2004 HSC Notes from the Marking Centre
Information Processes and Technology

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2004 HSC NOTES FROM THE MARKING CENTRE INFORMATION PROCESSES AND TECHNOLOGY

Introduction

This document has been produced for the teachers and candidates of the Stage 6 course in Information Processes and Technology. It provides comments with regard to responses to the 2004 Higher School Certificate Examination, indicating the quality of candidate responses and highlighting the relative strengths and weaknesses of the candidature in each section and each question.

It is essential for this document to be read in conjunction with the relevant syllabus, the 2004 Higher School Certificate Examination, the Marking Guidelines and other support documents which have been developed by the Board of Studies to assist in the teaching and learning of Information Processes and Technology.

The HSC Examination

In 2004, 6825 candidates presented for the Information Processes and Technology Higher School Certificate Examination.

Candidates are reminded that the mark value allocated for each question part, along with the 'key words' used in each question part, indicate the type of response required and the depth of that response.

Section I

Question	Correct Response
1	D
2	A
3	D
4	D
5	B
6	C
7	D
8	B
9	C
10	B
11	B
12	A
13	C
14	C
15	A
16	B
17	D
18	C
19	A
20	C

Section II

Candidates were required to answer all four questions in this section.

Many candidates were able to analyse these scenarios and to give responses which related their understanding to the scenario. Most candidates gave reasonable responses, although not all of these were tied directly to the situation described in the stimulus material and consisted of fairly general

answers. Candidates are reminded that they should relate their answers to the stimulus material in the question and to avoid over-generalised responses.

Question 21

The candidates' response overall reflected a reasonable understanding of what was required from the question and hence the majority of candidates were able to access the full range of marks from their responses.

(a) A majority of candidates showed an understanding of a data dictionary - containing the appropriate data dictionary heading - that is Field Name, Data Type, Field Width, Description and Example. Better responses were able to identify the need for linkage to another table using foreign keys. Poor responses provided the Field Names and one other characteristic of a data dictionary. A number of candidates did not set-up their data dictionary in a table structure - rather they used paragraphs to construct their data dictionary.

(b) Better responses featured a substantially correct dataflow diagram and included all or most of the required features. Poorer responses gave a minimal number of features required of the dataflow diagram - the processes, labelled data flows, entities and data stores.

A significant number of candidates did not distinguish between dataflow diagrams, system flowcharts, flowcharts and context diagrams.

Candidates need to be aware of the specifications Software and Course Specifications document associated with the syllabus.

(c) Better responses were able to show two ways and a good explanation in the use of these in the development of a new information system.

Poor responses indicated little understanding of what prototypes are and how they are used; identifying only one way they are used in the development of a new information system, or giving limited explanations.

Question 22

(a) Candidates were required to draw a diagram of a ring and a bus topology and identify the protocol for each topology. Most candidates were able to draw the two topologies but were not able to present a completely accurate diagram, as described in the scenario, showing all devices and correct connections.

Many candidates failed to identify the protocols at all, while others were able to provide lengthy descriptions of appropriate protocols.

(b) Candidates were required to distinguish between user management and security management as part of the role of a network administrator. Many candidates confused this role with that of the librarian and management of the library. Better responses outlined the features of setting up and maintaining user accounts as well as the operation of a secure network and backup of data. Poor responses were unable to distinguish between user tasks and security tasks.

(c) Most candidates identified copyright and accuracy of data as relevant issues with better responses providing an in-depth discussion related to the scenario. Poorer responses discussed the use of the internet and the library information system rather than the responsible use of information.

Question 23

In general, candidate responses reflected an understanding of the scenario and the requirements of the question, with most candidates gaining some marks for their responses.

Most responses indicated an understanding of the scenario, with a wide variety of answers given to parts (a) and (c).

(a) Better responses identified and described appropriate issues. Some of the better responses described the same issue from two perspectives. Weaker responses used the same issue without being able to distinguish between the social and the ethical viewpoint. Some candidates described issues that were not related to the display of results on the website but to the information system in general.

