



2014 Information Systems

Intermediate 2

Finalised Marking Instructions

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Part One: General Marking Principles for Information Systems Intermediate 2

This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this Paper. These principles must be read in conjunction with the specific Marking Instructions for each question.

- (a)** Marks for each candidate response must always be assigned in line with these general marking principles and the specific Marking Instructions for the relevant question. If a specific candidate response does not seem to be covered by either the principles or detailed Marking Instructions, and you are uncertain how to assess it, you must seek guidance from your Team Leader/Principal Assessor.
- (b)** Marking should always be positive ie, marks should be awarded for what is correct and not deducted for errors or omissions.

GENERAL MARKING ADVICE: Information Systems Intermediate 2

The marking schemes are written to assist in determining the “minimal acceptable answer” rather than listing every possible correct and incorrect answer. The following notes are offered to support Markers in making judgements on candidates’ evidence, and apply to marking both end of unit assessments and course assessments.

Part Two: Marking Instructions for each Question

Section I

Question			Expected Answer(s)	Max Mark	Additional Guidance
1.			<i>Any 2 from:</i> Data duplication Data inconsistency or update/deletion/insertion anomalies Data integrity errors (due to data inconsistency) Inconsistent search results in multi-value fields	2	Do not accept duplication on its own.
2.	(a)		To uniquely identify a row/record in a table.	1	
	(b)		An attribute that is a primary key in another table.	1	Do not accept linking tables together.
3.			Netiquette	1	Only acceptable answer. Not code of conduct, acceptable use policy or terms and conditions.

Question		Expected Answer(s)	Max Mark	Additional Guidance
4.	(a)	Any personal use eg Looking up a dictionary to find out the meaning of a word.	1	
	(b)	Any organisational use of DTP software, but must relate to an organisation eg Create a leaflet about the company, create a company newsletter.	1	
5.	(a)	A monetary implication.	1	
	(b)	<p><i>Any 1 from:</i></p> <p>Creation of information rich/information poor</p> <p>Range of jobs available increased</p> <p>Likelihood of redundancies</p> <p>Socially isolated</p> <p>Allows distant communication</p> <p>Less face-to face communication</p>	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
6.	(a)		Multi-Valued field	1	
	(b)		Date	1	Do not accept Date/Time.
	(c)		A whole number	1	
	(d)		Member Customer Be lenient in table names but must be appropriate to scenario	1	Do not accept membership card.

Question			Expected Answer(s)	Max Mark	Additional Guidance
7.			<p>Basic users can use menus eg File – print whereas advanced users could use keyboard shortcuts eg Ctrl-P.</p> <p>1 mark for explanation, 1 mark for suitable example.</p>	2	

Section II

Question			Expected Answer(s)	Max Mark	Additional Guidance
8.	(a)		SHOP (<u>shop number</u> , location, e-mail address, telephone number) BADGES (<u>ID</u> , badge, name, cost, shop number*) 1 mark for SHOP table name 1 mark for all correct attributes in SHOP 1 mark for shop number as the primary key 1 mark for BADGE table name 1 mark for all correct attributes in BADGE 1 mark for <u>ID</u> as the primary key 1 mark for shop number as the foreign key	7	
	(b)		One SHOP has many BADGES	1	Do not accept one-to-many.
	(c)	(i)	Object	1	
		(ii)	Presence Check	1	Do not accept restricted choice.

Question		Expected Answer(s)	Max Mark	Additional Guidance
9.	(a)	<p><i>Any 1 from:</i> Chip Microprocessor Magnetic strip</p>	1	
	(b)	The number of transactions/payments that occur.	1	
	(c)	<p><i>Any 2 from:</i> Easier to organise and update data Easier to backup data Improved productivity Improved efficiency in a business Data will be not be duplicated</p>	2	Do not accept easier to search and sort.
	(d)	(i)	1	
		(ii)	1	
	(e)	<p><i>Any 2 from:</i> to ensure that unauthorised users cannot access/steal bank/ payment details to ensure that data is not damaged by computer viruses or network failure</p>	2	Do not accept data could be lost.
	(f)	<p><i>Any 2 from:</i> Shopping is available 24 hours a day, seven days a week Increased product choice from worldwide market Social isolation (or description of) Closing High Street Shops</p>	2	

