2010 Information Systems

Intermediate 2

Finalised Marking Instructions

SECTION 1

Question				Marks
1	Define the term *data*.			1
Answer	*Any one from:* • *Data is raw/unprocessed facts and figures* • *Data has not been put in context to give it any meaning* • *Data is what is entered/stored in an information system* • *Do not accept – Information has no meaning*			
2	A student uses a DVD encyclopaedia to research the solar system. What type of application software is a DVD encyclopaedia?			1
Answer	• *Reference – only acceptable answer*			
3	A mail order company uses a relational database to store information about the items it sells and who buys them. Suggest a suitable name for one of the tables in the database.			1
Answer	• *Any suitable table name such as PRODUCT, CUSTOMER, ORDER* • *Do not accept – Anything that would be an attribute name – eg Item name*			
4	A field containing a numeric value can be either an *integer* or a *real* data type.			
	(a)	Describe what is meant by an "integer" data type.		1
Answer		• *Integer is a number with no decimal/fractional part* • *Do not accept – just an example must be some description*		
	(b)	Describe what is meant by a "real" data type.		1
Answer		• *Real is a number which may have decimal/fractional part* • *Do not accept – just an example must be some description*		
5	Describe **one** example of how an organisation makes use of word processing software.			1
Answer	*Any suitable example for an **organisation**.* • *Type letters to customers/suppliers etc (must be applied to an organisational use)* • *Type memo/report/newsletter*			
6	State **one** limitation of storing data in a flat file database.			1
Answer	• *Data duplication* • *Data inconsistency or update/deletion/insertion anomalies* • *Data integrity errors (due to data inconsistency)* • *Inconsistent search results in multi-value fields*			

7.	Part of a database and part of a spreadsheet are shown below.	
	Database Spreadsheet	

Database

Record 1	
Ref No	C146
Item	Cola
Quantity	10
Price	£0.50

Spreadsheet

	A	B	C	D
1		**Product List**		
2				
3	Ref No	Item	Quantity	Price
4	C146	Cola	10	£0.50
5	C123	Crisps	10	£0.50
6	J123	Juice	20	£0.40
7	S254	Mints	15	£0.25
8	S265	Chocolate	12	£0.45

		Marks
	Name the data object in the spreadsheet that holds the same information as the record in the database.	1
Answer	• *Row (4)*	
8	A national organisation supplying electricity to its customers uses an information system to calculate electricity bills because it can process a large *volume* of data. Describe **one other** reason for using an information system to calculate electricity bills.	1
Answer	• *Speed of processing – very fast* • *Accuracy of calculations – no errors, very precise* • *Efficiency improved* • *Do not accept – just speed or fast without justification*	
9	Describe **one** action relating to **seating**, that an employer should implement to ensure the health and safety of employees using computers.	1
Answer	• *Provide adjustable height chairs* • *Provide swivel chairs* • *Provide chairs with adjustable back* • *Provide footrests* • *Do not accept – comfy or allow breaks to get up and walk around during work periods)*	
10	State **two** reasons for normalising data.	2
Answer	• *To remove multi-valued fields/remove repeating group* • *To establish the entities* • *To establish which attributes belong in each entity* • *To establish relationships between entities* • *To avoid update/deletion/insertion anomalies (Max 1 mark)* • *To overcome the limitations of flat files (including prevent data duplication/data inconsistency errors)* • *Identify both primary and foreign keys (1 mark needs both primary and foreign)* *(1 mark each, max 2 marks)*	

11		A school keeps details about pupil attendance in a database.		
	(a)	The school prints a list of absent pupils similar to the one shown below.		

Daily Absentee List — 2nd September

Forename	Surname	Class
Nisah	Ali	2A
Sally	Abbot	2B
Jamie	Chalmers	2A
Jurgen	Schumacher	2A
Joyce	Watson	1D
Mo	Williams	3E

State the correct term for this printed list from a database.

1

Answer

- *Report*

(b) During registration, a teacher enters the absentees directly into the system on the screen shown below.

