IS/SQP240

Information Systems Intermediate 2

NATIONAL QUALIFICATIONS

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Course Assessment Specification

Information Systems Intermediate 2

The purpose of this document is to provide:

- details of the structure of the Question Paper for this Course
- details of the structure of the Practical Coursework task that contributes to this Course
- guidance to centres on how to use information gathered from the Question Paper and the Practical Coursework task in this Course to estimate candidate performance

PART 1

This part of the Course Assessment Specification details the structure of the Question Paper for this Course.

The Question Paper

- consists of three sections
- has a mark allocation of 70 marks
- has a time allocation of 1 hour 30 minutes

Section 1 - 15 marks

- consists of objective and short response questions
- samples across the content statements of the two mandatory Units (*Database Systems* and *Using Information*)
- approximately 10 marks will be for knowledge and understanding
- approximately five marks will be for problem solving
- the problem solving will be based in familiar contexts and be of a fairly straightforward nature
- candidates will be expected to tackle all questions in the section

Section 2 - 30 marks

- consists of questions requiring extended responses demonstrating structuring and reasoning
- questions have varying mark allocation and, therefore, do not have to be of the same length. Most questions will subdivide into a number of connected parts with the marks for each part clearly indicated
- questions will involve both knowledge and understanding and problem solving, and will be set in less familiar and more complex contexts than those in Section 1
- approximately 10 marks will be for knowledge and understanding
- approximately 20 marks will be for problem solving
- questions will sample across the content statements associated with the mandatory units (*Database Systems* and *Using Information*)
- some questions, or parts of questions, will require integration of knowledge from the two mandatory Units

- candidates will be expected to tackle all questions in the section

Section 3 - 25 marks

- this section has three sub-sections, one for each of the optional Units (*Applied Multimedia*, *Expert Systems* and *The Internet*)
- candidates will be expected to tackle all the questions within **one** sub-section
- each sub-section consists of questions requiring extended responses demonstrating structuring and reasoning
- questions have varying mark allocation and, therefore, do not have to be of the same length. Most questions will subdivide into a number of connected parts with the marks for each part clearly indicated
- questions will involve both knowledge and understanding and problem solving, and will be set in less familiar and more complex contexts than those in Section 1
- approximately eight marks will be for knowledge and understanding
- approximately 17 marks will be for problem solving
- questions in each sub-section will sample across the content statements associated with the appropriate optional Unit
- some questions, or parts of questions, will require integration of knowledge from the mandatory Units

PART 2

This part of the Course Assessment Specification details the structure of the Practical Coursework task in this Course.

- The Practical Coursework task has a mark allocation of 30 marks.
- There is no set time allocation, but the task has been designed to be completed by a typical candidate in 8 - 10 hours.
- The task provides the candidate with the opportunity to demonstrate and integrate practical skills and knowledge they have developed within the mandatory Units (*Database Systems* and *Using Information*) in a more complex and less familiar context than is possible within the Units
- A new Practical Coursework task will be provided by SQA in autumn each year
- The task is only valid for the session in which it is issued.
- The task may be undertaken in 'open book' conditions, but under supervision of the teacher/lecturer, to ensure that the work presented is the candidate's own work
- The task will be marked by the teacher/lecturer, using a marking scheme provided by SQA, but be subject to moderation.
- The marking scheme will provide a mark out of 30, which will be submitted directly to SQA without scaling.
- The teacher or lecturer may give the candidate hints and/or help if requested. Any such help should be reflected in the marks awarded.
- Once the task has been completed and marked, it should **not** be returned to the candidate for further work.

PART 3

This part of the Course Assessment Specification provides guidance on how to use assessment information gathered from the Question Paper and the Practical Coursework task to estimate candidate performance.

Component	Mark Range
Question Paper	0-70
Practical Coursework	0-30
Total Marks	0-100

The mark range for each component takes account of the weighting of each component.

In National Qualifications cut-off scores should be set at approximately 70% for Grade A and 50% for Grade C with Grade B falling midway.

For a total mark range of 0-100, the following gives an indication of the cut-off scores based on the candidate's **total** score.