Question		Expected Answer(s)	Max Mark	Additional Guidance	
10.	(a)	<p><i>Any 2 from:</i></p> <p>Less storage space is required Easier to edit data Complex reporting can be carried out Data analysis is less time-consuming Easier to backup Any other suitable answer</p>	2	Do not accept easier to search and sort or easier to lose file.	
	(b)	(i)	Report	1	
		(ii)	<p>Product=Kilt (1 Mark) (Don't penalise if they use Kilts instead of Kilt)</p> <p>AND</p> <p>Price >= £300 (1 Mark)</p>	2	
		(iii)	<p>Because it has a heading (<u>Quantity</u>), the figures have been put into context.</p> <p>It has meaning</p>	1	
		(iv)	<p>Reduce the size of the margins – 1 mark</p> <p>Reduce the line spacing – 1 mark</p>	2	
		(v)	Paragraph	1	
	(c)	Seating – provide height and back adjustable seating	1		

Section III

Applied Multimedia – Part A

Question		Expected Answer(s)	Max Mark	Additional Guidance
11.	(a)	<p><i>Any 2 from:</i> Up to date information about stock and new items available to customers. Larger capacity for extra details/descriptions/video etc. Easier access to wider range of customers.</p>	2	
	(b)	<p><i>Any 1 from:</i> Content Budget Timescale for development</p>	1	
	(c)	<p><i>Any 1 from:</i> Deals with FancyDress2U to ensure they are happy with the design and final catalogue Controls budget Controls timescale Allocates tasks to other members of the team</p>	1	
	(d) (i)	<p><i>Any 1 from:</i> Layout of elements Sketch will show where the images and text will be positioned</p>	1	Do not accept navigation.
	(ii)	<p><i>Any 1 from:</i> Captions Text wrap Number of graphics Use of white space Arrangements of graphics on page.</p>	1	
	(iii)	<p><i>Any 1 from:</i> To make the change from one slide to another less abrupt. Make the change from one slide to another more appealing. To alert the user that the screen is changing.</p>	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
	(e)	(i)	Web	1	
		(ii)	<i>Any 1 from:</i> Consistency of text (font, size, style, heading) Use of lists So that each page looks the same	1	
	(f)	(i)	Direct Manipulation/GUI/WIMP/graphical	1	
		(ii)	Restricted choice	1	
	(g)		<i>Any 1 from:</i> Reduce resolution Reduce colour depth File Compression	1	

Question		Expected Answer(s)	Max Mark	Additional Guidance
12.	(a)	Data Protection (Act)	1	
	(b)	<p><i>Any 1 from:</i></p> <p>To ensure users are aware of terms of the licence. To ensure users know they are only buying license to play the music – not allowed to copy it further or sell it on. To try and prevent breach of Copyright, Designs and Patents Act. Stop illegal sharing of music.</p>	1	
	(c)	Complex search	1	
	(d)	(i)	1	Accept 'the links to the albums' for 1 mark.
		<p><i>Any 3 of 4 required for 1 mark</i></p> <p>Born to Walk button The Stream button Shade on the Outskirts button Home button</p>		
		(ii)	1	
		<p><i>Any 1 from:</i></p> <p>The link attached to the anchor is followed. The page with the tracks on each album is displayed.</p>		
	(e)	(i)	1	
		<p><i>Any 1 from:</i></p> <p>Reduce sample rate Reduce sample depth</p>		
		(ii)	1	
		<p>Volume/Mute Accept any standard controls found on a music player eg fast forward etc.</p>		
		(iii)	2	Do not accept check links work.
		<p><i>Any 2 from:</i></p> <p>Check preview button plays the correct song Check Add to Basket buttons work correctly The screen would be checked for spelling and grammatical errors Check that all fonts, colours and sizes match original design Graphic displays properly</p>		
	(f)	<p><i>Any 1 from:</i></p> <p>To ensure fitness for purpose. To assess the quality of the user interface So they can improve the website from users opinions</p>	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
13.	(a)		<i>Any 2 from:</i> Allows for more complex user interface Easier to set up interactive elements Easy to implement clock/timing Scripting can be used to calculate points Scripting can be used to drag animals into place	2	
	(b)		Documentation	1	

