2009 HSC Information Processes and Technology Marking Guidelines

Section I

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

Section II

Question 21 (a)

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

MARKING GUIDELINES

Criteria	Marks
• Indicates the main features of THREE aspects the family should consider when determining the feasibility of a wireless solution • Demonstrates understanding of system feasibility	3
• Indicates the main features that the family should consider when determining the feasibility of a wireless solution indicating some understanding	2
• Identifies aspect(s) that indicate limited understanding of system feasibility	1

Question 21 (b)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• Provides diagram of hardware and software to be installed indicating clear understanding of the problem	3
• Provides diagram of hardware and/or software to be installed indicating some understanding of the problem	2
• Identifies hardware or software to be installed indicating limited understanding of the problem	1

Question 21 (c)

Outcomes assessed: H1.1, H2.2

MARKING GUIDELINES

Criteria	Marks
• Provides similarities and/or differences of wireless and cabled networks indicating understanding of the problem	3
• Provides description of wireless and/or cabled networks indicating some understanding of networks	2
• Identifies element(s) of wireless and/or cabled networks indicating limited understanding of networks	1

Question 22 (a)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• Provides clear explanation of each of the parts of the URL	3
• Provides description of part(s) of a URL indicating understanding of URL structure	2
• Provides identification of parts of a URL indicating limited understanding of http protocol	1

Question 22 (b)

Outcomes assessed: H6.2, H7.1

MARKING GUIDELINES

Criteria	Marks
• Provides context diagram including labelled data flows, process and external entity indicating understanding of the data flow diagram	2
• Provides attempt at context diagram indicating some understanding of data flow diagrams	1

Question 22 (c)

Outcomes assessed: H1.2

MARKING GUIDELINES

Criteria	Marks
• Provides substantially complete analysis indicating reference to the required information processes demonstrating clear understanding of data flow diagrams and processes	4
• Provides analysis indicating reference to the required information processes demonstrating understanding of the data flow diagrams and processes	3
• Provides description of process OR provides limited analysis between two processes indicating understanding of data flow diagrams and processes	2
• Identifies component(s) of a process indicating limited understanding of data flow diagrams and processes	1

Question 23 (a)

Outcomes assessed: H1.1, H1.2

MARKING GUIDELINES

Criteria	Marks
• Provides the underlying purpose of the system in relation to community safety	1

Question 23 (b)

Outcomes assessed: H1.1, H1.2

MARKING GUIDELINES

Criteria	Marks
• Identifies components demonstrating understanding of the system	2
• Identifies components of hardware or software	1

Question 23 (c)

Outcomes assessed: H3.1

MARKING GUIDELINES

Criteria	Marks
• Provides description of social and/or ethical issues in relation to the system indicating clear understanding of the proposed system	3
• Provides description of TWO social and/or ethical issues OR • Provides description of a social OR ethical issue in relation to the system indicating clear understanding of the proposed system	2
• Identifies a social OR ethical issue	1

Question 23 (d)

Outcomes assessed: H1.1

MARKING GUIDELINES

Criteria	Marks
• Predicts a valid application and provides a clear description of how remote monitoring could be applied, making reference to all required information processes	5
• Predicts a valid application and provides a description of how remote monitoring could be applied making reference to required information processes	4
• Predicts a valid application and provides limited description of how remote monitoring could be applied OR • Provides a description of an application of remote monitoring making reference to required information process(es)	3
• Identifies features of remote monitoring with some link to a different situation	2
• Identifies a feature associated with remote monitoring	1

Question 24 (a)

Outcomes assessed: H3.1

MARKING GUIDELINES

Criteria	Marks
• Provides explanation as to how the needs of customers impact on the design, indicating understanding of the context	3
• Provides discussion of how the needs of customers impact on the design, indicating limited understanding of the context	2
• Identifies issues that impact upon a design	1

Question 24 (b)