(b) Better responses were able to identify appropriate hardware and software that were not mentioned in the scenario but were required to achieve the purpose of the information system. These responses were also able to explain how the particular components interacted to achieve the goals of the information system. Poorer responses were able to identify only the components that were discussed in the scenario with very little description of their interaction. The weakest responses gave general answers that described the components of any system.

(c) Some responses showed a lack of understanding of the meaning of the word *criteria*. Better responses were able to clearly identify two or more criteria and describe, with clear reference to the new fun run information system, how those criteria were to be met. Poorer responses identified only one criterion, discussed how to determine that criteria had been met without describing the characteristics and features of the criteria, or identified two or more criteria without reference to the meeting of criteria. The weakest responses confused pre-completion criteria with post-completion criteria by referring to the feasibility study of a new and yet to be developed system.

Question 24

(a) Generally there was a good standard of response to this part. Most candidates were able to give a reasonable description of the internet and how it best supported interaction and communication between the different parties in the scenario. Poorer responses identified communication as an important aspect of the question but failed to discriminate between the parties and their interaction with either the internet or intranet. Better responses were able to clearly describe how the intranet was appropriate for the relevant parties identified. These responses included appropriate terminology derived from the syllabus core topics.

(b) Most candidates were able to identify at least one issue related to the accuracy of data in the given scenario and to provide supporting points. Better responses illustrated a good understanding of, and distinction between, ownership and control of data and featured a detailed discussion of issues related to the scenario. These responses contained a discussion of why it was important for the data to be accurate, what responsibilities each party had, and the implications of inaccurate data.

Section III

Candidates were required to answer TWO questions only from this section. Three percent (3%) of the total candidature attempted more than two questions, more than last year. Candidates should be discouraged from attempting more than two questions, as the time they waste on the extra question/s could be better spent fully answering the questions required.

Question 25

65% of the total candidature attempted this question.

Better responses demonstrated a link between factual knowledge and the consequences of its application in the particular transaction processing system of the scenario. These responses clearly explained the relationships between components of the transaction processing system.

Candidates need to apply the appropriate key terms used in the question, eg describe, define and analyse. The components of the key word definitions are essential to a comprehensive answer.

Candidates were able to access a full range of marks on all parts of this question.

(a) (i) Better responses gave both the meaning and the qualities of data integrity and gave an appropriate measure that may help ensure data integrity. Poorer responses did not illustrate a deep understanding of data integrity, giving only a weak meaning or quality or measure.

(ii) Better responses gave both the meaning and the qualities of data warehouse and provided characteristics and features of its purpose.

(b) Better responses provided characteristics and features of the three information processes collecting, storing and processing as described by the e-voting transaction processing system. Such responses also addressed the needs of real time processing. Midrange responses demonstrated a good understanding but may have only addressed two of the processes. Poorer responses typically provided limited features of one process.

(c) (i) Better responses demonstrated a sound knowledge of backup procedures and related the real time processing needs of the e-voting system to the backup procedure. Poorer responses sketched only one backup procedure, often in general terms, and without reference to the needs of the system described in the scenario.

(ii) Better responses identified and elaborated on at least four strengths and weaknesses covering each of the components of the e-voting system. These candidates were able to take into account the strengths and weaknesses of the e-voting system and relate implications between both components. Poorer responses were only able to list strengths and weaknesses of the e-voting system, often in general terms.

Question 26

31% of the total candidature attempted this question.

Candidates need to apply the appropriate key terms used in the question, eg describe, define and analyse. The components of the key word definitions are essential to a comprehensive answer.

(a) (i) Candidates were able to access a full range of marks on this question. Better responses were able to describe 'unstructured situations' with an appropriate example.

Poorer responses only gave an example or a weak description of an 'unstructured situation'.

(ii) Better responses included a clear definition of a 'what if' model and an example of its use.

Poorer responses included a definition but no example.

Some responses only presented an example of a 'what if' model or confused a 'what if' model with an 'if then else' model or with a projection.

(b) Better responses included a well designed spreadsheet template for the proposed DSS. These responses allowed a score for the applicant to be calculated using substantially correct formulae for travel time and experience bands.

Poorer responses by candidates did not account for differing travel times and the ability to change ranges for experience bands as required by the question. Many of the poorer responses included only some relevant labels on the template.