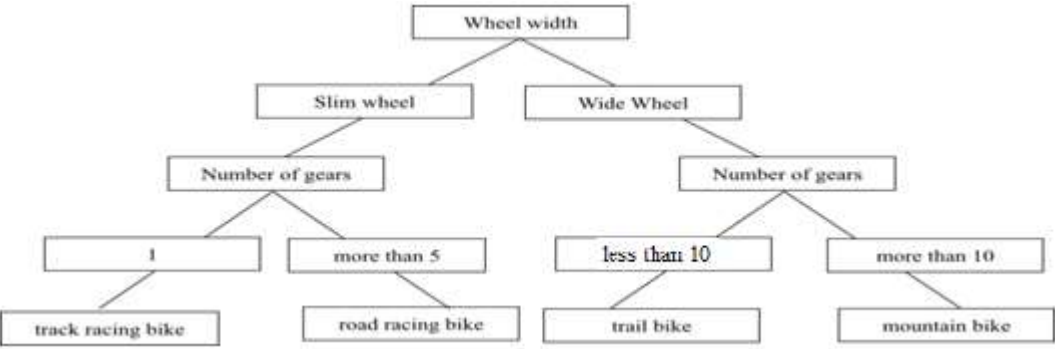
Section III

Expert System Part B

Question		Expected Answer(s)	Max Mark	Additional Guidance																				
14.	(a)	<table border="1"> <thead> <tr> <th>Seaweed</th> <th>Colour</th> <th>Air-bladders</th> <th>Shore location</th> </tr> </thead> <tbody> <tr> <td>Egg wrack</td> <td>Dark</td> <td>Yes</td> <td>Middle</td> </tr> <tr> <td>Bladder Wrack</td> <td>Pale brown</td> <td>Yes</td> <td>Upper</td> </tr> <tr> <td>Toothed wrack</td> <td>Yellowy-brown</td> <td>No</td> <td>Lower</td> </tr> <tr> <td>Spiral wrack</td> <td>Yellowy-brown</td> <td>No</td> <td>Middle</td> </tr> </tbody> </table> <p>1 mark for 4 meaningful column identifiers 3 marks for 4 correct rows 2 marks for 3 correct rows 1 mark for 2 correct rows 0 marks for 1 correct row</p>	Seaweed	Colour	Air-bladders	Shore location	Egg wrack	Dark	Yes	Middle	Bladder Wrack	Pale brown	Yes	Upper	Toothed wrack	Yellowy-brown	No	Lower	Spiral wrack	Yellowy-brown	No	Middle	4	Note that the order of the columns is unimportant as is the order of the rows.
Seaweed	Colour	Air-bladders	Shore location																					
Egg wrack	Dark	Yes	Middle																					
Bladder Wrack	Pale brown	Yes	Upper																					
Toothed wrack	Yellowy-brown	No	Lower																					
Spiral wrack	Yellowy-brown	No	Middle																					
	(b)	<p>If Shore location = lower and Colour = yellowy brown and Air-bladders = No Then Seaweed = Toothed wrack.</p> <p>Candidate may well have used different column identifiers, these are perfectly acceptable.</p> <p>(1 mark for correct use of If, And and Then, 1 mark for conditions 1 mark for conclusion) Deduct 1 mark if backward chaining used</p>	3	Be lenient with column identifiers, they don't need to be exactly the same.																				
	(c)	<p><i>Any 1 from:</i> You can gather facts about the seaweed to generate a conclusion about the type of seaweed it is. Trying to identify seaweed from its characteristics so cannot start with its name.</p>	1	To get the mark the answer must be in the context of the question.																				
	(d)	<p><i>Any 2 from:</i> Remove repetitive questions by using a multiple choice question. Use 'radio' buttons to select answer rather than typing. Provide 'Why' justification.</p>	2	Accept a diagram instead of description.																				

Question			Expected Answer(s)	Max Mark	Additional Guidance
	(e)	(i)	<p><i>Any 1 from:</i></p> <p>Structuring the data incorrectly</p> <p>Entering the facts and rules incorrectly</p> <p>Not testing their part of the expert system thoroughly enough.</p>	1	
		(ii)	<p><i>Any 1 from:</i></p> <p>Provided the wrong information to be coded.</p> <p>Not testing their part of the expert system thoroughly enough.</p>	1	

Question		Expected Answer(s)	Max Mark	Additional Guidance
15.	(a)	Diagnosis	1	Do not accept advice.
	(b)	Any 2 from: Limited domain of knowledge Little access to expertise Can be coded into rules based on symptoms	2	
	€	Any 1 from: Representing the domain knowledge <u>in a suitable knowledge representation language</u> . Representing the knowledge as <u>factor tables or decision trees</u> . Creating the production rules.	1	
	(d) (i)	Any 1 from: To provide advice through a consultation To provide access to expertise where no human expert is available Provide how justification Provide why justification	1	
	(ii)	Data – raw unprocessed facts and figures Knowledge – application of rules to known facts <i>1 mark each</i>	2	<i>Candidate must clearly show which is which otherwise take them in the order of the question.</i>
	€	Software that has an <u>inference engine</u> , <u>user interface</u> and <u>no (empty) knowledge base</u> . 2 marks for all 3 1 mark for any 2 0 marks for <= 1	2	
	(f)	Any 1 from: Employees have regular breaks away from using computers. Employees should have regular eye examinations (check-ups). Employers should ensure that monitors are anti-glare to avoid reflected light that would lead to eye strain.	1	

