



2013 Information Systems

Higher

Finalised Marking Instructions

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Part One: General Marking Principles for Information Systems Higher

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 Higher

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.

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. You can do this by posting a question on the Marking Team forum or by e-mailing/phoning the marker Helpline.
Alternatively, you can refer the issue directly to your Team Leader by checking the ‘Referral’ box on the marking screen.
- (b) Marking should always be positive ie, marks should be awarded for what is correct and not deducted for errors or omissions.
- (c) Technical terms which have been spelled incorrectly should still be awarded the relevant mark.
- (d) In situations where the subsequent part of a question depends on the correct answer to the first part, candidates who answer the first part incorrectly and then go on in the subsequent part of the question to give a correct answer based on their answer to the first part will be awarded the relevant mark for the subsequent part of the question.

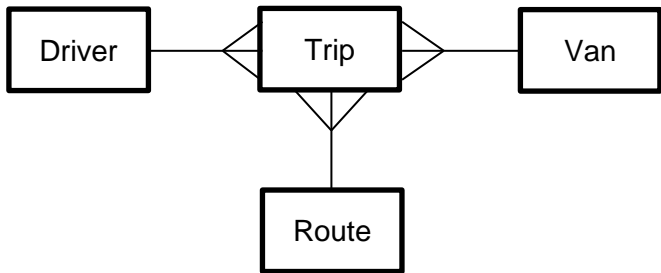
- (e)** In situations where the candidate has achieved the maximum number of marks available without getting to the end of their answer, a marker should award the maximum marks. However, in situations where there is only one correct answer and the candidate has split their answer with a / or an or, then this should not be accepted as a separate response and the marks should not be awarded. For example, if the correct answer for a data type question is date then a response of (date/time) or (date or time) would attract 0 marks as the / and the or combines the answer making it incorrect.
- (f)** In situations where the candidate writes the correct answer followed by an alternative incorrect answer then this should not be penalised. However, if the candidate writes an incorrect answer followed by a correct alternative answer this should not be awarded the marks. For example if the correct answer to a 1 mark question is written and the candidate includes an alternative incorrect answer such as visual then the following would apply:
Written (visual) = 1 mark.
Written/visual = 0 marks (example of combining as in (e) above).
Visual (written) = 0 marks.

Part Two: Marking Instructions for each Question

Question		Expected Answer/s	Max Mark	Additional Guidance
1	a	<ul style="list-style-type: none"> Changing Tennis club/Club secretary/ Club address/Club telephone (1 mark) Would affect multiple records or you might miss one or might make an error with one (1 mark) <p>1 mark for each bullet</p>	2	<p>Must be an implication of many to get second mark</p> <p>Data duplication problems (1 mark)</p>
1	b	<ul style="list-style-type: none"> Introduce a surrogate key (2 marks) Introduce another attribute/field (1 mark) eg player no. or similar (1 mark) 	2	Give each player a unique number (2 marks)
2	a	UNF (1 mark) a multi-value attribute exists (2 marks)	3	
2	b	Many to Many (1 mark)	1	
2	c	Count (1 mark) and summary field/group footer/report footer (1 mark)	2	
3		Permitted/possible values (2 marks) Range of values (1 mark)	2	
4	a	Boolean (1 mark)	1	
4	b	Link (1 mark)	1	Do not accept linked object
4	c	Integer (1 mark)	1	
5		Correct or accurate (2 marks) Valid (1 mark)	2	
6	a	<ul style="list-style-type: none"> Asks questions/consultation Gives advice /second opinion Contains knowledge From <u>several</u> experts Diagnose/plan/classify <p>(Any 2 bullets, 1 mark each)</p>	2	Other answers acceptable
6	b	<p>To deal with the large amount of day to day transactions (2 marks)</p> <ul style="list-style-type: none"> large amount of data operational data or day to day or transactions or supermarket till or similar <p>(1 mark) per bullet</p>	2	

