



2015 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		<ul style="list-style-type: none"> Has access to information sources like Internet, libraries, newspapers etc 	1	Do not accept has access to a computer
2	(a)	<ul style="list-style-type: none"> Highlight cells D3 to D5 (1 mark) and fill down (1 mark) Click on D3 (1 mark) drag corner down to D5 (1 mark) 	2	Replicate (1 mark) Copy and paste (1 mark)
2	(b)	<ul style="list-style-type: none"> record 	1	
2	(c)	<ul style="list-style-type: none"> It has been put into context by the heading weight (kg) 	1	
3		<ul style="list-style-type: none"> Presentation 	1	
4		<ul style="list-style-type: none"> (Original) knowledge that can be assigned protection 	1	
5		<ul style="list-style-type: none"> An attribute that is a primary key in another table 	1	
6		<ul style="list-style-type: none"> When storing a sound/picture/video 	1	

Question		Expected Answer(s)	Max Mark	Additional Guidance															
7	(a)	<ul style="list-style-type: none"> Other characteristics 	1	Do not accept Beard, moustache, scar															
7	(b)	<ul style="list-style-type: none"> Normalisation (accept 1NF or first normal form) 	1																
7	(c)	<table border="1"> <thead> <tr> <th>Hair Colour</th> <th>Eye Colour</th> <th>Other Characteristics</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>Green</td> <td>Beard</td> </tr> <tr> <td>Brown</td> <td>Blue</td> <td>Beard, moustache, scar</td> </tr> <tr> <td>Grey</td> <td>Blue</td> <td>Beauty spot</td> </tr> <tr> <td>Grey</td> <td>Brown</td> <td>none</td> </tr> </tbody> </table> <p>1 mark for Hair colour in correct order 1 mark for Eye colour in correct order Ignore other characteristics field</p>	Hair Colour	Eye Colour	Other Characteristics	Black	Green	Beard	Brown	Blue	Beard, moustache, scar	Grey	Blue	Beauty spot	Grey	Brown	none	2	
Hair Colour	Eye Colour	Other Characteristics																	
Black	Green	Beard																	
Brown	Blue	Beard, moustache, scar																	
Grey	Blue	Beauty spot																	
Grey	Brown	none																	
8	(a)	<ul style="list-style-type: none"> Repetitive Strain Injury 	1																
8	(b)	<p>Any one of:</p> <ul style="list-style-type: none"> Use an ergonomic keyboard Take regular breaks from using the computer Use an adjustable chair Wrist pad Others 	1																
			(15)																

Section II

Question			Expected Answer(s)	Max Mark	Additional Guidance
9	(a)	(i)	<ul style="list-style-type: none"> To gather/collect data 	1	
9	(a)	(ii)	<ul style="list-style-type: none"> Presence check 	1	
9	(a)	(iii)	<p>(A)</p> <ul style="list-style-type: none"> Menu Drop down list 	1	Do not accept restricted choice or pop-up
			<p>(B)</p> <ul style="list-style-type: none"> Easy to enter data by selecting from the list of reset values no typing errors in data entry restricted choice <p>(accept answers that refer to this scenario such as: Users cannot enter examples of cinemas that do not exist)</p>	1	If correct answer to B is given in A then answer can be transferred
9	(b)	(i)	<p>(A)</p> <ul style="list-style-type: none"> Data Protection Act 	1	
			<p>(B)</p> <p>Answers should describe any one of:</p> <ul style="list-style-type: none"> Do not give data to third party without consent Ensure data is adequate, relevant and not excessive Ensure data is accurate and up to date Ensure data not kept longer than necessary Ensure data is not transferred to country outside EU (without adequate protection) Ensure data is kept securely Ensure processed in accordance of data subjects rights 	1	<ul style="list-style-type: none"> Do not accept examples of data subjects rights. Do not accept use lawfully or relevance as in question

Question			Expected Answer(s)	Max Mark	Additional Guidance
9	(b)	(ii)	<p>Any two suitable security measures from:</p> <ul style="list-style-type: none"> • Username and password for authorised users to log in • Firewall on server • Encryption on financial transactions like buying tickets • Anti - Malware • Other appropriate measures 	2	Need both username and password for mark.
9	(c)		<p>Any two from:</p> <ul style="list-style-type: none"> • Text Wrap • Columns or table layout • Fully justified alignment • Line spacing 	2	
10	(a)		<p>Any two from:</p> <ul style="list-style-type: none"> • Less data duplication • Avoids data inconsistency • Better data integrity • Easier to search for data in more than one table 	2	
10	(b)		<ul style="list-style-type: none"> • AREA(area_association, area name, formation, hq, member_countries, area_president, logo) • MEMBER(country, country_association, title, headquarters, founded, affiliation, president, area_association*) <p> 1 mark for Area table name 1 mark for all correct attributes in AREA 1 mark for area_association as the primary key 1 mark for Member table name 1 mark for all correct attributes in MEMBER 1 mark for country as the primary key 1 mark for area_association as the foreign key </p>	7	
10	(c)		<ul style="list-style-type: none"> • link 	1	Accept hyperlink