Grade	Band	Mark Range
A	1	85-100
A	2	70-84
B	3	65-69
B	4	60-64
C	5	55-59
C	6	50-54
D	7	45-49
NA	8	40-44
NA	9	0-39

These cut-off scores may be lowered if Question Paper component turns out to be more demanding or raised if less demanding.

Worked example

- In a centre's own prelim, a candidate scores 44/70, and the candidate scores 18/30 in the Practical Coursework.
- The two marks are added together, giving a total of 62/100.
- The centre's view is that their own prelim is slightly less demanding than SQA examination.
- Using the mark range, a realistic estimate may be **band 5** rather than band 4.

IS/SQP240

Information Systems Intermediate 2

Time: 1 hour 30 mins

NATIONAL QUALIFICATIONS

Specimen Question Paper
for use in and after 2006

Attempt Sections 1 and 2 and **one part** of Section 3.

Sections 1 and 2 — Attempt all questions within these sections.

Section 3 — This section has three parts:

Part A—Applied Multimedia

Part B—Expert Systems

Part C—The Internet.

Choose **one** part of this section and attempt all of the questions within that part.

Read all questions carefully.

Write your answers in the answer book provided. Do not write on the question paper.

Write as neatly as possible.

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SECTION 1

Marks

Attempt all questions in this section.

1. What is the difference between data and information? **1**

2. A database of players in a tennis club includes the following fields:

Name;
Date of birth;
Sex (M or F);
Height (in metres);
Weight (in kilograms).

Suggest the most suitable data type for each of the fields *Sex (M or F)* and *Height (m)*. **2**

3. State **two** activities that the Computer Misuse Act (1990) was designed to prevent. **2**

4. Name the type of software used to organise the flow of money within a business. **1**

5. Relational databases rely on the use of *primary keys*. What is a "primary key"? **1**

6. Below is an extract from one of the tables in a relational database containing details of student marks.

ID No	Group	Unit 1	Unit 2	Unit 3
18762	3A	85	87	78
19792	3C	90	82	75
19981	3A	65	68	60
19993	3B	70	72	64

(*a*) State a suitable *validation technique* for *ID No*. **1**

(*b*) Group is the *foreign key*. What is a foreign key? **1**

7. What is the name given to formatted output from a database system? **1**

8. May is looking for a book on the subject of Yoga for less than £10. Suggest a query that the book shop assistant could enter into the bookshop database to identify suitable titles. **2**

9. State **one** method of ensuring that data entered in an information system is within an acceptable range. **1**

10. Jack purchases a DVD using the Internet. Give **one** advantage and **one** disadvantage of shopping using the Internet. **2**

Total for Section 1 (15)

[*END OF SECTION 1*]

SECTION 2

Marks

Attempt all questions in this section.

11. A college library makes use of a paper-based system to keep track of its books and borrowers. It has separate paper files for Borrowers and Book Reservations. A sample of the data in each of these files is shown below.

Borrowers			
Borrower-ID	Forename	Surname	Class
2613	Kerry	Munro	2A3
1852	James	Wilson	4A2
0958	Simon	Andrews	1B1
1164	Anna	Knight	3B2

Book Reservations					
Reservation-No	Reservation-Date	Borrower-ID	ISBN	Title	Author
126	16/9/04	1852	0-09-980840-8	Going Wrong	Ruth Rendell
143	10/10/04	0947	0-14-002374-7	Puckoon	Spike Milligan
176	28/11/04	1375	0-04-823070-7	The Hobbit	JRR Tolkein
279	28/4/05	2071	0-04-823070-7	The Hobbit	JRR Tolkein
288	1/5/05	1856	0-14-002374-7	Puckoon	Spike Milligan
291	2/5/05	2112	0-04-823070-7	The Hobbit	JRR Tolkein

Each book's International Standard Book Number (ISBN) is unique. Each borrower has a unique Borrower-ID.

Borrowers can reserve any number of books.

The librarian now wishes to use a relational database to store this information.

(*a*) Give the entities and attributes of the current system. **4**

(*b*) Book Reservations has been put into first normal form. Identify the primary and foreign keys in each of the two new entities below.