Candidates often confused the design of a template with display of a spreadsheet with entered data. There was also a poor understanding of the placement and structure of formulae, and the layout of spreadsheets or templates to separate data entry areas from calculation areas.

(c) (i) Better responses included characteristics and features appropriate to an expert system and related these to the hiring process.

Poorer responses included minimal features and characteristics of expert systems and often failed to relate them to the hiring process. Some responses included a description of the hiring system without any relationship to the expert system. Such responses attracted no marks.

(ii) Better responses were able to identify both components of the hiring system. These responses took into account strengths and weaknesses of both the DSS and interview components of the system. The best responses were also to relate implications between both components.

Many candidates described a strength and weakness of only one component.

Question 27

17% of the total candidature attempted this question.

Candidates' responses reflected a reasonable understanding of how theoretical concepts could be applied to a given scenario.

(a) (i) Better responses demonstrated a clear understanding of the relationship between CAD and CAM and included a clear example. Midrange responses defined only CAD or CAM, without an example of its use in an automated manufacturing system.

Poorer responses defined only CAD or CAM without an example of its use in an automated manufacturing system.

(ii) Better responses included a definition of noise in an automated manufacturing system, identified its cause and suggested appropriate techniques for the reduction of noise. Poorer responses confused the technical meaning of noise with noise as an audible sound.

(b) Many candidates could identify sensors but did not display knowledge of actuators. The use of barcodes and barcode readers was the area with the best responses overall for this part of the question. Candidates who could apply sensors and actuators to practical situations gave the best responses to how they could be used at Aussie Electricals.

Better responses clearly named two sensors, two actuators and could explain how barcode / barcode readers could be used in automated manufacturing system at Aussie Electricals. Midrange responses only explained four of the devices and how they could be used in an automated manufacturing system at Aussie Electricals. Poorer candidate responses simply listed sensors or actuators and did not explain how they could be used at Aussie Electricals.

(c) (i) Better responses explained how underdamping and overdamping could occur in the automated manufacturing system at Aussie Electricals. The use of diagrams by these candidates was a good way to present the concepts clearly. Poorer responses defined one of the terms correctly but did not apply it to the automated manufacturing system at Aussie Electricals.

(ii) All candidates made an attempt to outline the strengths and weaknesses of automated manufacturing system at Aussie Electricals. Better responses clearly identified strengths and weaknesses and the relationship between them when analysing the automated manufacturing system at Aussie Electricals. Better candidate responses were able to draw out and relate implications to employees and/or the automated manufacturing system in the scenario as part of their analysis. Poorer candidate responses only identified strengths or weaknesses and did not attempt to analyse the system at Aussie Electricals.

Question 28

90% of the total candidature attempted this question.

In general, candidates responded well to this question with many candidates achieving full marks.

(a) (i) Most candidates related bit depth to the number of colours or the size of the colour palette. However, many candidates were unable to accurately define the term *bit depth* with relation to pixels and how they are represented in memory. Good responses identified essential qualities which included the relationship connecting the number of colours to bit depth by powers of two, for example, a bit depth of eight will provide 2^8=256 colours. Some candidates mistakenly described features of screen resolution as the number of pixels on the screen, for example, 1024 x 768.

(ii) Many candidates were able to discuss some issues of compression with many identifying correctly the techniques of lossy and lossless. Better responses included detailed descriptions by using the examples of jpeg and gif, being the two most common image compression methods and were able to clearly identify their differences in terms of quality and application. A number of candidates incorrectly described the compression of other media types such as video and audio.

(b) Drawing a storyboard provided an opportunity for candidates to demonstrate the practical skills that they have developed in the classroom when designing multimedia systems. Better responses followed the instructions to label major design elements and show links between pages. Poorer responses provided a simple overview of the site that did not allow for indication of screen elements such as navigation buttons, detailed menus, media types, consistent layout and links to return to the home page. Most responses provided a logical, non-linear storyboard layout with a home page or menu page.

(c) (i) Better responses outlined navigation and layout as the major issues. Unfortunately, some candidates focussed on the storyboard that they constructed in the previous question and suggested modifications to it. Alternatively, they linked the designer's role to the system development cycle such as using the storyboard as a prototype.