Attendance Check

Class 2a
Teacher Mr Rae

September

Surname	Forename	02 - Sept	09 - Sept	16 - Sept	23 - Sept	30 - Sept
Ali	Nisah	X				
Amokatchi	Nwankwo					
Ashcroft	Liam					
Barnes	Francesca					
Chalmers	Jamie	X				
Dziekanowski	Piotr					
Jones	Ciaran					
Le Pen	Thierry					
Schumacher	Jurgen	X				

State the correct term for this type of screen.

1

Answer

- *(Data) input form*
- *Do not accept – input screen or form fill-in*

12	Computers give easy access to information systems. Describe **one other** way to gain easy access to information systems.	1

Answer

- *Mobile phone with internet access*
- *Computer games console connected to internet*
- *Interactive TV and services*
- *Library/phone/mp3 player/Sat nav/<u>Digital</u> TV/Kiosk/Internet*

	Total for Section 1	**(15)**

[END OF SECTION 1]

SECTION 2

Question				Marks
13		XtrenIS is setting up a new information system to help run their business. XtrenIS has several branches throughout Scotland.		
	(a)	XtrenIS requires a new software package but are unsure which one to buy. The *range of data objects* available in a package is one feature that can be used to evaluate a software package. Name **two other** features that could be used to evaluate software packages.		2
Answer		• *Range of data operations/functionality* • *Formatting function* • *HCI (User Interface)* • *Online help* • *Online tutorial* *(1 mark each, max 2 marks)*		
	(b)	XtrenIS has been advised to implement a *security strategy*. Describe **two** reasons why a company requires a "security strategy".		2
Answer		• *To ensure that the company's important operational data is not lost or damaged by computer failure or viruses* • *To ensure data is not accessed by unauthorised employees (hackers) or competitors* *(1 mark each, max 2 marks)*		
	(c)	XtrenIS is keen to use a *centralised database*. Describe **one** advantage of having a "centralised database" in an organisation instead of separate copies stored on different computers.		1
Answer		• *Easier to organise, edit, update (less data duplication, better data integrity)* • *Easier to back-up the data* • *Improved productivity and efficiency of business*		

13 (cont)	(d)	XtrenIS sent out the following letter to customers advising them of changes.		

<div style="border:1px solid black">

113 Greendale Estate
Waterside
WA23 5YT

Dear Customer

As a valued customer, we want to keep you up to date with some of the proposed alterations to the way we run our business.

    A new information system is to be installed. This new system will involve a centralised database for customer accounts, ***improved data security*** and ***improved customer ordering service.***

We will be providing the same products and fine service on which we have built our reputation in the industry.

</div>

Identify **two** formatting functions used in this letter. — 2

Answer		• *Change style (to bold and italic) − only one mark for 'style'* • *Right alignment of address* • *Change line length of paragraph 2/indent/fully justified* • *Do not accept centred.*

Total marks	**(7)**
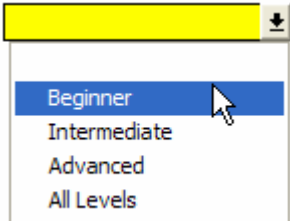
Question				Marks

14		Wilderness Adventures is a summer camp that employs a number of instructors to run courses for guests. Here is an example of the data stored about each instructor and the courses they run.	

Instructor ID INS186
Firstname Joe
Surname King

Photograph

Course Ref	**Description**	**Level**	**Day course runs**
SL101	Sailing	Beginner	Monday
SL103	Sailing	Advanced	Tuesday
KY104	Canoeing	All levels	Wednesday

	(a)	Identify and remove the multi-value fields from the table and represent the contents as two entities with suitable names. Clearly indicate the primary and foreign keys in the tables.	7

Answer		• *INSTRUCTOR(instructor_ID , firstname, surname, photograph)* • *COURSE(course_ref, description, level, day course runs, instructor_ID*)* • *1 mark for INSTRUCTOR table name, 1 mark for COURSE table name* • *1 mark for instructor_ID as PK, 1 mark for course_ref as PK, 1 mark for instructor_ID* as FK* • *1 mark for the 4 correct attributes in INSTRUCTOR entity, 1 mark for 5 correct attributes in COURSE entity)*	