BOOKS (ISBN, Title, Author)
RESERVATIONS (Reservation–No, Reservation–date, Borrower–ID, ISBN) **4**

Marks

12. A video store owner is transferring details of her customers and of the videos available for rental, from a paper based system to a computerised system.

(*a*) Explain how the new computerised system will help the store owner in relation to

(i) searching and sorting;

(ii) analysis and reporting. **4**

(*b*) Suggest **two** advantages the computerised system could have in relation to

(i) security of data;

(ii) preventing data loss. **2**

13. A history teacher needs to store a large number of dates and events to be used in a series of lessons he will be giving during the school year.

(*a*) (i) What software application should he use to store and organise the historical information. Justify your answer.

(ii) What software application could he use to help illustrate his lessons by displaying pages in a series of slides? **3**

(*b*) Once the data is stored on the history teacher's computer he is able to share it with his pupils.

(i) Suggest **one** method he could use to share the data.

(ii) Give **one** advantage of using this method. **2**

Some people in Scotland don't have access to, or the ability to use, information systems, and feel disadvantaged.

(*c*) Suggest **one** way that our society could remedy this situation. **1**

14. A consultant has recently advised the Nextus Company to integrate its ordering and dispatch processes, which had previously been done separately. The consultant says that if they use an integrated system there will be benefits to the company in the ordering and despatch process.

Explain how integrating the systems will provide benefits in terms of:

(*a*) (i) speed;

(ii) accuracy;

(iii) efficiency. **3**

Many people shop online nowadays. The company has decided to provide this facility for its customers.

(*b*) Describe **two** social implications of this trend towards online shopping. **2**

The company has decided to use Web authoring software to create new Web pages for its online site.

(*c*) State **three** objects you would expect to be able to create on a page. **3**

(*d*) State **two** things that the company must do to comply with the Data Protection Act 1998. **2**

Total for Section 2 (30)

[*END OF SECTION 2*]

SECTION 3

Marks

Complete ONE part of this section.

Either PART A or PART B or PART C

PART A—Applied Multimedia

15. A sports company plans a presentation to advertise its products.

(*a*) Give **one** reason why the company will need to consider their proposed audience and the content before developing the presentation. **1**

(*b*) (i) Suggest **two** possible media for delivery of the presentation. **2**

(ii) Give **one** advantage for each of these means of delivery. **2**

16. During development of a company's Web based multimedia presentation the multimedia designer has responsibility for the overall appearance.

(*a*) State **two** other areas of responsibility the designer has. **2**

Part of the presentation allows new customers to make online requests for information to be sent to them.

(*b*) Suggest **two** methods the designer can use to ensure that these customers

(i) are able to enter their details easily; and

(ii) send them securely. **2**

(*c*) What piece of legislation provides safeguards for companies receiving information via the Internet? **1**

Marks

17. Steven is working on a Web based presentation that involves biographical details and photographs about the players in his favourite football team. He wants to allow users of the presentation to go directly to individual players' Web sites on the Internet.

(*a*) Which type of application package should he choose to create his presentation?

Give a reason for your answer. **2**

The squad list looks like this:

Swaffham Town Rovers

Peter Groves

Steven Collier

Robert Stewart

Gordon Williamson

David Roberts

François Legrand

Terry Cochrane

Mike Gresham

Donald Winterton

Craig Campbell

Dougal MacIntosh

(*b*) Suggest **one** way in which Steven could

(i) design the layout of his presentation to allow direct access from the squad list to individual details;

(ii) go directly from players' details to their own Web sites. **2**

(*c*) When testing his presentation, Steven discovers that the squad list looks disorganised. How could he improve the layout of the squad list in his Web presentation? **1**

Marks

18. A kitchen accessory company is expanding its business to include specialist equipment for cake decorators. An electronic catalogue which includes a large number of full colour illustrations will be sent to all those currently in their customer database.

(*a*) What type of storage medium should the company choose? Give **one** reason for your choice. **2**

The storage requirements for one illustration are much greater than the others.

(*b*) Suggest **two** properties of the illustration that can be altered to reduce the overall storage requirements. **2**

A celebrity chef has already used some of the equipment on his TV show and has illustrations on his accompanying book. One member of the team suggests capturing the relevant illustrations and using them in the catalogue.

