Jenna tests her finished program by using 30 and 40 as examples of <i>normal</i> test data for the distance. Suggest two numbers that Jenna should use for <i>exceptional</i> test data.	Non numeric eg forty five Number out of range eg 200, 80 Negative number eg -25 (Two answers can be from the same category eg two numbers over range) 2 marks
	(c)	Jenna used an <i>interpreter</i> while developing her program. State one advantage of using an interpreter rather than a compiler.	<ul style="list-style-type: none"> • Interpreter reports mistakes as they are made • Faster development time 1 mark

	(d)	The finished program requires 84 Mb of memory. Name the item of <i>documentation</i> that should contain this information.	Technical Guide 1 mark
	(e)	Jenna checks to see if her program is <i>fit for purpose</i> .	
	(i)	Name the stage of the software development process that Jenna is carrying out.	Evaluation 1 mark
	(ii)	State what is meant by the term “fit for purpose”.	The program meets the specification 1 mark
	(f)	Computer viruses pose a serious threat to computer systems.	
	(i)	State one way of spreading computer viruses.	Spread via floppy disk, homemade CDs, websites, e-mail, e-mail attachments, macros 1 mark
	(ii)	Describe one common symptom of a computer virus.	<ul style="list-style-type: none"> • Displaying unwanted messages • Unusual visual or sound effects • Computers rebooting unexpectedly • Unwanted generation of emails 1 mark
			(10)

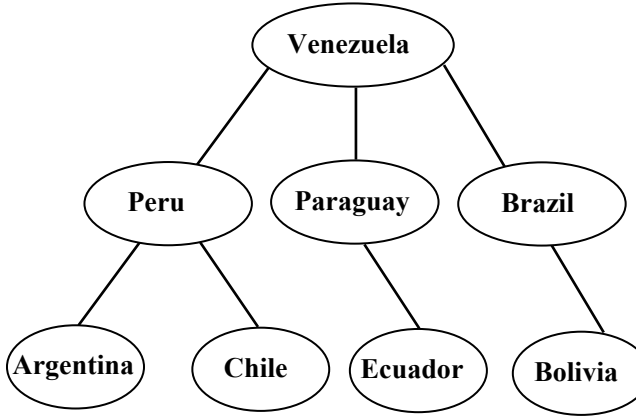
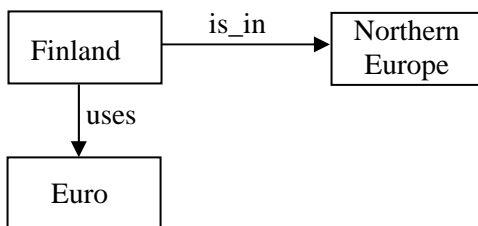
[END OF SECTION II]

		SECTION III Part A – Artificial Intelligence Attempt ALL questions in this section.	Marking guidelines
17.	(a)	Early artificial intelligence focused on games like noughts and crosses, draughts and chess.	
		(i)	
		State one reason why game playing was one of the first areas of artificial intelligence research.	<ul style="list-style-type: none"> • Program following a set of simple rules • Restricted environment • Defined set of rules <p>1 mark</p>
		(ii)	
		Name and describe the test that is used to determine whether a computer shows intelligence.	<p>Turing test</p> <p>1 mark</p> <p>User communicates with an unseen respondent; if he cannot tell if it is a computer or a person then it is said to be intelligent</p> <p>1 mark</p>
	(b)	ELIZA is a program that simulates a conversation.	
		(i)	
		Describe how ELIZA responds to input from the user.	<p>ELIZA responds to user's statements by asking questions based on key words from the user's input</p> <p>1 mark</p>
		(ii)	
		Name the type of program used to hold a conversation with a human.	<p>Chatterbot</p> <p>1 mark</p>
	(c)	The Post Office uses an <i>artificial neural system</i> in the sorting office. Describe a task that an "artificial neural system" is used for in this situation.	<ul style="list-style-type: none"> • Used to read postcodes • Handwriting recognition <p>1 mark</p>