	(b)	The personal details of each instructor are stored in the information system. In terms of the Data Protection Act, who is the *data controller* in this situation?	1

Answer		• *Wilderness Adventures* • *Summer Camp* • *Do not accept instructor, manager, the company, Joe King*	

| 14 (cont) | (c) | Wilderness Adventures runs a website to advertise their courses and take bookings. The user can obtain a list of the courses available from the website. | |

| | | (i) | The user can only select the level of a course from a list like this: State the type of validation used in this situation. | 1 |

| **Answer** | | | • *Restricted Choice* | |

| | | (ii) | Each day, Wilderness Adventures obtain a list of bookings similar to the one shown below. | |

Camper Number	Forename	Surname	Gender	Age	Course Ref
WA1287	Dominika	Adamczyk	Female	15	SL201
WA1007	Sally	Harkins	Female	16	KY101
WA1034	Arabella	Young	Female	14	RK101
WA1109	Jack	Greer	Male	15	AB101
WA1145	Jose	Sanchez	Male	17	SL101
WA1089	Dylan	Whitehead	Male	16	CA101
WA1345	Hussein	Zubar	Male	15	KY201

Describe how the above list has been sorted. | 2

| **Answer** | | | • *Field called 'Gender' into ascending order (1 mark)*
• *AND field called 'surname' into ascending order (1 mark)* | |

| | | (iii) | The booking list makes use of *primary keys* and *foreign keys*. Explain what is meant by a "foreign key". | 1 |

| **Answer** | | | • *Foreign key is an attribute which appears in another table as a primary key*
• *Do not accept – 'links two tables'.* | |

14 (cont)	(d)	Electronic databases can sort data into order very quickly. Describe **two other** advantages of using an electronic database instead of a manual database.	2
Answer		• *Searching can be done very quickly/more easily* • *Data can be updated very quickly/more easily* • *Data analysis and reporting can be done very easily* • *Searches and sorts are done accurately* • *Easier to backup* • *Less space taken up* • *Less likely to lose a record* • *Do not accept any answer to do with sorting* *(1 mark each, max 2 marks)*	
	(e)	The user interface used on the website makes the electronic database *user friendly*. Describe **two** other features to be considered when designing the user interface.	2
Answer		• *Layout on each screen/screen design* • *Method of interaction* • *Choice of font/size/styles* • *Consistency of layout* • *Accessible to all users* • *Do not accept – user friendly* *(1 mark each, max 2 marks)*	
		Total marks	**(16)**

Question				Marks
15			Super Lottery uses a computerised information system. Players can buy tickets for the Super Lottery from shops around the country.	
	(a)		The functions carried out by the system are *gathering*, *processing*, *storing* and *outputting* information.	
		(i)	Describe **one** piece of information gathered by the system.	1
Answer			• *Players choice of numbers*	
		(ii)	Describe **one** method that could be used for entering data into the Super Lottery computer system.	1
Answer			• *Scan* • *OMR/Mark Sense* • *Type at keypad* • *Voice recognition* • *Barcode*	
		(iii)	Outputting information can be done in several ways. Describe **one** method of output that may be used in the Lottery system.	1
Answer			• *Printed ticket issued to player* • *Selected numbers sent to file for inclusion in the draw* • *Selected numbers or charge displayed on screen at POS*	
		(iv)	The computerised information system used by Super Lottery carries out a lot of processing. Describe **one** process that may be carried out in the Lottery system.	1
Answer			• *Search stored tickets to find numbers matching winning numbers* • *Sort numbers selected into ascending order* • *(Count) total number of tickets sold* • *(Calculate) total prize fund* • *(Count) total number of winners* • *Pick winning numbers*	

15 (cont)	(b)		Super Lottery is considering selling tickets online.	
		(i)	Describe **one** advantage to players of the Super Lottery of buying their tickets online rather from a shop.	1
Answer			• *Can buy at time convenient to them* • *No need to travel to shop* • *Easy to repeat same numbers many times* • *Winnings paid directly into account* • *No worries about losing ticket*	
		(ii)	Describe **two** implications for Super Lottery of selling their tickets online rather than from a shop.	2
Answer			• *Very large initial cost to establish online operation* • *Must ensure secure system for purchasing* • *May need to review staffing in shops if more business online* • *Potential of wider audience may lead to improved profitability*	
			Total marks	**(7)**
			Total for Section 2	**(30)**