(*c*) Is this legal? Justify your answer. **1**

19. Sarah is organising the audio to be used for a presentation. She has a number of sound files, one of which she plans to use as background music.

(*a*) State **one** advantage and **one** disadvantage of the use of background music in presentations. **2**

The quality of sound output from this file is poor.

(*b*) (i) Identify **two** hardware factors that Sarah could change which would improve the sound quality. **2**

(ii) Identify **one** software factor that could be altered to improve the sound output. **1**

Total for Section 3 Part A (25)

[*END OF SECTION 3—PART A*]

SECTION 3

Marks

PART B—Expert Systems

20. *Travelplan* is software that recommends a route for vehicle drivers. The user enters a starting point and a destination and the software produces a route map between these points with an approximate length of time for the journey.

One of the main components of the Travelplan expert system is the user interface.

(*a*) Describe **three** main functions of a user interface. **3**

(*b*) Name the other **two** components of the expert system. **2**

Tracy was driving to Dover to catch the ferry to France. She used Travelplan to plan her journey. Although Tracy followed the directions exactly and there were no undue delays, she was 30 minutes late for the ferry.

(*c*) State **two** people who could be blamed for Tracy missing the ferry and justify each of your answers. **3**

21. *Scotts Country Kitchen* is a catering company which provides meals for special occasions like weddings, birthday parties and anniversaries. The company has decided to create an expert system to help them plan the menus for these special occasions.

(*a*) What is the domain of this expert system? **1**

(*b*) Name and describe, in detail, the stages involved in setting up this expert system. **3**

The expert system is created using an *expert system shell*.

(*c*) What is an expert system shell? **1**

Two methods of deductive reasoning that can be supported in an expert system are *forward chaining* and *backward chaining*.

(*d*) (i) Explain what is meant by forward chaining and backward chaining. **2**

(ii) Which method of reasoning would you suggest for the expert system for the catering company? Justify your answer with an appropriate example. **2**

Marks

22. There are four categories of expert system. Choosing a savings plan is an example of an expert system that gives *advice*.

(*a*) State the category of each expert system below.

- Identifying a medical problem
- Identification of a species of animal
- Devising a flight path of aeroplanes **3**

MYCIN is an expert system used by the medical profession to diagnose illnesses and diseases. A user obtains a medical diagnosis from the expert system but is convinced it is wrong and asks the expert system to justify the diagnosis.

(*b*) Describe the type of justification that will be used. **2**

(*c*) Using an expert system with which you are familiar represent **one** diagnosis from the knowledge in the following table as rules and facts.

Diagnosis	**Temperature**	**Pulse**	**Condition 3**
Fainted	normal	slow	skin is clammy and is not conscious
Sinusitis	high	normal	headache at front of head and pain in face
Hay fever	normal	normal	runny nose and watery eyes and sneezing

3

Total for Section 3 Part B (25)

[*END OF SECTION 3—PART B*]

SECTION 3

Marks

PART C—The Internet

23. A company currently has a dial up connection but needs a faster Internet connection.

(*a*) (i) What type of connection should they purchase?

(ii) State **two** advantages of this type of connection. **3**

The company wishes to have a web site on the World Wide Web. They have approached an Internet Hosting Company asking them to provide this service for them.

(*b*) Name **two** of the services their Hosting Company may offer to allow the company to set up their website. **2**

24. Dawn is an Internet enthusiast. She is interested in how data is transmitted over the Internet, and reads a book about *Internet Routing*.

(*a*) What is meant by the term "Internet Routing"? **1**

(*b*) (i) Explain what a "packet" is.

(ii) Describe the process used to transmit the data across a network. **3**

Dawn has been given the URL for a site.

(*c*) What network service will provide the IP address for that domain? **1**

25. The Singh family has Internet access in their home. They are concerned about the possibility of accessing inappropriate information on the World Wide Web.

(*a*) What type of software should they install to help prevent this? **1**

Mr Singh uses his computer to work at home. He creates a document and wants to send it to his office using e-mail.

(*b*) (i) Describe what Mr Singh has to do to send the document.