Outcomes assessed: H5.1

MARKING GUIDELINES

Criteria	Marks
• Provides a data dictionary for fields indicating understanding of the context by including relevant columns and fields	3
• Provides a data dictionary indicating some understanding, and/or some relevant data from the context	2
• Attempts a data dictionary	1

Question 24 (c)

Outcomes assessed: H2.1

MARKING GUIDELINES

Criteria	Marks
• Provides a schema demonstrating logical organisation of data including the nature of relationships and relevant key fields, indicating a clear understanding of the context of the problem	5
• Provides a schema demonstrating logical organisation of data including the nature of relationships and key fields indicating understanding of the context of the problem	4
• Provides a schema indicating some relationships and some fields related to the problem	3
• Provides a schema indicating limited understanding of the design of schemas	2
• Attempts a schematic diagram	1

Section III

Question 25 (a) (i)

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

MARKING GUIDELINES

Criteria	Marks
• Deomonstrates an understanding of a transaction	1

Question 25 (a) (ii)

Outcomes assessed: H1.1, H1.2, H6.1, H7.1

MARKING GUIDELINES

Criteria	Marks
• Provides description of a batch transaction processing system	2
• Identifies feature(s) of a batch transaction processing system	1

Question 25 (b)

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

MARKING GUIDELINES

Criteria	Marks
• Identifies TWO methods of data backups providing examples of appropriate use indicating understanding of backup systems	3
• Identifies method(s) of data backup with example(s) indicating some understanding of backup systems	2
• Identifies feature(s) or example(s) of backup systems	1

Question 25 (c) (i)

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

MARKING GUIDELINES

Criteria	Marks
• Provides design of e-ticket and description of purpose of data relating to the transaction indicating clear understanding of the context	4
• Provides design of e-ticket and some description of the purpose of data relating to the transaction indicating understanding of the context	3
• Provides an attempt at design of e-ticket and/or description of data indicating limited understanding of the design process	2
• Identifies features of a design OR • Identifies data relating to the context	1

Question 25 (c) (ii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides analysis with reference to screenshots indicating clear understanding of the context including reference to the required information processes	6
• Provides analysis with reference to screenshots indicating understanding of the context including reference to the required information processes	5
• Provides discussion with reference to screenshots indicating understanding of the process including reference to information processes	4
• Provides description with reference to screenshots OR information process(es) indicating understanding	3
• Provides description with reference to data/information requirements	2
• Identifies features of data/information requirements	1

Question 25 (c) (iii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides analysis of the online transaction processing system in comparison to booking in person demonstrating clear understanding of the context	4
• Provides discussion of the online transaction processing system in comparison to booking in person demonstrating understanding of the context	3
• Provides description of the online transaction processing system in comparison to the booking in person demonstrating limited understanding	2
• Identifies and names feature(s) of a transaction processing system	1

Question 26 (a) (i)

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

MARKING GUIDELINES

Criteria	Marks
• Demonstrates an understanding of GIS	1

Question 26 (a) (ii)

Outcomes assessed: H1.1, H1.2, H6.1, H7.1

MARKING GUIDELINES

Criteria	Marks
• Provides description of one example of use of GIS as a decision support	2
• Identifies feature(s) of a decision support system	1

Question 26 (b)

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

MARKING GUIDELINES

Criteria	Marks
• Provides names and description of TWO roles in the development of an expert system, indicating understanding of expert system development	3
• Names and identifies TWO roles in the development of an expert system, indicating limited understanding of expert system development OR • Provides name and description of ONE role in the development of an expert system indicating understanding of expert system development	2
• Names role(s) or identifies features of expert systems	1

Question 26 (c) (i)

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

MARKING GUIDELINES

Criteria	Marks
• Provides a comparison and contrast between neural networking and expert systems demonstrating a clear understanding of both systems	4
• Provides a comparison or contrast between neural networking and expert systems demonstrating a clear understanding of both systems OR • Provides a comparison and contrast between neural networking and expert systems demonstrating understanding of both systems	3
• Provides attempt at a comparison or contrast between neural networking and expert systems demonstrating limited understanding of either of the two systems	2
• Identifies features of a neural network OR • Identifies features of an expert system	1