	(d)	Braeness International Airport uses an intelligent robot to carry luggage.	
	(i)	Describe how the robot could find its way from one location in the airport to another location in the airport.	<ul style="list-style-type: none"> • Robot uses sensor to detect a physical quantity eg bump, weight • Robot can find their way from one terminal to another by following wires buried in factory floor (magnetic guidance system) • Robot follows painted line on ground (light guidance system) • Rotating laser attached to robot and reflective light hits targets to calculate its position <p>1 mark</p>
	(ii)	State one advantage of using an intelligent robot to carry luggage around the airport rather than using a robot with no intelligence.	<ul style="list-style-type: none"> • Robot doesn't need humans to make decisions • Robot is able to adapt to new situations • Learn from mistakes • No damage or accidents <p>1 mark</p>
	(e)	State one development in computer hardware that has made progress in the field of artificial intelligence possible.	<ul style="list-style-type: none"> • Faster processors • Increased RAM • Increased capacity of hard drives • Improved sensors • Improved portable power supplies <p>1 mark</p>
			(9)
18.		The organisation Health4Scotland has an expert system on its website to help patients plan a programme of exercise and healthy eating.	
	(a)	State two advantages to the patient of using the expert system rather than visiting the doctor.	<ul style="list-style-type: none"> • Many experts' knowledge is available • Advice is consistent • Advice is available to many different users at the same time • May get advice quicker than visiting doctor • Allow people who are reluctant to discuss complaint to talk to computer program rather than a person • Don't have to travel to surgery <p>2 marks</p>

	(b)	Suggest one concern that doctors might have about the introduction of this expert system.	<ul style="list-style-type: none"> • Moral/ethical implications – who is responsible when advice given is incorrect? • Doctors fear that they might lose their jobs <p>1 mark</p>
	(c)	Patients are able to use palmtop computers to input data into the expert system using speech recognition.	
	(i)	State one task the user will need to carry out before the speech recognition software can operate effectively.	Train software to recognise voice 1 mark
	(ii)	Name one problem that could affect the accuracy of the speech recognition system.	Background noise, sore throat/cold, stutter 1 mark
	(iii)	Apart from speech recognition, name an application of artificial intelligence that could be used to input the data.	<ul style="list-style-type: none"> • Handwriting recognition • OCR <p>1 mark</p>
			(6)

19.	<p>Xtreme Biking is a company that offers mountain biking courses. The knowledge base below holds facts and rules, and is able to match students to courses.</p> <p>1 fitness(jessica, excellent). 2 fitness(shabir, excellent). 3 fitness(mary, excellent). 4 fitness(dominik, good). 5 fitness(graeme, poor). 6 owns(shabir, bike). 7 owns(graeme, bike). 8 owns(mary, bike). 9 experienced(dominik).</p> <p>10 attend_intermediate_course(X) if experienced(X). 11 attend_advanced_course(X) if fitness(X excellent) and owns(X bike).</p>		
(a)	(i)	<p>State the result of the following query:</p> <p>?fitness(mary, good).</p>	<p>No or false</p> <p>1 mark</p>
	(ii)	<p>State the result of the following query:</p> <p>?attend_intermediate_course(X).</p>	<p>X=dominik</p> <p>1 mark</p>
(b)	<p>Using the numbering system to help you, <i>trace</i> how the system will evaluate the query:</p> <p>?attend_advanced_course(X).</p> <p>as far as the first solution.</p>		<p>Match at line 11 Subgoal 1 fitness(X excellent) Match at line 1 X = jessica 1 mark Subgoal 2 owns(jessica bike) no match subgoal fails 1 mark Backtrack, subgoal 1 match at line 2 X = shabir 1 mark Subgoal 2 owns(shabir bike) match at line 6 1 mark</p> <p>4 marks</p>
			(6)