(ii) Better responses analysed the situation by drawing out and relating implications such as increased tourist opportunities due to wider audience and possible alienation of elderly ratepayers as a result of their limited access, knowledge and skills with technology. Poorer responses were limited to brief points without discussion of the issues or clearly indicating the differences between a web-based solution and a paper-based solution.

Information Processes and Technology

2004 HSC Examination Mapping Grid

Question	Marks	Content	Syllabus outcomes
Section I			
1	1	Project work	H3.1
2	1	Information systems and databases	H1.1
3	1	Information systems and databases	H1.1
4	1	Communication system	H1.1
5	1	Project work	H6.2
6	1	Information systems and databases	H1.2
7	1	Communication system	H1.1, H3.2
8	1	Project work	H6.1
9	1	Communication system	H1.1, H4.1
10	1	Information systems and databases	H1.1
11	1	Information systems and databases	H1.1, H6.1
12	1	Communication system	H1.1
13	1	Project work	H5.1
14	1	Project work	H6.2
15	1	Communication system	H1.1
16	1	Project work	H2.1
17	1	Information systems and databases	H1.1
18	1	Information systems and databases	H6.1
19	1	Communication system	H1.1
20	1	Communication system	H1.1
Section II			
21 (a)	3	Information systems and databases	H1.1
21 (b)	3	Project work	H2.1
21 (c)	4	Project work	H1.1, H6.1
22 (a)	3	Communication system	H1.1, H1.2
22 (b)	3	Communication system	H1.1, H1.2
22 (c)	3	Information systems and databases	H3.1, H3.2, H5.2
23 (a)	3	Project work	H3.1, H5.2

Question	Marks	Content	Syllabus outcomes
23 (b)	5	Information systems and databases	H1.1, H1.2, H2.1, H3.1, H6.1
23 (c)	4	Project work	H1.1, H3.1
24 (a)	4	Communication systems	H1.1, H6.1
24 (b)	5	Information systems and databases	H3.1, H3.2, H5.2
Section III			
25 (a) (i)	3	Transaction processing systems	H1.1
25 (a) (ii)	3	Transaction processing systems	H1.1, H4.1
25 (b)	6	Transaction processing systems	H1.1, H2.1
25 (c) (i)	3	Transaction processing systems	H1.1, H4.1
25 (c) (ii)	5	Transaction processing systems	H1.1, H3.1, H5.2
26 (a) (i)	3	Decision support systems	H1.1
26 (a) (ii)	3	Decision support systems	H1.1
26 (b)	6	Decision support systems	H1.1, H2.2, H4.1
26 (c) (i)	3	Decision support systems	H1.1, H4.1
26 (c) (ii)	5	Decision support systems	H1.1, H3.1, H3.2, H5.2
27 (a) (i)	3	Automated manufacturing systems	H1.1
27 (a) (ii)	3	Automated manufacturing systems	H1.1
27 (b)	6	Automated manufacturing systems	H1.1, H2.1, H4.1
27 (c) (i)	3	Automated manufacturing systems	H1.1
27 (c) (ii)	5	Automated manufacturing systems	H3.1, H5.2
28 (a) (i)	3	Multimedia systems	H1.1
28 (a) (ii)	3	Multimedia systems	H1.1
28 (b)	6	Multimedia systems	H1.1, H1.2, H4.1
28 (c) (i)	3	Multimedia systems	H1.1
28 (c) (ii)	5	Multimedia systems	H3.1, H5.2

BOARD OF STUDIES
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2004 HSC Information Processes and Technology Marking Guidelines

Section II

Question 21 (a)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• A response that shows good understanding of the construction of data dictionaries. All necessary fields in the Lunch-Orders table must be included, including field name, field width, data type, and a description of the purpose of each field • Descriptions need to be clear on data format and relationship to another table	3
• A response that shows understanding of the construction of data dictionaries. At a minimum, the data dictionary needs to be relevant to the Lunch-Orders table and show some of the fields and three of their characteristics	2
• A response that shows limited understanding of the construction of data dictionaries. At a minimum, the response needs to indicate some fields and at least one of their characteristics	1

Question 21 (b)