Question	Expected Answer/s	Max Mark	Additional Guidance																														
7	<ul style="list-style-type: none"> • multiple tasks • start time/finish time of tasks • timeline • critical path <p>Any three bullets for one mark</p> <p>Diagram must show any three of the above</p> <table border="1"> <thead> <tr> <th>Jan</th> <th>Feb</th> <th>Mar</th> <th>Apr</th> <th>May</th> </tr> </thead> <tbody> <tr> <td style="background-color: #d3d3d3;"></td> <td style="background-color: #d3d3d3;"></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="background-color: #d3d3d3;"></td> <td style="background-color: #d3d3d3;"></td> <td style="background-color: #d3d3d3;"></td> <td></td> </tr> <tr> <td></td> <td></td> <td style="background-color: #d3d3d3;"></td> <td style="background-color: #d3d3d3;"></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td style="background-color: #d3d3d3;"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Jan	Feb	Mar	Apr	May																										3	A rough drawing is required here with no detail
Jan	Feb	Mar	Apr	May																													
8	<ul style="list-style-type: none"> • Communication • Contacts • Calendar • Task lists/To-Do Lists <p>Any two bullets for (2 marks)</p>	2																															
9	<ul style="list-style-type: none"> • must be obtained and processed fairly • must be held only for lawful purposes • must be held only for those purposes • must be relevant and not excessive • must be accurate • must be held no longer than necessary • must be surrounded by proper security • must be provided on request to the individual concerned <p>(1 mark for each bullet – max 2 marks)</p>	2	<p>Accept “ask for owner’s permission” for bullet point 1</p> <p>Mention of sharing information within the EU – accept points relating to this.</p>																														
10	<ul style="list-style-type: none"> • Massive amount of data • Internal data • Different databases • Operational data • Too large to search • Continually updated <p>(1 mark for each bullet – max 2 marks)</p>	2	Other answers possible																														

Question	Expected Answer/s	Max Mark	Additional Guidance								
11	<table border="1"> <thead> <tr> <th>UNF</th> <th>1NF</th> <th>2NF</th> <th>3NF</th> </tr> </thead> <tbody> <tr> <td> <u>Student No</u> Student name Home address Room number Item Hire cost Stock No Manufacturer Test date Term </td> <td> <u>Student No</u> Student name Home address Room number Item Hire cost <u>Stock No</u> Manufacturer Test date <u>Term</u> Student No* </td> <td> <u>Student No</u> Student name Home address Room number <u>Stock No</u>* <u>Term</u> Student No* <u>Stock No</u> Item Hire cost Manufacturer Test date </td> <td> <u>Student No</u> Student name Home address Room number <u>Stock No</u>* <u>Term</u> Student No* <u>Stock No</u> Item* Manufacturer Test date <u>Item</u> Hire cost </td> </tr> </tbody> </table>	UNF	1NF	2NF	3NF	<u>Student No</u> Student name Home address Room number Item Hire cost Stock No Manufacturer Test date Term	<u>Student No</u> Student name Home address Room number Item Hire cost <u>Stock No</u> Manufacturer Test date <u>Term</u> Student No*	<u>Student No</u> Student name Home address Room number <u>Stock No</u> * <u>Term</u> Student No* <u>Stock No</u> Item Hire cost Manufacturer Test date	<u>Student No</u> Student name Home address Room number <u>Stock No</u> * <u>Term</u> Student No* <u>Stock No</u> Item* Manufacturer Test date <u>Item</u> Hire cost		
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	<p>There are 6 marks for the process and 11 marks for the final 3 NF</p> <p>Process</p> <p>1NF</p> <p>1 mark for creating a second entity including Student No</p> <p>1 mark for including <u>all</u> 6 multi valued attributes shown (ignore extra attributes)</p> <p>2NF</p> <p>1 mark for removing Stock number (accept part of candidate's compound key but NOT Student No) - compound PK <u>must</u> remain together</p> <p>1 mark for leaving a copy of Stock number (or part of candidate's compound key) only behind</p> <p>3NF</p> <p>1 mark for removing a non-key dependency provided a PK is not removed with it</p> <p>1 mark for leaving a copy of the non-key dependency behind.</p> <p>Looking only at 3NF</p> <p>(4 marks for attributes)</p> <ul style="list-style-type: none"> 1 mark for each entity having the correct attributes (a misplaced non-key attribute would only lose 1 mark, i.e. would not lose the mark in both entities) <p>(4 marks for Primary Keys)</p> <ul style="list-style-type: none"> 2 marks for the compound Primary key(Stock No + Term) 1 mark for Stock No + Term + Student No 1 mark for Stock number as PK 1 mark for Item as PK <p>(3 marks for Foreign keys)</p> <ul style="list-style-type: none"> 1 mark for each correct Foreign key for the candidate's 3NF entities <p>Note: an atomic PK is not a valid FK</p>										