(ii) Where does the document go after he sends it? **2**

Ms Singh is looking at the United Nations website. She reads a warning about the world excluding *information poor* nations from the Information Revolution.

(*c*) (i) Explain what "information poor" means. **1**

(ii) Suggest a method of helping the information poor. **1**

Marks

26. Robert is looking on the Internet for information on dinosaurs for his children. He knows that there are many different types of search service that can help him.

(*a*) (i) Suggest a type of search service Robert could use to find the largest number of results.

(ii) Suggest a type of search service that will only search specific sites. **2**

(*b*) Give **one** advantage and **one** disadvantage of using subject gateways. **2**

Robert is worried that he might download a virus when using the Internet.

(*c*) How can he prevent a virus affecting his computer? **1**

27. There are now a number of methods that enable people to access the Internet even if they don't have a computer.

(*a*) Name and describe **two** methods of accessing the Internet without a computer. Include the method of communication used by the device. **2**

Peter is writing some web pages and will use HTML layout tables.

(*b*) Describe **one** advantage HTML layout tables provide when designing web pages. **1**

Peter wishes to link his pages.

(*c*) How can he do this? **1**

Picture compression is used on Peter's web page.

(*d*) Explain why this may be required. **1**

Total for Section 3 Part C (25)

[*END OF SECTION 3—PART C*]

[*END OF SPECIMEN QUESTION PAPER*]

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Information Systems
Intermediate 2

Specimen Marking Instructions
for use in and after 2006

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SECTION 1

Type/Source

1.	*Data does not have any meaning whereas information has meaning or structure.* ***1 mark***	**KU** **UI**
2.	*Sex – Text* *Height (in metres) – Real* ***2 marks***	 **PS** **DS**
3.	*Hacking* *Virus distribution* ***2 marks***	 **KU** **UI**
4.	*Financial* ***1 mark***	**PS** **UI**
5.	*A primary key identifies each record* ***1 mark***	**KU** **DS**
6.	(*a*) *Restricted choice OR presence check* ***1 mark***	**PS**
	(*b*) *A foreign key is the primary key from another table OR the field that links two tables* ***1 mark***	**KU** **DS**
7.	*A report* ***1 mark***	**KU** **DS**
8.	*Subject = Yoga AND Cost < 10* ***1 mark for correct fields, 1 mark for correct Boolean link***	**PS** **DS**
9.	*Using a validation check* ***1 mark***	**KU** **UI**
10.	*Advantage: wider choice, can order from home* ***1 mark*** *Disadvantage: wait for delivery, possible fraud, needs Internet access etc* ***1 mark***	**KU** **UI**

[*END OF SECTION 1*]

SECTION 2

Type/Source

11. (*a*) *BORROWERS (Borrower-ID, Forename, Surname, Class)*
BOOK RESERVATIONS (Reservation-No, Reservation-date, Borrower-ID, ISBN, Title, Author)
1 mark** for each entity and **1 mark** for each correct attribute to a max of **4 marks **KU DS**

(*b*) *Primary keys –*
BOOKS – ISBN
RESERVATIONS Reservation-No
1 mark** for each primary key to a max of **2 marks

Foreign keys –
RESERVATIONS – Borrower-ID and ISBN **PS**
1 mark** for each foreign key to a max of **2 marks **DS**

12. (*a*) (i) *Volume of data, easier to find particular video/customer, can sort on variety of fields **1 mark for each example to max of 2 marks***

(ii) *Can find most popular video, can see customers who return videos late, can produce letters for overdue videos, produce selection lists for customers* **PS**
1 mark for each example to max of 2 marks **UI**

(*b*) (i) *Password protection* **PS**

(ii) *Backups* **DS**

13. (*a*) (i) *Database. **1 mark** Volume of data, able to sort, search. **1 mark** (Other software and correct justification acceptable.)* **PS DS**

(ii) *Presentation software **1 mark*** **UI**

(*b*) (i) *Create a webpage from the data, store on a fileserver, copy to disks **1 mark** for any of the above or acceptable alternative*

(ii) *Web: everyone can access data simultaneously (and from home),* **PS**
Fileserver: all can obtain copy across network **UI**
Disks: everyone gets a copy, can take home. **DS**
***1 mark** for any of the above or an acceptable alternative*