[END OF SECTION 2]

SECTION 3

Part A – Applied Multimedia

Question				Marks
16		Argus, a high street catalogue shop, decides to replace their in-store catalogues with multimedia information screens.		
	(a)		Two designs for the user interface of the information screens are shown below.	
			Design A **Design B** **Browse Argus** **Browse Argus** 1 TV & DVD 1 TV & DVD 2 Kitchen Appliances 2 Kitchen Appliances 3 Photo & Camcorders 3 Photo & Camcorders 4 Gaming Software 4 Gaming Software 5 Audio Products 5 Audio Products *Type the number of the option you wish:* *Type the number of the option you wish:*	
		(i)	State the type of user interface being used above.	1
Answer			• *Menu*	
		(ii)	Argus decided to use Design A. State **two** reasons, relating to text design principles, why Argus might prefer Design A.	2
Answer			• *Consistent (left) alignment of text* • *Consistent use of size of text* *(1 mark each, max 2 marks)*	
	(b)		When the user moves from one screen to another, a "dissolve" effect occurs.	
		(i)	State the term used to describe a special effect occurring between screens.	1
Answer			• *Transition*	
		(ii)	Explain why Argus uses special effects when changing screens.	1
Answer			• *Gives the user a visual cue that the screen is changing* • *Makes the presentation more interesting*	

16 (cont)	(c)		Each of the 25,000 products in the multimedia catalogue requires a photograph to be stored. This has made the file size of the catalogue very large. It has been decided to alter the photos **without compressing them**.	
		(i)	Describe the method used to reduce the file size of Photo 1 to give Photo 2 that is shown below. Photo 1 Photo 2 	1
Answer			• *Reduce the picture resolution*	
		(ii)	Explain how the method you described in part (i) reduces the file size of the photo.	1
Answer			• *Fewer dots per inch need to be stored, therefore reducing the file size*	
	(d)		The multimedia catalogue is updated as stock is sold so that customers know how many are left in the store. The WWW could be used as the delivery medium. State **one other** delivery medium that could be used in this case.	1
Answer			• *Kiosk*	
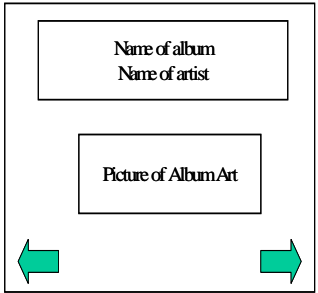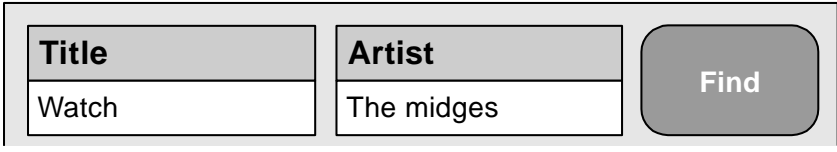
16 (cont)	(e)		The local newspaper is creating an online article reporting on the Argus shareholders meeting. A small part of two versions of the article are shown below.	
	Version 1		Version 2	
	Argus reports record profits "2010 has been the best year yet," reported Jim Aitchinson chairman of Argus. A smiling Jim addressed shareholders at yesterdays meeting to report record profits of £8.4 million		**Argus reports record profits** "2010 has been the best year yet," reported Jim Aitchinson chairman of Argus. A smiling Jim addressed shareholders at yesterdays meeting to report record profits of £8.4 million *Jim Aitchinson*	
		(i)	State **two** graphic design principles that have been used when changing Version 1 into Version 2.	2
Answer			• *Text wrap* • *Caption* *(1 mark each, max 2 marks)*	
		(ii)	In both versions, the photograph is an *anchor*. Describe what is meant by the term "anchor" in this situation.	1
Answer			• *The part of a hyperlink that you click upon* • *Either end (source or destination) of a link*	
			Total marks	**(11)**