Question		Expected Answer/s	Max Mark	Additional Guidance
12	a	 <p><i>1 mark for each correct join with no extra join and 1 more mark if the join has the correct cardinality</i></p>	6	Count each extra join once eg 2 extra joins with 3 correct joins would be awarded 4 marks. A join is a single line between two entities.
12	b	<p>A – Text (1 mark) B – Lookup from Route (Table) (1 mark) C – N (1 mark) D – FK (1 mark)</p>	4	
12	c	<p>The entity integrity would be lost (1 mark) as Refuel town might be null (1 mark) as it might not be necessary to refuel (1 mark)</p> <p>OR</p> <p>Refuel town may not be unique (1 mark) as two routes may use this town (1 mark)</p>	3	
13	a	Historic and Aural	2	
13	b	<p>Timing poor – game took place in 1966, not current/in the past/years ago good – appropriate time in the media studies course</p> <p>Presentation poor – no picture, crackly audio good – BBC professionally produced</p> <p>Reliability Poor/bias - possible BBC bias towards British team? (must state England or British team) Good/reliable – BBC <u>reputation</u></p>	6	<p>2 marks for the comment that supports the answer. Need to say good or poor with a reason to get 2 marks under each term</p> <p>Must relate to scenario for 2 marks – generic answers only – 1 mark</p> <p>Reason without stating good/poor – 1 mark</p>

Question			Expected Answer/s	Max Mark	Additional Guidance
14	a		Backup, Security, Software and Upgrade	4	
14	b		<p>Topology (1 mark) Auditing and monitoring software (1 mark)</p> <ul style="list-style-type: none"> • LAN • WAN • Distributed network • Ring • Star • Bus • Mesh • Diagram of above <ul style="list-style-type: none"> • Client/server • Peer to peer • Network adapter, NIC • Structured cabling <ul style="list-style-type: none"> • Network operating system • Network account 	6	<p>1 mark for a description of 1 bullet</p> <p>1 mark for any 2 bullets</p> <p>With (network) hardware – 1 mark</p> <p>With (network) software – 1 mark</p> <p>Insist on network operating system or operating system for server</p>
15	a	i	<ul style="list-style-type: none"> • Font (size or style or colour) • Colour (not font colour) • Navigation • Structure/layout • Graphics/logo • Alignment • Background <p>(Any 4 bullets for 4 marks)</p>	4	Navigation means how the buttons appear or whether a navigation bar is used
15	a	ii	<p>Template (1 mark) or master page (1 mark) or stylesheet (1 mark) and apply it to <u>every page</u> (1 mark)</p>	2	

Question		Expected Answer/s	Max Mark	Additional Guidance
15	b	<p>Social –</p> <ul style="list-style-type: none"> • makes the world a smaller place • good for keeping in touch with friends • become more information rich • addictive – affects family and personal life • arranging nights out, etc • cyber bullying <p>Legal –</p> <ul style="list-style-type: none"> • Regulation of Investigatory Powers Act • how it affects private messages • Computer Misuse Act • illegal for others to hack your private messages <p>Ethical –</p> <ul style="list-style-type: none"> • Freedom of speech, yes or no • Can facilitate crime • Increases global citizenship • Grooming by deception <p><i>(Any one bullet for 1 mark from each of the 3 headings)</i></p>	6	<p>Do not accept reduces face to face communication</p> <p>Computer Misuse Act can only get a mark if accompanied with a correct explanation</p> <p>Personal/private messages being read by others <i>(1 mark)</i> Invasion of privacy <i>(1 mark)</i></p> <p>Taking a stand (good or bad) and <u>attempting</u> to justify <i>(1 mark)</i></p>