(*c*) *Training for all/provision of free computers/library access or any other acceptable answer. **1 mark*** **PS UI**

			Type/Source
14.	(*a*)	*Speed – the operation will be faster as no communication between systems is needed* *Accuracy – Data not transferred, fewer mistakes, so more accurate* *Efficiency – Increased speed and accuracy means greater efficiency – more done in less time* ***1 mark per correct response***	**PS** **UI**
	(*b*)	*less travelling, less traffic on the road* *more leisure time so increased wellbeing* *cheaper goods so higher living standard* *less social interaction, so more distress.* ***1 mark*** *per correct response to a max of* ***2 marks***	**KU** **UI**
	(*c*)	*Text block* *Graphic or photograph* *Hyperlink or button* *Animation* *or other acceptable response.* ***1 mark*** *per correct response to a max of* ***3 marks***	**KU** **UI**
	(*d*)	*Any two from:* • *Obtain information lawfully* • *Information used for specified purposes only* • *Information should not be disclosed* • *Information should be relevant* • *Information should be accurate and up to date* • *Information should not be kept longer than necessary* • *Data subject has right to see information* • *Information must be changed if wrong* ***1 mark*** *per correct response to a max of* ***2 marks***	**KU** **UI**

[*END OF SECTION 2*]

SECTION 3

Type/Source

PART A—Applied Multimedia

15. (*a*) *how technical the content will need to be for audience*
appropriateness of language
overall appearance of presentation
any other valid reason **PS**
1 mark *for any correct response* **AM**

(*b*) (i) *kiosk, WWW, CD-ROM/DVD* **KU**
1 mark *for each to a* ***max of 2 marks*** **AM**

(ii) *Updating easy (kiosk, WWW)*
Large data capacity (kiosk, WWW, CD-ROM/DVD)
answer should be relevant to choice made **PS**
1 mark *per valid response to a max of* ***2 marks*** **AM**

16. (*a*) *any 2 of: structure, navigation* **KU**
2 marks **AM**

(*b*) (i) *menus, form fill-in*

(ii) *secure server, encryption* **PS**
1 mark *per correct response to a max of* ***2 marks*** **AM**
or alternative correct response **UI**

KU
(*c*) *Computer Misuse Act 1990* **UI**

17. (*a*) *Web authoring package* ***1 mark*** **PS**
Suitable for inserting anchors and hyperlinks, can produce Web pages ***1 mark*** **UI**

PS
(*b*) (i) *anchors to go direct from list to individual details* ***1 mark*** **2b**

PS
(ii) *hyperlinks to go from Steven's site to individual players' own sites* **2b**
1 mark **AM**

(*c*) *any one of: create table, alter alignment* **PS**
1 mark **AM**

18. (*a*) *CD-ROM or DVD*
storage capacity **KU**
1 mark *for media,* ***1 mark*** *for reason* **AM**

(*b*) *colour depth reduced, colour resolution reduced* **PS**
1 mark *for each correct response to a max of* ***2 marks*** **AM**

(*c*) *No – Breach of copyright*
Yes – Has to get permission of copyright owner **KU**
1 mark for justification **AM**

			Type/Source
19.	(*a*)	*Advantage: enliven a dull presentation; enhance written text of presentation, etc* ***1 mark***	
		Disadvantage: volume can be too loud, inappropriate to content, file size, copyright etc ***1 mark***	**KU** **AM**
	(*b*) (i)	*hardware: sound card, high quality speakers* ***1 mark*** *per correct response to a max of* ***2 marks***	**PS**
	(ii)	*software: increase sample rate, increase sample resolution* ***1 mark***	**PS** **AM**

[*END OF SECTION 3—PART A*]

SECTION 3

Type/Source

PART B—Expert Systems

20. (*a*) *To ask questions and obtain answers from the user*
To display advice
To justify questions and answers **KU**
1 mark *for each to a max of* ***3 marks*** **ES**

(*b*) *Knowledge Base, Inference Engine* **KU**
1 mark *for each to a max of* ***2 marks*** **ES**