17		Blah is a digital audio player application. It allows users to store music and album art on a home computer.		
	(a)	A typical screen contains the information on one album. The screen should contain the name of the album and the artist who recorded it, as well as a picture of the album cover and navigation buttons to move between albums.		
		Draw a labelled storyboard showing all of the above screen design elements.		3
Answer		Name of album Name of artist Picture of Album Art	• *1 mark for both pieces of text suitably labelled.* • *1 mark for album art suitably labelled* • *1 mark for navigation buttons (either labelled or obviously navigation buttons)*	
	(b)	When music files are captured to be stored using Blah, the user can choose from a range of *sampling rates*. Describe what is meant by the term "sampling rate".		1
Answer		• *The number of sound samples taken per second*		
	(c)	Many users of Blah download music files from the Internet without permission. Name the piece of legislation they may have broken.		1
Answer		• *Copyright, Designs and Patents Act*		
	(d)	Blah allows users to search for music files. State the type of search facility illustrated below.		
		Title Watch **Artist** The midges **Find**		1
Answer		• *Complex Search*		
	(e)	A digital audio player application is an example of multimedia used at home. State **one** other use of multimedia at home.		1
Answer		• *Computer games or any other example/category*		

17 (cont)	(f)	The digital audio player application comes with *online help*. Describe "online help".	1
Answer		• *A built-in guide to assist the user with a feature of the software (answer needs indication of both online and help)*	
		Total marks	**(8)**

18	Netastik are creating a multimedia application to promote their business.				
	(a)	When creating the multimedia application Netastik have to take account of the *audience* who will be using the application.			
		(i)	Describe **one** issue about the "audience" that Netastik should take into account when creating the application.		1
Answer			• *May require different languages for world wide market* • *Reading age* • *ICT capability*		
		(ii)	Describe a solution to the issue you identified in part (i).		1
Answer			• *Language translation required* • *Use of language appropriate to the targeted reading age audience* • *Easy to use User Interface* *(Answer must relate to issue described in part (i).)*		
	(b)	State the job title of the person who organises the development of the application and ensures that it is created on time and on budget.			1
Answer		• *Project manager*			
	(c)	Netastik had a choice of using an *icon-based* or *scripting* authoring package to create the multimedia application. Netastik have chosen to use the "icon-based" authoring package as it was easier to use. Describe why an "icon-based" authoring package is easier to use than a "scripting" authoring package.			1
Answer		• *No need to learn a programming language/scripting commands* • *User simply needs to drag icons onto a timeline*			
	(d)	During the testing stage, a *screen test* will be carried out. Explain the purpose of a "screen test".			1
Answer		• *Implementation matches design* • *Various media are displayed/played correctly* • *Hotspots are placed correctly* *(Do not accept answers relating to testing of links)*			
	(e)	Netastik evaluate the multimedia application in terms of *fitness for purpose*. Describe one method they could use to evaluate "fitness for purpose".			1
Answer		• *Compare application to original specification* • *Focus Group* • *User Questionnaire* • *User Observation*			
				Total marks	**(6)**
				Total for Section 3 Part A	**(25)**

[END OF SECTION 3 − PART A]

SECTION 3

Part B – Expert Systems

Question				Marks
19		Money Matters is an expert system used by university students to find out ways to earn money. The expert system asks questions to find out about the students' interests and free time. The student enters their responses and the software displays jobs they may be interested in.		
	(a)	Describe **two** purposes of an expert system.		2
Answer		• *To represent the knowledge of one or more human experts* • *To provide explanations of why questions are being asked* • *To provide explanations of how conclusions were reached* • *To provide advice* • *To classify* • *To plan* • *To diagnose* *(1 mark each, max 2 marks)*		
	(b)	When the Money Matters expert system was created, an *expert system shell* was used. Describe what is meant by the term "expert system shell".		1
Answer		• *With an Expert system shell the user interface and inference engine already exist – Money Matters only need supply the facts and rules.* • *Do not accept Expert system without knowledge*		
	(c)	State the category of expert system that Money Matters belongs to.		1
Answer		• *Advice*		