Applied Multimedia

Question			Expected Answer/s	Max Mark	Additional Guidance
16	a	i	<ul style="list-style-type: none"> • good communication /interpersonal skills • good team leading skills (leadership) • good time management skills • good organisational skills • good budgeting skills <p><i>(Any 2 bullets for 2 marks)</i></p>	2	
16	a	ii	<p>Any 3 from:</p> <p>Purpose – information resource from primary pupils</p> <p>User / Audience – primary pupils</p> <p>Content – photos, video & sound clips of <u>owls at sanctuary</u></p> <p>Delivery media – www (not website)</p> <p>Timescale – start of school term in <u>October</u></p> <p>Budget – <i>(1 mark)</i></p>	6	<p>Need “of owls” to get 2 marks</p> <p>Need to state October</p>
16	a	iii	<p>Multimedia Designer</p> <ul style="list-style-type: none"> • Creates overall design of the owl website • Decide on positioning of the photos, video, sound clips and text of the owls • Responsible for structure, navigation, screen layout, interactivity. • Creates storyboards <p>Multimedia Programmer</p> <ul style="list-style-type: none"> • Creates the website • Expert in the chosen software. • Matches the design <p>Interactions</p> <p>Multimedia Designer and Media Specialist Multimedia Designer and Multimedia Programmer Multimedia Designer and Project Manager Multimedia Designer and Subject Expert Multimedia Programmer and Project Manager</p> <p><i>(2 marks for roles of personnel. 2 marks for two interactions)</i></p>	6	

Question			Expected Answer/s	Max Mark	Additional Guidance
16	b	i	Sketch diagram to include: <ul style="list-style-type: none"> - text box including the title "Pygmy Owl" (1 mark) - 2 boxes showing movie clip and photo (1 mark) - Box/icon with indication to play sound (1 mark) - Index button and Quit button (1 mark) - Navigation indicated on the Index button to return to the index page (1 mark) 	5	
16	b	ii	Any valid points relating to the website <ul style="list-style-type: none"> - Owl sanctuary heading font, style, sizes on the home page - file names etc for the video and sound clips - background and colour information - link information for index page 	3	Answers must be specific to storyboard drawn in part (i) Do not accept generic answers apart from background colour
16	c		Colour depth – <ul style="list-style-type: none"> • a slight reduction in number of colours wouldn't be noticed • lose too many colours – begins to look less real/like a cartoon Resolution – <ul style="list-style-type: none"> • changing the dpi may make the photo too small • it may appear pixelated Compression <ul style="list-style-type: none"> • will reduce quality • since being viewed on computer monitor than difference in quality not so distinguishable <p>1 mark for any bullet under each heading above and also 1 mark for each of these bullets under any one heading (max 6 marks)</p> <ul style="list-style-type: none"> • Smaller file size • Quicker download • Suitable for web application/context of primary pupils 	6	
16	d		MP3 is suitable – (1 mark) sound recorded (1 mark) MIDI is digitally created (1 mark)	3	

Question			Expected Answer/s	Max Mark	Additional Guidance
16	e		Increase frame rate (2 marks) Frame rate (1 mark) Reduce window size (2 marks) Window size (1 mark)	2	
16	f	i	Any two from <ul style="list-style-type: none"> Requirements specification Navigation map Record of testing. 	2	
16	f	ii	User documentation	1	
17	a		<ul style="list-style-type: none"> data capacity (1 mark) – kiosk limited in storage depending on disk size, www infinite (1 mark) data transfer rate (1 mark) – kiosk fast transfer rate from hard disk, www depends on users connection (1 mark) window size (1 mark) – www displayed on browser window size, similar to kiosk with screen size (1 mark) ease of update (1 mark) – very easy to update www, from server, updating kiosk may be more difficult (1 mark) <p>Any 2 bullets for 2 marks each</p>	4	Must have comparison plus 1 point relating to www or kiosk e.g. www can hold a lot more than kiosk which is limited to the size of the disk
17	b	i	direct manipulation (GUI) (1 mark) or menu (1 mark) <ul style="list-style-type: none"> – touch screen requires no extra hardware attached to kiosk (1 mark) – no specialist knowledge required (1 mark) <p>One type and one reason for 2 marks</p>	2	
17	b	ii	1 mark for stating each criteria, 1 mark for each reason consistency – consistent as both screens use a consistent font, size and style. Same colours and layout of information avoiding information overload – minimal information, contact details brief in the left hand panel navigation – no visible navigation	4	