20.	(a)	<p>A problem is represented using the search tree below.</p>  <pre> graph TD Venezuela --> Peru Venezuela --> Paraguay Venezuela --> Brazil Peru --> Argentina Peru --> Chile Paraguay --> Ecuador Brazil --> Bolivia </pre> <p>The solution to the problem is Chile.</p> <p>List the nodes, in the order in which they will be visited, to reach the solution using a <i>breadth-first search</i>.</p>	<p>Venezuela, Peru, Paraguay, Brazil, Argentina, Chile</p> <p>1 mark</p>
	(b)	<p>One way of representing information before creating a knowledge base is by using a <i>semantic net</i>.</p>	
	(i)	<p>Name the stage of the software development process at which a “semantic net” will be drawn.</p>	<p>Design</p> <p>1 mark</p>
	(ii)	<p>Draw a “semantic net” to illustrate the following information:</p> <p>Finland is in Northern Europe and uses the Euro as its currency.</p>	 <pre> graph TD Finland -- is_in --> Northern_Europe Finland -- uses --> Euro </pre> <p>2 marks</p>
			(4)

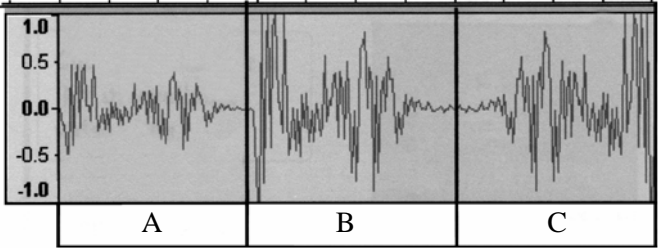
		SECTION III Part B – Computer Networking Attempt ALL questions in this section.	Marking guidelines
21.	<p>Simon has a villa which he rents to holidaymakers. He creates a website to advertise the villa. Simon chooses an ISP to host his website.</p> <p>The structure of his website is shown below.</p> <div style="text-align: center;"> <pre> graph TD HP[Home Page] --- H1[] H1 --- Photos[Photos] H1 --- Prices[Prices] H1 --- Map[Map] </pre> </div>		
	(a)	State what Simon should have on his home page to help users navigate his website.	Hyperlinks Hotspots 1 mark for either
	(b)	Simon uploads his website files to the ISP host computer.	
	(i)	State what ISP means.	Internet Service Provider 1 mark
	(ii)	Name the Internet service that Simon uses to upload his website files.	File transfer 1 mark
	(iii)	Name the type of <i>data transmission</i> that Simon uses when he uploads his website files to the host computer.	unicast 1 mark
	(c)	The URL for the Web page which has a map is: http://www.isp4scots.co.uk/simonsvilla/map.html	
	(i)	State the domain name for this Web page.	isp4scots.co.uk 1 mark
	(ii)	Describe the function of the <i>Domain Name Service</i> .	It searches for the URL in its database 1 mark And identifies the server where it is stored 1 mark Also accept Matches domain name 1 mark With an IP address 1 mark 2 marks


	(d)	Simon registers details of his website with a search engine company. State one reason why this will benefit Simon.	More visitors to his site 1 mark
			(8)
22.		Grange Bank uses the Internet to recruit employees. People seeking employment can fill in application forms and sit selection tests on-line. They are informed by e-mail if they are to be invited to attend for interview.	
	(a)	Describe one cost to the bank of using the Internet to recruit staff.	<ul style="list-style-type: none"> • Paying for the website to be designed and created • Maintenance • Cost of Internet access 1 mark for any one
	(b)	The bank has a version of their website formatted for mobile phones. Name the software that will be needed to view a website on a mobile phone.	Microbrowser 1 mark
	(c)	Data submitted to the bank is <i>encrypted</i> and stored on disk. Describe a situation where the bank must allow outside agencies access to “encrypted” data.	<ul style="list-style-type: none"> • Police investigating a crime • National security 1 mark for either
	(d)	An employee at a rival bank gains unauthorised access to the bank’s computer and deletes some files.	
	(i)	Name the law that the employee is breaking.	Computer Misuse Act 1 mark
	(ii)	Describe two features of a <i>backup strategy</i> that would allow the bank to recover this data.	<ul style="list-style-type: none"> • Save a copy on second backing storage • Regularly back up • Keep backup in safe place away from the original 2 marks, 1 mark each, only two required