19 (cont)	(d)	During the consultation, the following screen is displayed:	
		Q: Is playing sport your favourite way to spend your free time? A: Yes Q: Is going to the cinema your favourite way to spend your free time? A: No Q: Is eating out your favourite way to spend your free time? A: No	
		Suggest a more efficient method of getting the same information. You may use a diagram in your answer if you wish.	2
Answer		*A variety of answers would be acceptable* *Only one question should be asked (1 mark)* *Only one response required which allows all 3 answers as shown in the question (1 mark)* *Eg* How do you spend your free time? Playing sport Going to cinema Eating out	
		Total marks	**(6)**
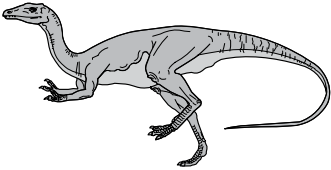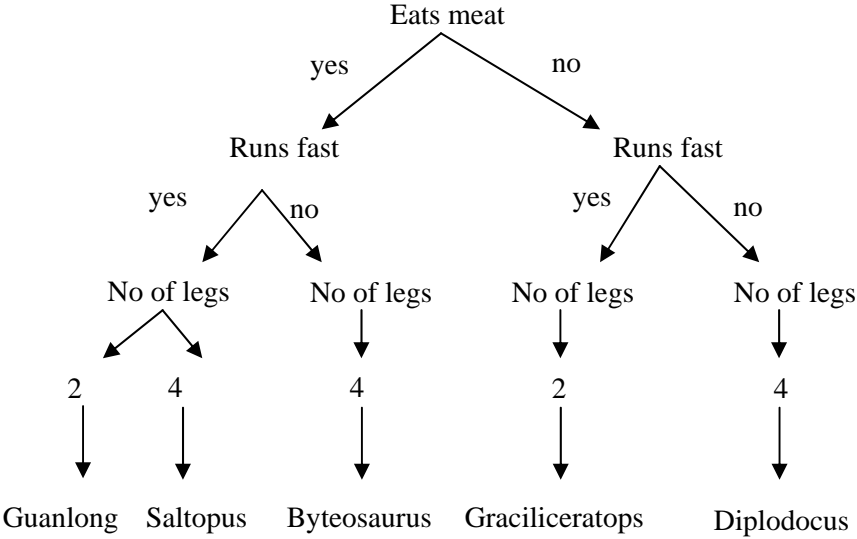
Question					Marks
20		Cheap and Cheerful are producing recipe sheets for university students. They wish to provide students with cheap tasty recipes. They decide to create a recipe expert system.			
	(a)		There are three stages in creating an expert system. The first stage is knowledge acquisition. State the **other two** stages.		2
Answer			• *Knowledge representation* • *System validation/System testing* *(1 mark each, max 2 marks)*		
	(b)		During the creation of the recipe expert system, a number of personnel will be involved. The domain expert will provide information about the recipes and foods.		
		(i)	State **one other** person involved in the creation of the expert system.		1
Answer				• *Knowledge engineer* • *Programmer* • *User* *(1 mark for any appropriate response)*	
		(ii)	Describe the role of the person you identified in part (i)		1
Answer				• *Knowledge engineer – works with the domain expert, writes down the knowledge so that it can be entered into the knowledge base* • *Programmer – enters the facts and rules into the expert system* • *User – client – the person or company who has commissioned the expert system* • *User – end user – the person who eventually uses the completed expert system* *(1 mark for any appropriate response that relates to their answer in part (i).)*	
	(c)		When the expert system is complete and working, it gives the user *How* and *Why justification facilities*.		
		(i)	At what point during the consultation of the recipe expert system would the "Why" facility be used?		1
Answer				• *Why facility is used when a question is being asked*	
		(ii)	Describe the purpose of the "How" facility in the recipe expert system.		1
Answer				• *The how facility explains to the user how the conclusion was reached*	
				Total marks	**(6)**