Question			Expected Answer/s	Max Mark	Additional Guidance
17	c	<p>i</p> <ul style="list-style-type: none"> • Planning (1 mark) • Decision making (1 mark) <p>ii</p> <p>A generic definition of any of the above 2 is only worth 1 mark Any example related to the scenario is worth 2 marks, eg</p> <p>(Decision Making) – customers could use this information to decide on which restaurant to go to (2 marks)</p> <p>(Decision Making) – Could use this information to book a table by phoning or e-mail (2 marks)</p> <p>(Decision Making) – Could use this information to find out more about the restaurant by visiting the website or emailing the restaurant before deciding whether to book a table (2 marks)</p> <p>(Planning) – need to include at least two steps eg when planning a booking:</p> <ul style="list-style-type: none"> • check when restaurant is open • number of people going • how much money to take • time of the meal • when to leave to get to the restaurant in time • any other reasonable step (2 marks) 		2	Candidates will not be penalised in part (ii) if they do not answer part (i) correctly

Expert Systems

Question	Expected Answer/s	Max Mark	Additional Guidance
18	<ul style="list-style-type: none"> • Earliest or first expert to be developed • Developed in 1965 • Domain was (molecular) chemistry • Used to classify (organic compounds) • Analysed results from a mass spectrum • Created at Stanford University • Written using Lisp • Mycin and/or Prospector and/or XCON were derived from Dendral • Two main programs were Heuristic Dendral and Meta-Dendral • Uses plan-generate-test-paradigm rather than forward or backward chaining • Limited the possible results using constraints <p>1 mark for any bullet (4 max)</p>		Any 4 valid points for 4 marks
19 a	<p><u>Benefit</u> Combination of knowledge from 'different parts of the world' (2 marks)</p> <ul style="list-style-type: none"> • Preservation of expertise • dissemination of expert knowledge • combining expertise of multiple experts • available 24/7 (1 mark) <p><u>Drawback</u> Other types of weed (2 marks) Restricted domain/high development and/or maintenance costs (1 mark)</p>	4	A generic answer is only worth a maximum 1 mark for each
19 b	<p>i (leaf, hairy) (stem, spines) (flower, flattened globe)</p> <p>1 mark for one correct pair and 1 mark for two more correct pairs with a consistent notation</p>	2	Accept variations in the notation like leaves=hairy or alternative forms or alternative variables eg shape instead of flower

Question			Expected Answer/s	Max Mark	Additional Guidance																
19	b	ii	<table border="1"> <tr> <td></td> <td>leaf</td> <td>stem</td> <td>flower</td> </tr> <tr> <td>bull</td> <td>rough</td> <td>spines</td> <td>vase</td> </tr> <tr> <td>musk</td> <td>smooth</td> <td>naked</td> <td>large disc</td> </tr> <tr> <td>Scotch</td> <td>hairy</td> <td>spines</td> <td>Flattened globe</td> </tr> </table> <p> 1 mark for having four columns 1 mark for three headings 1 mark for one correct row 1 mark for two other correct rows </p>		leaf	stem	flower	bull	rough	spines	vase	musk	smooth	naked	large disc	Scotch	hairy	spines	Flattened globe	4	<p>The order of the columns is not important</p> <p>Bull, musk and Scotch can be in any order</p> <p>Capital letters and plurals are not important here</p> <p>One or two headings only could still get the final two marks</p>
	leaf	stem	flower																		
bull	rough	spines	vase																		
musk	smooth	naked	large disc																		
Scotch	hairy	spines	Flattened globe																		
19	b	iii	<p>IF leaf IS rough AND stem IS spines AND flower IS vase THEN thistle IS bull</p> <p>IF leaf IS smooth AND stem IS naked AND flower IS 'large disc' THEN thistle IS musk</p> <p>IF leaf IS hairy AND stem IS spines AND flower IS 'flattened globe' THEN thistle IS 'Scotch'</p> <p> 1 mark for one correct rule 1 mark for two other correct and consistent rules 1 mark for use of IF, AND and THEN 1 mark for consistent use of IS (or =) 1 mark for use of thistle variable (or similar) </p>	5	<p>Accept variations of the form</p> <p>weed is bull if leaves=rough and flower=vase and stem=spine</p> <p>providing the candidate is consistent</p> <p>Do not penalise syntax involving capitals or lack of quotes</p>																