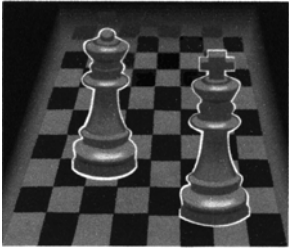
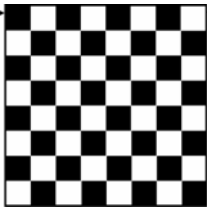

	(e)	Yasmina is applying for a job with the bank. She has been on-line all morning completing the application form and sitting on-line tests.	
	(i)	State two reasons why an <i>ADSL Internet connection</i> is better than connecting with a <i>dial-up modem</i> in this situation.	<ul style="list-style-type: none"> • Can still receive phone calls • Not paying for length of time connected to Internet • Faster transfer of data • More stable/reliable <p>2 reasons – 1 mark each</p>
	(ii)	Yasmina receives an e-mail inviting her to attend for interview. The e-mail address is: recruitment@grangebank.com State the user name in this e-mail address.	recruitment 1 mark
	(f)	Yasmina is successful at her interview and is appointed as a financial adviser who visits customers in their own homes. She will use her laptop and a printer to form a WPAN.	
	(i)	State what WPAN stands for.	Wireless personal area network 1 mark
	(ii)	Yasmina decides to use her laptop to do some on-line shopping. Describe what the bank could do to prevent her accessing on-line shopping websites.	Filtering or explanation of filtering. 1 mark
			(11)
23.		Swirlclean is a company that sells washing machines from its website. Sophie buys a washing machine from the Swirlclean website.	
	(a)	Describe one advantage to the customers of e-sales.	<ul style="list-style-type: none"> • Can shop 24/7 • Can easily compare prices • Can do it in comfort of own home <p>1 mark</p>


	(b)	Sophie's washing machine is model WM07. A fault code F31 is displayed on an LCD panel on the front of the washing machine.	
	(i)	State what LCD stands for.	<ul style="list-style-type: none"> Liquid crystal display 1 mark
	(ii)	<p>Sophie logs onto the company's website. Describe how she could use the screen below to get information about the fault.</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 10px auto;"> <p>SWIRLCLEAN QUICKFIX!</p> <p>MODEL <input style="width: 100px;" type="text"/></p> <p>FAULT CODE <input style="width: 100px;" type="text"/> GO</p> </div>	<ul style="list-style-type: none"> Enter model Enter code Click on Go All 3, 2 marks Any 2, 1 mark 1 or less 0 marks
	(c)	Sophie phones an engineer who visits her home. He connects his laptop to the washing machine and re-installs the control software.	
	(i)	Name the type of computer that is built in to the washing machine.	<p>Embedded</p> 1 mark
	(ii)	Describe one way in which <i>convergent technology</i> would have been of benefit in this situation.	<ul style="list-style-type: none"> Washing machine could have contacted engineer and reported fault Software could have been downloaded remotely 1 mark for either
			(6)

		SECTION III Part C – Multimedia Technology Attempt ALL questions in this section.		Marking guidelines
24.	Rowan High School is moving to a new building in 2010. The pupils are creating a DVD that tells the history of the school.			
	(a)	Mr Alexander, a previous headteacher, now lives in Canada. Name the input device that Mr Alexander could use so that a filmed interview with him could be captured across the Internet.	Webcam Digital video Camera	1 mark
	(b)	The pupils use a scanner to capture graphics from old photographs of staff and pupils.		
	(i)	When the photographs are scanned, reflected light is turned into an analogue signal and then digitised. Name the device in the scanner that does the digitising.	<ul style="list-style-type: none"> • Charge Coupled Device or CCD • ADC 	1 mark
	(ii)	The scanner software asks the user to select the <i>colour depth</i> and the <i>resolution</i> .		
		A)	Explain what is meant by “colour depth”.	<ul style="list-style-type: none"> • The number of bits per pixel • The number of colours that are possible
				1 mark for either
		B)	Explain what is meant by “resolution”.	<ul style="list-style-type: none"> • The number of pixels in a fixed area/ image • Dots per Inch (DPI)
				1 mark
	(iii)	One of the photographs is to be altered so that only the head and shoulders show. Name the image editing tool that could be used to do this.	crop	1 mark
	(iv)	The photographs are stored as bitmap files rather than JPEG files. Describe the effect this will have on file size.	larger file size	1 mark