21	TakeitEasy is a holiday company using an expert system to help customers decide where to go on holiday. Some of the rules from the expert system are shown below: IF price range IS expensive AND likely weather IS hot AND activities ARE scuba diving THEN destination IS Barbados. IF price range IS medium AND likely weather IS mixed AND activities ARE sight seeing THEN destination IS Prague. IF price range IS cheap AND likely weather IS rain AND activities ARE donkey riding THEN destination IS Blackpool. IF price range IS expensive AND likely weather IS snow AND activities ARE skiing THEN destination IS French Alps. IF price range IS expensive AND likely weather IS hot AND activities ARE sight seeing THEN destination IS Rome.			
	(a)	When writing the rules, the creators had a choice of inferencing methods they could use.	
		(i)	State the type of inferencing used in the above rules.	1
Answer			• *Forward Chaining*	
		(ii)	Explain why the creators of the expert system used this type of inferencing in this situation.	2
Answer			• *Finds out their holiday requirements and draws a conclusion (1 mark) in an efficient manner (1 mark)* • *That is the way it would be done in a travel agency (1 mark), ask the customer what they wish and make a suggestion based on their requirements (1 mark)* • *Answers must relate to the scenario to get both marks. Generic answer – max 1 mark.*	
		(iii)	Describe **one** feature of the *inference engine*.	1
Answer			• *To determine the order in which rules are applied* • *To determine the order in which questions are asked* • *To arrive at the conclusion*	

21 (cont)	(b)	Mr. Hamid wishes a holiday which will be expensive and where the likely weather is hot and he can do some sight seeing. State the destination the expert system would recommend.	1
Answer		• *Rome*	
	(c)	Instead of using an expert system, TakeitEasy could have created a database to store this information. State how many fields the database would have.	1
Answer		• *4*	
	(d)	Compare the way TakeitEasy staff would find suitable holiday destinations using an expert system and a database.	2
Answer		• *Using a database the staff would use a query (search) the table by entering the criteria in the correct fields. When they run the query (search) the appropriate destinations are shown as a list* • *Using an expert system the expert system displays questions that the staff answer (with responses from the clients) and an appropriate destination is given as a conclusion*	
		Total marks	**(8)**

22	The Natural History Museum collects information on dinosaurs. Some of the information is represented as the following attribute-value pairs: Guanlong (eats meat =Yes, runs fast = Yes, no of legs = 2) Saltopus (eats meat =Yes, runs fast = Yes, no of legs = 4) Byteosaurus (eats meat =Yes, runs fast = No, no of legs = 4) Diploducus (eats meat = No, runs fast = No, no of legs = 4) Graciliceratops (eats meat =No, runs fast = Yes, no of legs = 2)	
	Represent these attribute-value pairs as a decision tree.	5
Answer	 *(1 mark for each dinosaur that can be logically followed to a conclusion.)* *note that the no. of legs is not needed for Byteosaurus, Graciliceratops, Diplodocus.* *Note that there are several different methods of answering this question eg starting with the number of legs. As long as the logic can be followed to the correct dinosaur award the mark.*	
	Total marks	**(5)**
	Total for Section 3 Part B	**(25)**

[END OF SECTION 3 − PART B]

SECTION 3

Part C – The Internet

Question   **Marks**

23			Fotto.com is a website that sells photographs.	
			  Fotto.com New Search Facility 	
	(a)		The Fotto.com website has a search engine that allows the user to search for photographs on any topic. Wenling is a student who uses the Fotto.com website to find pictures.	
		(i)	Wenling is looking for a photograph of either a yellow or red flower, which is any type except a rose. Write down the Boolean search that would produce the required result.	3
Answer			• *Flower AND (Red OR Yellow) NOT Rose* • *Red Flower OR Yellow Flower NOT Rose* *(1 mark each for alternative flower colours, 1 mark for excluding rose)*	
		(ii)	Wenling copies the photograph of the flower from the website without permission. State the piece of legislation Wenling may have broken.	1
Answer			• *Copyright, Designs & Patents Act*	
		(iii)	Wenling regularly uses the Fotto.com website. State the feature of web browser software that Wenling could use to store the location of the page for easy access.	1
Answer			• *Favourites* • *Bookmark*	