Question	Expected Answer(s)	Max Mark	Additional Guidance
16.	 <pre> graph TD A[Wheel width] --> B[Slim wheel] A --> C[Wide Wheel] B --> D[Number of gears] C --> E[Number of gears] D --> F[1] D --> G[more than 5] E --> H[less than 10] E --> I[more than 10] F --> J[track racing bike] G --> K[road racing bike] H --> L[trail bike] I --> M[mountain bike] </pre> <p> <i>1 mark for wheel width correctly entered</i> <i>1 mark for number of gears correctly entered</i> <i>1 mark for all bikes being correctly identified</i> </p>	3	

Section III

The Internet – Part C

Question			Expected Answer(s)	Max Mark	Additional Guidance
17.	(a)	(i)	Any 1 from: Text Icon Image Icon Video Icon Audio Icon Links Icon Add Page Icon Delete Page Icon	1	
		(ii)	Any 1 from: Hyperlink tool (must include tool) Links icon	1	
	(b)	(i)	File transfer protocol/FTP	1	
		(ii)	Browser	1	Do not accept Internet Explorer or any other trade name
		(iii)	A State the absolute address of the W3C image. http://www.compscientists.com/w3c.jpg http://www.compscientists.com – 1 mark /w3c.jpg – 1 mark	2	
		B	Link inflexibility – the image address needs manually updated each time a file is moved.	1	
		(iv)	Any 1 from: Trademark Information intellectual property rights Copyright	1	

Question		Expected Answer(s)	Max Mark	Additional Guidance	
18.	(a)	<p><i>Any 2 from:</i></p> <p>Targeted advertising</p> <p>Social networking – displaying personal information on public pages</p> <p>Cookies – used for tracking the URLs visited by users</p> <p>Phishing – redirecting users to fraudulent URLs to gather log-in details</p> <p>Spyware – takes control of user interaction with a computer to redirect to sites or gather personal information.</p> <p>Any other acceptable response (must include a description)</p>	2	Award 1 mark for stating the name of 2 threats.	
	(b)	(i)	Post a message and wait for a reply.	1	
		(ii)	<p><i>Any 1 from:</i></p> <p>Legal discussion about privacy threats eg companies changing privacy settings without permission</p> <p>Posting information about forthcoming privacy marches</p> <p>Increase public awareness of the charity</p> <p>Any other acceptable response (must include a description)</p>	1	
	(c)	(i)	<p><u>“protest marches”</u> <u>+Scotland</u> <u>–Saturday</u></p> <p><u>“protest marches”</u> <u>AND Scotland</u> <u>NOT Saturday</u></p> <p><i>1 mark each for underlined part</i></p>	3	
		(ii)	Usage Rights	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
19.	(a)	(i)	Switch	1	
		(ii)	Any 1 from: 46.36.198.121 46.36.198.123 46.36.198.125	1	
		(iii)	It checks IP addresses and sends the packets to their correct destination.	1	
	(b)	(i)	Any 1 from: Cabling including Fibre Optic Faster Routers Faster Switches Faster Network Interface Cards (NIC) Faster Download Speeds	1	
		(ii)	Any 1 from: Faster streaming of data Files download faster Increased speed of intranet/internet pages loading up Intranet/internet display faster in the browser Real-time services (chat and video conferencing) have less lag Any other acceptable answer	1	

Question		Expected Answer(s)	Max Mark	Additional Guidance
	(c) (i)	<p><i>Any 1 from:</i></p> <ul style="list-style-type: none"> Flexible working hours mean employees can work when convenient to them Saves money since no need to travel to work Reduces length of working day as no travelling time Saves money from the family budget since less childcare costs Any reasonable suggestion (must relate to the employee) 	1	
	(ii)	<p><i>Any 2 from:</i></p> <ul style="list-style-type: none"> Chat Video Conferencing VOIP 	2	Do not accept Skype or any other trade name.
	(iii)	<p><i>Any 1 from:</i></p> <ul style="list-style-type: none"> Encryption Anti-virus software Firewalls Spyware Removal Software (Anti-Spyware software) 	1	Do not accept spyware.

[END OF MARKING INSTRUCTIONS]