Question			Expected Answer(s)	Max Mark	Additional Guidance
11	(a)		Any two from: <ul style="list-style-type: none"> • Hardware costs to purchase terminals • Cost to network devices • Cost to buy software to run system • Cost to train staff to use it 	2	
11	(b)	(i)	<ul style="list-style-type: none"> • Bar code reader or Touch screen 	1	
11	(b)	(ii)	<ul style="list-style-type: none"> • Chip and pin or magnetic stripe 	1	
11	(c)		Any two from: <ul style="list-style-type: none"> • Speed • Volume of transactions • Accuracy 	2	
11	(d)	(i)	Any sensible suggestion that indicates search, sort or calculation carried out, eg <ul style="list-style-type: none"> • Work out how many of each item were sold • Find out how many items were sold during break • Find most popular products 	1	
11	(d)	(ii)	(A) <ul style="list-style-type: none"> • CardID is unique PK to identify pupil, whereas pupil name might not be unique. • Two people may have the same name 	1	
			(B) <ul style="list-style-type: none"> • Search cardID field = 10876 and date field > = 1/12/2014 	2	
				(30)	

Section III

Part A – Applied Multimedia

Question			Expected Answer(s)	Max Mark	Additional Guidance
12	(a)		Any one from: <ul style="list-style-type: none"> Advertising and selling products Creating presentations Others 	1	
12	(b)		<ul style="list-style-type: none"> Larger storage capacity Faster data transfer rate Max 2 marks	2	<ul style="list-style-type: none"> Do not accept 'faster' without justification. Do not accept 'memory'
12	(c)		Any two from: <ul style="list-style-type: none"> Age group Computer expertise Accessibility Language spoken (geographic location) Max 2 marks	2	
12	(d)		<ul style="list-style-type: none"> Hierarchical 	1	
12	(e)	(i)	<ul style="list-style-type: none"> Media Specialist 	1	
12	(e)	(ii)	Any one from: <ul style="list-style-type: none"> To ensure that users are aware that the material is copyright protected OR <ul style="list-style-type: none"> To ensure that users do not breach the Copyright, Design's and Patents Act 	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
13	(a)	(i)	<ul style="list-style-type: none"> User interface Screen Layout 	1	
13	(a)	(ii)	Any one from: <ul style="list-style-type: none"> Aberdeen Dundee Edinburgh Glasgow Home Gallery 	1	
13	(a)	(iii)	Any one from: <ul style="list-style-type: none"> Use of background music Use of sound effects 	1	
13	(a)	(iv)	Any one from: <ul style="list-style-type: none"> To make the user aware that the screen is changing To make a change from one screen to another To make the change more interesting 	1	
13	(b)	(i)	<ul style="list-style-type: none"> The number of bits used to store a sound 	1	
13	(b)	(ii)	<ul style="list-style-type: none"> Higher number of samples (1 mark) taken over the same amount of time (1 mark) 	2	
13	(c)		Any one from: <ul style="list-style-type: none"> Authoring Scripting 	1	
13	(d)		<ul style="list-style-type: none"> Navigation Testing 	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
14	(a)	(i)	Any one from: <ul style="list-style-type: none"> Graphic, character, word, sentence, paragraph 	1	
14	(a)	(ii)	<ul style="list-style-type: none"> The colour depth/bit depth (1 mark) has been reduced (1 mark) 	2	
14	(b)	(i)	<ul style="list-style-type: none"> Direct Manipulation (accept GUI) 	1	
14	(b)	(ii)	Any one from: <ul style="list-style-type: none"> Menus Keyboard commands 	1	
14	(b)	(iii)	<ul style="list-style-type: none"> There is a need to continuously update the content of this product Can be accessed worldwide Wider audience Others 	1	
14	(c)		<ul style="list-style-type: none"> User instructions 	1	
14	(d)		<ul style="list-style-type: none"> Evaluation 	1	
				(25)	