Outcomes assessed: H2.1

MARKING GUIDELINES

Criteria	Marks
• A response that shows good understanding of DFDs and the scenario. Response must include the 3 processes indicated in the question, the relevant external entities, data store and the key data flows	3
• A response that shows some understanding of DFDs and the scenario. Response may not include all necessary details but must show some logic of the scenario and indicate the correct use of at least TWO distinct DFD symbols	2
• A response that shows limited understanding of DFDs and/or scenario. Response must indicate the correct use of at least TWO distinct DFD symbols	1

Question 21 (c)

Outcomes assessed: H1.1, H6.1

MARKING GUIDELINES

Criteria	Marks
With reference to two ways, • Provides how and/or why the prototype aids the development of the IS	4
• Makes reference to two ways, and provides how and/or why the prototype aids the development of the IS for one of these	3
• Provides two ways a prototype may be used to assist the development of an IS OR • Makes reference to one way a prototype may be used to assist the development of an IS and provides how and/or why	2
• Provides one way a prototype may be used to assist the development of an IS	1

Question 22 (a)

Outcomes assessed: H1.1, H1.2

MARKING GUIDELINES

Criteria	Marks
• Correctly draws both diagrams and correctly nominates a correct protocol for each network Note: If it is clear that the student understands the ring or bus topologies, and the students has clearly indicated the printers and servers, the numbers of devices on the networks are not important.	3
• Draws a ring and a bus network AND • Nominates a correct protocol for one of the networks	2
• Draws a ring and a bus network OR • Draws one diagram and nominates a correct protocol for that network	1

Question 22 (b)

Outcomes assessed: H1.1, H1.2

MARKING GUIDELINES

Criteria	Marks
• Provides characteristics and features of one task in each category	3
• Provides two tasks with some relevant characteristics of at least one	2
• Provides any two tasks OR • Provides characteristics of one task	1

Question 22 (c)

Outcomes assessed: H3.1, H3.2, H5.2

MARKING GUIDELINES

Criteria	Marks
• Identifies two relevant issues and provides points for and/or against both issues	3
• Identifies and provides points for and/or against one relevant issue OR • Identifies two relevant issues and attempts to elaborate on at least one	2
• Identifies one relevant issue with some elaboration OR • Identifies two relevant issues	1

Question 23 (a)

Outcomes assessed: H3.1, H5.2

MARKING GUIDELINES

Criteria	Marks
• Provides characteristics and features of one social issue and one ethical issue related to the display of results on the website	3
• Identifies one social and/or one ethical issue related to the display of results on the website and provides characteristics and features of one	2
• Identifies two social and/or ethical issues relating to the display of results on the website	1

Question 23 (b)

Outcomes assessed: H1.1, H1.2, H2.1, H3.1, H6.1

MARKING GUIDELINES

Criteria	Marks
• Provides characteristics and features of all the identified components in the proposed information system and provides how/why the components work together to achieve the goals of the information system	5
• Provides characteristics and features of a majority of the identified components in the proposed information system • Better answers should provide how/why some of the components work together to achieve the goals of the IS	3–4
• Provides the characteristics and features of at least one of the identified components	1–2

Question 23 (c)

Outcomes assessed: H1.1, H3.1

MARKING GUIDELINES

Criteria	Marks
• Provides characteristics and features of at least two criteria that could be used to judge the success of the new IS, and describes how to determine if each criteria has been met	4
• Provides characteristics and features of at least two criteria that could be used to judge the success of the new system and describes how to determine if at least one of the criteria has been met	3
• Provides characteristics and features of at least one criterion OR • Provides some description of how to determine the criteria have been met	1–2

Question 24 (a)

Outcomes assessed: H1.1, H6.1

MARKING GUIDELINES

Criteria	Marks
• Correctly identifies the parties involved in the intranet and internet access of the department store's network, and clearly describes how at least one type of network would be appropriate for the parties identified • Better responses must address both internet and intranet	3–4
• Correctly identifies parties involved in the internet and intranet access of the department store's network OR • Correctly describes the features of internet and intranet OR • Correctly identifies at least one party involved in the intranet and/or internet access of the department store's network and correctly describes the features of internet and/or intranet	2
• Correctly identifies at least one party involved in the internet or intranet access to the department store's network OR • Correctly describes internet and/or intranet technology	1