Question			Expected Answer/s	Max Mark	Additional Guidance
19	b	iv	What type of leaves? <ul style="list-style-type: none"> • Rough • Smooth • Hairy <p>1 mark for any question (or statement like 'Describe...') about leaves, stems or flowers</p> <p>1 mark for a list of options including those options given in the notes</p>	2	
19	c		System validation (1 mark) <ul style="list-style-type: none"> • Domain expert • tests • thoroughly • compare with experts knowledge <p>3 marks for any 3 bullets</p>	4	<ul style="list-style-type: none"> • Each generic point is only worth 1 mark • If in context, worth 2 marks • Idea of structure or thorough testing, worth 3 marks
20	a	i	Let $P = \text{business} > \text{amount}$ $Q = \text{people} > 50$ $R = \text{yes to loan}$ then $P \wedge Q \longrightarrow R$ <p>1 mark for setting up proposition statements</p> <p>1 mark for use of \wedge and \longrightarrow</p>	2	Allow variations for P, Q and R including single words $\text{business} > \text{amount} \wedge \text{people} > 50 \longrightarrow \text{yes to loan}$ (1 mark only)
20	a	ii	<ul style="list-style-type: none"> • Certainty factors for each condition and rule • Method for combining certainty factors in a rule: CF outcome = CF rule x min (CF conditions) <p>2 marks for each bullet</p>	4	Certainty factors (1 mark) There is a rule for combining (1 mark) Putting it in context such as $\text{CF 'yes to loan'} = \text{CF rule} \times \min(\text{CF 'business} > \text{amount'}, \text{CF 'people} > 50')$ or $\text{CF R} = \text{CF rule} \times \min(\text{CF P}, \text{CF Q})$ gets 4 marks (all bullets are exemplified)

Question			Expected Answer/s	Max Mark	Additional Guidance
20	b	i	Level for bank is operational (1 mark) Level for client is tactical/strategic (1 mark) it has a more long term effect/more major impact for the client (1 mark) or only day to day (less impact) for the bank. (1 mark)	3	
20	b	ii	Justification facilities / HOW (1 mark) showing which rules were used/looking up rule tree. (1 mark)	2	
20	c		<ul style="list-style-type: none"> • External courses • In-house training • On the job training 1 mark for each bullet (max 2 marks)	2	
20	d	i	Responsibility is with the employee that authorised the loan / not with the expert system (1 mark) The expert system is only a 'second opinion' / the employee makes the decision (1 mark)	2	
20	d	ii	<ul style="list-style-type: none"> • Information that relates to the 'people' or 'business' scores may not be fully revealed • Economic conditions may change • There could be an unforeseen accident that affects the business or people involved 2 marks for any bullet	2	Other answers are possible that relate to the systems limited knowledge Do not accept answers that relate to poor testing

Question	Expected Answer/s	Max Mark	Additional Guidance
21	<ul style="list-style-type: none"> • There is a change to working memory • Facts are added/removed • Rules are sought • Using the RETE algorithm • To form a conflict set • Rules match facts in working memory • A conflict resolution strategy is used <p>1 mark for each bullet</p> <p>Additional marks for correct order</p> <p>Change to working memory THEN rules are sought (1 mark)</p> <p>RETE algorithm used THEN conflict set formed (1 mark)</p> <p>Conflict set THEN conflict resolution (1 mark)</p> <p>Conflict Resolution</p> <p>Exemplification of conflict resolution can gain a further 2 marks either by naming two or one with a description</p> <ul style="list-style-type: none"> • rule ordering/first-come-first-served – each rule has a fixed ranking • recently – which rule uses most recently added facts • specificity/size ordering – which rule has the largest number of conditions • refractoriness – do not keep choosing the same rules to fire or do not fire the same rule twice in a row • data ordering – choose the rule with the most important conditions • context limiting/setting a rule agenda – only consider a rule about a certain aspect <p>Max 8 marks</p>	8	Do not give credit for answers that do not use the correct terms other than 3 marks for the order of events