(*c*) *Two of*

- *Knowledge engineer for entering data wrong*
- *Human expert for providing wrong information*
- *Tracy for not inputting data correctly* **PS**

1 mark for both people *and* ***1 mark for each justification*** *to a max of* **ES**
3 marks. **UI**

21. (*a*) *catering* **PS**
1 mark **ES**

(*b*) *Knowledge Acquisition + description*
Knowledge Representation + description
System Validation + description
1 mark for each name and description **KU**
1 mark for all 3 names with no descriptions **ES**

(*c*) *An expert system shell is a program with a user interface, an inference engine* **KU**
1 mark **ES**

(*d*) (i) *Forward chaining is when you know the initial facts working to a conclusion*
Backward chaining is starting with the conclusion and working to find the facts to justify it. **KU**
1 mark for each **ES**

(ii) *Either with appropriate justification*
Look at type of people eg old folk, children, time of day of meal and time of year and then work ***forward*** *to choose type of meal to suit* **PS**
No marks for type – 2 marks for correct justification **ES**

			Type/Source
22.	(*a*)	*Diagnose*	
		Categorise	
		Planning	**PS**
		1 mark *for each to a max of* ***3 marks***	**ES**
			PS
	(*b*)	*How justification – how did the expert system come to that conclusion.*	**ES**
	(*c*)	*eg*	
		IF temperature is normal	
		AND pulse is slow	
		AND skin is clammy	
		AND is not conscious	
		THEN patient has fainted	**PS**
		3 marks for a correct set	**ES**

[*END OF SECTION 3—PART B*]

SECTION 3

Type/Source

PART C—The Internet

23. (*a*) (i) *A Broadband connection (or ISDN)* – ***1 mark***

(ii) *has a high bandwidth, a higher data transfer rate than a dial up connection, (broadband is also on all the time).* **PS**
1 mark *for each advantage to a max of* ***2 marks*** **IN**

(*b*) *Mail accounts/FTP management/web page construction/database support/ e-commerce/dedicated server/DNS/Web hosting* **KU**
Any 2 *correct for a max of* ***2 marks*** **IN**

24. (*a*) *The way by which data finds its way from the host computer to the user* **KU**
1 mark **IN**

(*b*) (i) *Data is divided into segments of a predetermined size – known as a packet*
1 mark

(ii) *Each packet has a Header (destination address)* ***1 mark*** *so that it can find the way to its destination, where the data is then reassembled* ***1 mark*** **KU**
1 mark *per correct response to a max of* ***3 marks*** **IN**

KU
(*c*) *DNS (Domain Name System)* ***1 mark*** **IN**

25. (*a*) *Filter Software* **PS**
1 mark **IN**

PS
IN
(*b*) (i) *Attaches it to the email* ***1 mark*** **UI**

KU
(ii) *In his mailbox OR on a mail server* ***1 mark*** **IN**

(*c*) (i) *Information poor – those who have neither access to, nor training in using, computers* ***1 mark*** **KU** **IN**

(ii) *Investment should be made in equipping and training people in poorer countries*
OR
Donate old equipment
1 mark **PS**

			Type/Source
			PS
26.	(*a*)	*Meta – searches several engines at the same time* ***1 mark***	IN
		Subject based searches specific sites ***1 mark***	UI
			KU
	(*b*)	*Subject gateway – index of pre-saved suitable sites so high relevance,* ***1 mark***	IN
		but only giving links to a restricted number of relevant web sites ***1 mark***	UI
			PS
	(*c*)	*Use anti-virus software* ***1 mark***	IN
27.	(*a*)	*TV based – cable*	
		palm PC – infra red	
		Mobile phone – microwaves	PS
		1 mark *for each correct response to a max of* ***2 marks***	IN
	(*b*)	*To aid neat columnar design OR stop overflow of text when resizing the page*	KU
		1 mark	IN
	(*c*)	*Using a Hyperlink/relative addressing – containing the address of page relative*	PS
		to the page you are on ***1 mark***	IN
			PS
	(*d*)	*Saves memory and speeds downloads* ***1 mark***	IN

[*END OF SECTION 3—PART C*]

[*END OF SPECIMEN MARKING INSTRUCTIONS*]