Question 24 (b)

Outcomes assessed: H3.1, H3.2, H5.2

MARKING GUIDELINES

Criteria	Marks
• Identifies issues and provides points for and/or against both accuracy and ownership and control of data, relating them to the scenario	4–5
• Identifies at least one issue and provides points for and/or against accuracy of data OR ownership and control of data. Issues need to relate to the scenario	3
• Identifies at least one issue of accuracy of data and/or ownership and control of data. Better answers will relate to the scenario	1–2

Section III

Question 25 (a) (i)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• States meaning and/or identifies essential qualities of data integrity as well as briefly providing characteristics and features of one appropriate measure	3
• States meaning and/or identifies essential qualities of data integrity and/or briefly providing characteristics and features of one appropriate measure	1–2

Question 25 (a) (ii)

Outcomes assessed: H1.1, H4.1

MARKING GUIDELINES

Criteria	Marks
• States meaning and identifies essential qualities of data warehouse as well as providing characteristics and features of its purpose	3
• States meaning and/or identifies essential qualities of data warehouse and/or briefly providing characteristics and features of its purpose	1–2

Question 25 (b)

Outcomes assessed: H1.1, H2.1

MARKING GUIDELINES

Criteria	Marks
• A response that demonstrates comprehensive understanding of the three processes in relation to the e-voting system by providing at least two characteristics/features of each of the processes. Full marks should only be awarded if the response mentions real-time processing.	5–6
• A response that demonstrates good understanding of the e-voting system by providing at least four characteristics/features for at least two of the processes	3–4
• A response that demonstrates limited understanding of the e-voting system. At a minimum, response must provide at least one characteristic/feature of one of the three processes stated	1–2

Question 25 (c) (i)

Outcomes assessed: H1.1, H4.1

MARKING GUIDELINES

Criteria	Marks
• Sketches in general terms at least 2 appropriate backup procedures. Response must address the needs of real-time processing	3
• Sketches in general terms at least 2 appropriate backup procedures	2
• Sketches in general terms at least one appropriate backup procedure	1

Question 25 (c) (ii)

Outcomes assessed: H1.1, H3.1, H5.2

MARKING GUIDELINES

Criteria	Marks
• Identifies and elaborates on at least 4 relevant issues of the TPS, with at least one strength and one weakness. Better answers should draw out and relate implications	4–5
• Identifies and elaborates on at least 1 strength and 1 weakness of the TPS	3
• Identifies and/or elaborates on at least one relevant issue of the TPS	1–2

Question 26 (a) (i)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• Provides characteristics and features of the term and an appropriate example. The description and example may be integrated	3
• Provides at least a characteristic and/or feature of the term and/or provides an example. The characteristic/feature and example may be integrated	1–2

Question 26 (a) (ii)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• States the meaning and identifies essential qualities of the term and gives an appropriate example	3
• States the meaning and/or identifies essential quality(ies) and/or provides an example	1–2

Question 26 (b)

Outcomes assessed: H1.1, H2.2, H4.1

MARKING GUIDELINES

Criteria	Marks
• The spreadsheet template should contain most of the relevant labels and formulae required. Better answers need to demonstrate consideration for future maintainability (eg. using absolute addressing to refer to the 'experience' and 'travelling time' data)	5–6
• A response that shows adequate understanding of template design. Response must attempt to calculate the points score based on the travelling time and/or experience. Better answers should contain a substantially correct formula to perform one of the travelling time experience calculations	3–4
• A response showing a poor grasp of the use of formulae in spreadsheets. At a minimum the students must show a spreadsheet with some relevant labels.	1–2

Question 26 (c) (i)

Outcomes assessed: H1.1, H4.1

MARKING GUIDELINES

Criteria	Marks
• Provides characteristics and features of expert systems by relating the components of the expert system to the scenario. Better answers will relate all three components: knowledge base, a database of facts, and an inference engine, to the company.	2–3
• Provides characteristics and/or features of an expert system without relating it to the company	1

Question 26 (c) (ii)