	<p>(c) Background music for the DVD is created from a recording of the school choir. The sound wave is shown below.</p> 	
	<p>(i) Section A was copied and edited to create section B. Name the editing feature that has been used to create section B.</p>	<p>Volume/amplitude 1 mark</p>
	<p>(ii) Section B was copied and edited to create section C. Name the editing feature that has been used to create section C.</p>	<p>Reverse 1 mark</p>
	<p>(iii) Apart from speakers, name the hardware needed to output sound.</p>	<p>Sound card 1 mark</p>
	<p>(d) The architects have produced a <i>virtual reality</i> guide to the new school building.</p>	
	<p>(i) Explain why the “virtual reality” application lets pupils experience the new building more fully than a slide show presentation would.</p>	<p>They can navigate the building in 3D 1 mark</p>
	<p>(ii) Name a file type that could be used to store the vector graphics used in the virtual reality application.</p>	<p>VRML, WRL 1 mark</p>
	<p>(iii) Name one type of software the school could use to view a multimedia application.</p>	<p>File player, browser, media player 1 mark</p>
		<p>(12)</p>

25.	Martyn produces a website that provides information for visitors to Venice. One page of website is shown below:		
			
	(a)	When the video clips were first captured they filled the whole screen. What change has been made to the video clip so that the whole clip can be viewed in the window shown above?	<ul style="list-style-type: none"> • Change resolution • Crop <p>1 mark</p>
	(b)	The file size of the video clips is very large. It is reduced by decreasing the frame rate.	
	(i)	State one advantage of decreasing the frame rate rather than decreasing the video time.	See whole clip/film 1 mark
	(ii)	State one disadvantage of decreasing the frame rate rather than decreasing video time.	Video will be jerky 1 mark
	(c)	Visitors can download an MP3 audio tour guide which they can listen to while exploring Venice.	
	(i)	Name the type of compression used by MP3	lossy 1 mark
	(ii)	State two reasons why it is important that the audio tour files have a small size.	<ul style="list-style-type: none"> • Faster download times 1 mark • Storage capacity on mp3 player 1 mark <p>2 marks</p>
	(d)	Martyn is a good keyboard player. He wants to create the sound of guitars and violins as background music for the video clips. Name the input device he should use to create the music.	<ul style="list-style-type: none"> • MIDI keyboard • Synthesiser <p>1 mark</p>
	(e)	Martyn adds more information to his website after it has been on-line for a few weeks. Name the stage of the software development process that is being carried out.	Maintenance 1 mark
			(8)

26.	Krysia has created a chess game using 3D graphics.		
			
	(a)	Name the <i>attribute</i> of the image of a chess piece which can be changed so that the chess piece looks like wood.	Texture 1 mark
	(b)	<p>Krysia is creating the CD cover for the chess game. She has used graphics packages to create images of the chessboard and chess pieces as shown below.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>A →</p>  </div> <div style="text-align: center;">  </div> </div>	
	(i)	Krysia has used a <i>vector graphics package</i> to create the chessboard. State the two attributes that are different between square A and square B in the graphic above.	<ul style="list-style-type: none"> • Position • Colour fill 1 mark each 2 marks
	(ii)	Explain how you could prove that the graphic of the chess pieces has been produced using a <i>bit mapped graphics package</i> rather than a <i>vector graphics package</i> .	Enlarge the image – not resolution independent 1 mark

	(iii)	<p>Krysia wants the chessboard to show through the background in the graphic of the chess pieces as shown below.</p>  <p>State the <i>attribute</i> of the graphic of the chess pieces that she should change to do this.</p>	<p>transparency</p> <p>1 mark</p>
			(5)

[END OF SECTION III]

[END OF MARKING INSTRUCTIONS]