The Internet

Question		Expected Answer/s	Max Mark	Additional Guidance	
22	a	A = /title B = /head C = body D = alt 1 mark each	4		
22	b	<style> .style1 {font-size: 9pt} </style> <style> + </style> (1 mark) .style1 (1 mark) {font-size and } (1 mark) :9 (1 mark)	4	Need both tags for 1 mark Need to have dot Need to have opening and closing bracket Need colon (pt not needed in answer)	
22	c	i	Shows large image (1 mark) in new document/page/same window (1 mark)	2	
22	c	ii	Jumps to a new section within the current document (2 marks) or Opens additional information on the same page (2 marks)	2	
22	c	iii	Starts/activates/launches (1 mark) an email client (1 mark)	2	
23	a		A set of rules (1 mark) for exchanging information or data transmission (1 mark)	2	
23	b	<ul style="list-style-type: none"> • IP – for routing (packets across networks) • TCP – arranges delivery (of data from one device to another) • TELNET – to control a remote device • DNS – to allow translating of domain names into IP addresses Any two bullet points	4	1 mark for protocol name 1 mark for purpose Accept other protocols such as smtp, pop, http, https, ftp, etc	
23	c		IETF	1	
24	a	i	255.255.255.0	1	
24	a	ii	192.168.0.254	1	

Question		Expected Answer/s	Max Mark	Additional Guidance									
24	b	To connect or To route traffic from (1 mark) one network to another or an internal network and the Internet (1 mark)	2										
24	c	A router or bridge	1										
24	d	<table border="1"> <thead> <tr> <th>Station Address</th> <th>Subnet Mask</th> <th>Gateway Address</th> </tr> </thead> <tbody> <tr> <td>192.168.0.56</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>192.168.0.232</td> <td>Yes</td> <td>No</td> </tr> </tbody> </table> <p>2 marks for Yes, No for Gateway 1 mark for Yes, Yes for station 192.168.0.56 1 mark for Yes, No for station 192.168.0.232</p>	Station Address	Subnet Mask	Gateway Address	192.168.0.56	Yes	Yes	192.168.0.232	Yes	No	4	This is marked in pairs
Station Address	Subnet Mask	Gateway Address											
192.168.0.56	Yes	Yes											
192.168.0.232	Yes	No											
24	e	Nominet or ICANN	1										
24	f	<p>www.zombeez.co.uk www.zombeez.com</p> <p>Do not accept use of Total Action in a pathway eg www.totalaction.co.uk/zombeez</p> <p>www.totalaction.co.uk (1 mark)</p>	2	A commercial domain name (1 mark) with an indication of the game name (1 mark)									
24	g	<ul style="list-style-type: none"> • Breach of Computer Misuse Act • Committed in US where UK police have no authority • Notify US authorities • Ask for games designer to be extradited to UK • Ask US authorities for co-operation <p>(Any 3 bullets for 3 marks)</p>	3										
25	a	Bias – no bias or equal basis (1 mark) as site shows balance of views from fans (1 mark) Credibility – high/good (1 mark) as site has been reviewed by other bodies/magazines (1 mark)	4	Representing both points of view for each is acceptable									
25	b	Answer should demonstrate cost related to monetary cost – in this case by subscription/maintain the website (1 mark) and value to importance of information to the fans/company (1 mark)	2	At least one reference to website for 2 marks, generic answers = 0 marks									

Question		Expected Answer/s	Max Mark	Additional Guidance
25	c	Primary (1 mark) External (1 mark)	2	
25	d	<ul style="list-style-type: none"> • Site is dynamically/constantly changing • Need server-side language/scripting • Posts saved in database • To prepare new page for each request/refresh • Php has the capability to do this automatically • HTML code would need to be constantly revised <p>Any 4 bullets at 1 mark each</p>	4	
25	e	Pre-validates form (1 mark) for faster response to user (1 mark) or Frees up server(1 mark) to carry out other tasks (eg php) (1 mark)	2	Less processing by the server – 0 marks

[END OF MARKING INSTRUCTIONS]