Outcomes assessed: H1.1, H3.1, H3.2, H5.2

MARKING GUIDELINES

Criteria	Marks
• Identifies components of the hiring system and addresses strengths AND weaknesses of BOTH stages of hiring system. Better answers should draw out the complementary relationship between the two parts.	4–5
• Identifies and elaborates on at least one strength and one weakness	3
• Identifies and/or elaborates on at least one issue	1–2

Question 27 (a) (i)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• States meaning and identifies essential qualities of CAD/CAM and provides characteristics and features of an appropriate example in an automated manufacturing system	3
• States the meaning of CAD/CAM and/or provides an appropriate example and/or states meaning of CAD and/or CAM and/or provides an example of CAD and/or CAM	1–2

Question 27 (a) (ii)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• States meaning and identifies essential qualities of noise in an automated manufacturing system and describes how it may be reduced	3
• States meaning and/or identifies essential qualities of noise in an AMS and/or refers to how it may be reduced	1–2

Question 27 (b)

Outcomes assessed: H1.1, H2.1, H4.1

MARKING GUIDELINES

Criteria	Marks
• Provides why and/or how two types of sensors, two types of actuators, and barcodes and barcode readers in inventory tracking are used in automated manufacturing system at AE	5–6
• Explains how at least four devices in at least two of the stated categories could be used in an AMS. Better answers must relate to AE.	3–4
• Identifies at least two devices (sensors or actuators) AND/OR • Explains how a device (including barcode reader) in the stated categories could be used in an AMS	1–2

Question 27 (c) (i)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• Provides why and/or how under-damping AND over-damping may occur AND relates to Aussie Electricals	3
• Provides why and/or how under-damping and/or over-damping may occur. Better answers should relate to AE.	1–2

Question 27 (c) (ii)

Outcomes assessed: H3.1, H5.2

MARKING GUIDELINES

Criteria	Marks
• Identifies and elaborates on at least four relevant issues of the AMS with at least one strength and one weakness. Better answers should draw out and relate implications	4–5
• Identifies and elaborates on at least one strength and one weakness of the AMS	3
• Identifies and/or elaborates on at least one relevant issue of the AMS	1–2

Question 28 (a) (i)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• States the meaning and identifies essential qualities of bit depth and provides characteristics and features of its representation of colour in multimedia systems	3
• States the meaning and/or identifies essential qualities of bit depth and/or provides some characteristics/features of its representatives of colour	1–2

Question 28 (a) (ii)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• Identifies two methods of compression of image files and clearly shows their difference(s)	3
• Identifies two appropriate methods and elaborates on at least one without necessarily showing their differences	2
• Identifies two appropriate methods OR • Identifies and elaborates on one appropriate method	1

Question 28 (b)

Outcomes assessed: H1.1, H1.2, H4.1

MARKING GUIDELINES

Criteria	Marks
• Demonstrates a comprehensive understanding of a storyboard, showing a number of desirable design elements such as: – a logical storyboard layout (a linear layout is not adequate to attract full marks) – labelled navigation tools – providing appropriate links – consistency of placement of screen elements – clear indication of the contents of each page incorporating appropriate media (eg video, hypertext, images) – a central menu page that provides appropriate links to the other webpages – A link on each page to return to the home page Note: For a mark of 5 or 6 to be awarded, the response must clearly indicate relationships between the webpages although this does not necessarily have to be done in a diagram	5–6
• Demonstrates a clear understanding of the storyboard, showing some of the desirable design elements listed above	3–4
• Demonstrates a limited understanding of the storyboard, illustrating only a few of the elements listed above	1–2

Question 28 (c) (i)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• Provides characteristics and features of how designers would use this storyboard. For full marks to be awarded, the response must address both the navigation and layout aspects of the storyboard.	3
• Provides limited characteristics and features of how designers would use the storyboard	1–2

Question 28 (c) (ii)

Outcomes assessed: H3.1, H5.2

MARKING GUIDELINES

Criteria	Marks
• Identifies and elaborates on at least four relevant issues, with at least one strength and one weakness of the proposed web-based solution. Better answers should draw out and relate implications	4–5
• Identifies and elaborates on at least one strength and one weakness of the proposed web-based solution	3
• Identifies and/or elaborates on at least one relevant issue of the proposed web-based solution	1–2