Question				Marks
23 (cont)	(b)		All photographs on the website use *picture compression*.	
		(i)	Describe **one** benefit to Fotto.com of using "picture compression".	1
Answer			• *Will reduce the file size of a photograph* • *So more photos can be stored on their hard disc*	
		(ii)	Describe **one** benefit to Wenling of the Fotto.com website using "picture compression".	1
Answer			• *Photos can be downloaded in a shorter time* • *Photos can be downloaded over dial-up connection*	
	(c)		Fotto.com have added a new facility, that allows users of the website to upload their own photographs.	
		(i)	State the protocol used to upload photographs to the Fotto.com website.	1
Answer			• *FTP*	
		(ii)	A user has uploaded a photograph containing their name and address. Explain why having their name and address on the photograph may be inappropriate.	1
Answer			• *Any reason relating to privacy or safety* • *They may receive unsolicited (electronic) mail* • *Strangers might recognise him in public*	
			Total marks	**(9)**

Question					Marks

	24	The home page for BizBing.com is shown below.	

	(a)		The home page above was created using several features of web authoring software: • the webpage has been formatted into rows and columns • the graphic animates when the pointer rolls over it • the menu allows you to navigate to other web pages.	

		(i)	State the feature of the web authoring software that was used to create the rows and columns.	1
Answer			• *Table tool*	
		(ii)	Code was added to the website that allowed the graphic to be animated when the pointer moves over it. State the feature of web authoring software that allows code to be added to the website.	1
Answer			• *Scripting tool*	
	(b)		BizBing sell Internet security software and hardware.	
		(i)	State **two** types of Internet security software that may be sold by BizBing.	2
Answer			• *Anti-Virus;* • *Anti-Spyware;* • *Anti-Malware;* • *Pop-up blocker;* • *Firewall;* • *Anti-Phishing* • *Encryption* • *Filtering* *(1 mark each, max 2 marks)*	
		(ii)	Bizbing's best selling hardware device is a *router*. Describe the function of a "router".	2
Answer			• *It checks IP addresses (1 mark)* • *and sends the packets to their correct destination (1mark)*	

Question				Marks
24 (cont)	(c)		The Bizbing website makes use of both *absolute* and *relative page addressing*. The absolute page address for the BizBing logo is: http://www.bizbing.com/image/keylogo.jpg	
		(i)	State what *www* stands for in the above address.	1
Answer			• *World Wide Web*	
		(ii)	Some customers instead of typing http://www.bizbing.com, enter 81.99.141.142 State what 81.99.141.142 represents.	1
Answer			• *IP address (of the bizbing host computer)*	
		(iii)	Explain what is meant by the term "absolute page addressing".	1
Answer			• *This is when the full pathname is used to address a resource*	
		(iv)	Explain what is meant by the term "relative page addressing".	1
Answer			• *A relative page address gives the path to the resource relative to its current location*	
			Total marks	**(10)**

25			Betty uses the school network for class work, accessing the Internet and video conferencing.	
	(a)		The school network contains a device that allows several signals to be sent down a single line at the same time. State the name of this device.	1
Answer			• *Multiplexer*	
	(b)		Betty uses the video conferencing facility for educational purposes.	
		(i)	Describe **one** example of how Betty might use video conferencing for educational purposes.	1
Answer			• *To communicate with a teacher or tutor* • *To chat with people in other countries about her studies* • *To chat with other students about her studies*	
		(ii)	When the video conferencing data is transmitted over the Internet it is divided into *packets*. Explain why the data is divided into "packets".	2
Answer			• *Allows message to be transmitted over several routes; (1 mark) to maintain network efficiency (1 mark)* • *No need to resend entire message (1 mark) if 1 packet lost/ corrupted. (1 mark)*	
	(c)		Betty's teacher has suggested that the class submit their homework answers using a newsgroup service. Explain why using a newsgroup may be unsuitable for submitting homework answers.	1
Answer			• *Newsgroups are not private so homework could be copied by other students*	
	(d)		Betty has a friend who does not have access to Internet, newspaper or library services. State the term used to describe someone who does not have access to these services.	1
Answer			• *Information Poor*	
			Total marks	**(6)**
			Total for Section 3 Part C	**(25)**

[END OF SECTION 3 − PART C]

[END OF MARKING INSTRUCTIONS]