Section III

Part B – Expert Systems

Attempt ALL questions in this section

Question			Expected Answer(s)	Max Mark	Additional Guidance
15	(a)	(i)	<ul style="list-style-type: none"> Knowledge base 	1	
15	(a)	(ii)	<ul style="list-style-type: none"> Destination IS Barbados IF Likely Weather IS Hot AND Activities = scuba diving AND Price Range = expensive <p style="text-align: center;">All 4 correct – 2 marks 2 correct – 1 mark</p>	2	Can be in any order apart from 1 st line.
15	(a)	(iii)	<p>Forward chaining (1 mark)</p> <p>Any one from:</p> <ul style="list-style-type: none"> Finds out their holiday requirements and draws a conclusion (1 mark) That is the way it would be done in a travel agency – ask the customer what they wish and make a suggestion based on their requirements (1 mark) <p>Not backward chaining – too many goals to make assumption from start</p>	2	
15	(b)	(i)	<ul style="list-style-type: none"> User Interface 	1	
15	(b)	(ii)	<p>Price range is ... ? (1 mark)</p> <ul style="list-style-type: none"> Expensive Medium Cheap (1 mark for all options) 	2	
15	(b)	(iii)	<ul style="list-style-type: none"> Expensive, hot, sight-seeing 	1	All 3 needed for 1 mark
15	(b)	(iv)	<ul style="list-style-type: none"> How – explains how the conclusion was reached 	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
16	(a)		<ul style="list-style-type: none"> • Diagnosis 	1	Do not accept Advice
16	(b)		<ul style="list-style-type: none"> • To represent the knowledge of many experts/TV repair specialists in one place • To provide explanations as to diagnosis given <p>Answers must relate to the scenario</p>	2	
16	(c)		<p>Any two from:</p> <ul style="list-style-type: none"> • Interview TV repair workers to extract their knowledge and experience/ask domain experts • Look up reference manuals for each TV set • Research troubleshooting guide for each TV set 	2	
16	(d)	(i)	<ul style="list-style-type: none"> • Check speaker connection 	1	
16	(d)	(ii)	<ul style="list-style-type: none"> • Determine the order in which rules are applied (1 mark) • Determine order in which questions are asked to user (1 mark) 	2	

Question			Expected Answer(s)	Max Mark	Additional Guidance
17	(a)		<ul style="list-style-type: none"> Search/Query is carried out 	1	
17	(b)		<ul style="list-style-type: none"> Database lists all holidays matching customer search criteria in a report (1 mark) Expert Systems shows recommendation/ advice on which holiday is most suitable for needs. (1 mark) 	2	Accept Expert Systems can provide justification for recommendation (1 mark)
17	(c)	(i)	<ul style="list-style-type: none"> Black(sign = diamond, gradient = very steep, difficulty = expert, feature = moguls) <p>3 items for 1 mark 4/5 correct for 2 marks</p>	2	
17	(c)	(ii)	<ul style="list-style-type: none"> Knowledge engineer 	1	
17	(d)		<ul style="list-style-type: none"> A set of test cases is tried out and the answers checked with domain expert for accuracy. 	1	
				(25)	

Section III

Part C – The Internet

Answer ALL questions in this section

Question			Expected Answer(s)	Max Mark	Additional Guidance
18	(a)	(i)	<ul style="list-style-type: none"> It provides set of rules for exchanging data between computer systems 	1	
18	(a)	(ii)	<ul style="list-style-type: none"> TCP divides the message into packets IP provides the source and destination addresses <p>1 mark per bullet</p>	2	
18	(b)	(i)	<ul style="list-style-type: none"> 192.16.0.1 192.16.0.2 192.16.0.3 	1	
18	(b)	(ii)	<ul style="list-style-type: none"> Switch or Hub 	1	
18	(b)	(iii)	<ul style="list-style-type: none"> Router 	1	
18	(c)	(i)	<ul style="list-style-type: none"> To reduce the file size of the image So that it downloads quickly 	2	
18	(c)	(ii)	<p>Any one from:</p> <ul style="list-style-type: none"> Broadband/ADSL/Cable – have increased bandwidth Fibre Optic – allows transmission at higher bandwidths Faster Router 	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
19	(a)		<ul style="list-style-type: none"> Web Authoring 	1	Accept HTML editor
19	(b)		<ul style="list-style-type: none"> Scripting (Tool) 	1	
19	(c)	(i)	<ul style="list-style-type: none"> When using absolute addressing hyperlinks use full pathname of a file when creating a link. 	1	
19	(c)	(ii)	<ul style="list-style-type: none"> If the site is moved to another web server then all of the links are broken. 	1	
19	(d)	(i)	<ul style="list-style-type: none"> Get permission from the entrants 	1	
19	(d)	(ii)	<ul style="list-style-type: none"> Search by file type (accept file type) 	1	

Question			Expected Answer(s)	Max Mark	Additional Guidance
20	(a)		<ul style="list-style-type: none"> • “valiant hotel” (1) • + gym (1) • - London (1) 	3	
20	(b)	(i)	<ul style="list-style-type: none"> • SMTP or IMAP 	1	
20	(b)	(ii)	<ul style="list-style-type: none"> • POP or IMAP 	1	
21	(a)	(i)	Any one from: <ul style="list-style-type: none"> • Back Button, Forward Button, Home Button, Address Bar 	1	
21	(a)	(ii)	<ul style="list-style-type: none"> • File transfer 	1	Accept FTP
21	(b)	(i)	<ul style="list-style-type: none"> • Computer slows down, computer keeps rebooting, files deleted, etc 	1	
21	(b)	(ii)	<ul style="list-style-type: none"> • Virus software had not been updated recently • Virus was created after his anti-virus software was created 	1	
21	(b)	(iii)	Any one from: <ul style="list-style-type: none"> • Firewalls • Spyware Removal Software (accept Anti-Spyware software DO NOT accept Spyware) 	1	
				(25)	

[END OF MARKING INSTRUCTIONS]