Question 26 (c) (ii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides analysis with references to development of the system indicating a clear understanding of the context of the problem including reference to the required information processes	6
• Provides analysis with references to development of the system indicating an understanding of the context of the problem including reference to the required information processes	5
• Provides discussion with reference to development of the system indicating an understanding of the process of system development including reference to the information process(es)	4
• Provides some description with reference to development of the system OR information process(es) indicating understanding	3
• Provides a description with reference to development of the system	2
• Identifies features of the development of the system	1

Question 26 (c) (iii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides analysis of the use of neural networks for decision support demonstrating clear understanding of the context	4
• Provides discussion of the use of neural networks for decision support demonstrating understanding of the context	3
• Provides description of the use of neural networks for decision support demonstrating limited understanding	2
• Identifies feature(s) of a neural network	1

Question 27 (a) (i)

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

MARKING GUIDELINES

Criteria	Marks
• Demonstrates an understanding of actuator	1

Question 27 (a) (ii)

Outcomes assessed: H1.1, H1.2, H6.1, H7.1

MARKING GUIDELINES

Criteria	Marks
• Provides description of CAD AND CAM	2
• Recognises features of CAD AND/OR CAM	1

Question 27 (b)

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

MARKING GUIDELINES

Criteria	Marks
• Identifies TWO methods of processing in a manufacturing system including examples of each indicating understanding of processing in a manufacturing system	3
• Identifies method(s) of processing with example(s) in a manufacturing system indicating some understanding of processing in a manufacturing system	2
• Identifies feature(s) or example(s) of processing in a manufacturing system	1

Question 27 (c) (i)

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

MARKING GUIDELINES

Criteria	Marks
• Provides a block diagram and supports argument(s) or conclusion(s) as to why block diagrams are used indicating understanding of the scenario	4
• Provides a block diagram and supports argument(s) or conclusion(s) as to why block diagrams are used indicating understanding of the scenario OR • Attempts a block diagram and supports conclusion(s) as to why block diagrams are used indicating understanding of the scenario	3
• Provides an attempt at a block diagram or justification indicating an understanding of the use of block diagrams	2
• Identifies features of block diagrams OR • Provides elements of justification	1

Question 27 (c) (ii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides analysis for the removal of wheels in the car manufacturing system indicating a clear understanding of the context including reference to the required information processes	6
• Provides analysis for the removal of wheels in the car manufacturing system indicating an understanding of the context including reference to the recognized information processes	5
• Provides discussion on the removal of wheels in the car manufacturing systems indicating an understanding of the process including reference to information processes	4
• Provides description of the removal of wheels in the car manufacturing system OR information process(es) indicating understanding	3
• Provides description of the removal of wheels in the car manufacturing system	2
• Identifies features of the removal of wheels in the car manufacturing system	1

Question 27 (c) (iii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides an analysis of the automated system with reference to quality control and repetition of tasks demonstrating a clear understanding of the context	4
• Provides discussion of the automated system with reference to quality control and repetition of tasks demonstrating an understanding of the context	3
• Provides description of the automated system with reference to quality control OR repetition of tasks demonstrating limited understanding	2
• Identifies feature(s) of an automated manufacturing system	1

Question 28 (a) (i)

Outcomes assessed: H1.1, H.2, H6.1

MARKING GUIDELINES

Criteria	Marks
• Demonstrates an understanding of pixels	1

Question 28 (a) (ii)

Outcomes assessed: H1.1, H1.2, H6.1, H7.1

MARKING GUIDELINES

Criteria	Marks
• Provides description of relationship between pixel and screen resolution	2
• Identifies features of pixel and/or screen resolution	1

Question 28 (b)

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

MARKING GUIDELINES

Criteria	Marks
• Describes TWO fields of expertise of different personnel indicating understanding of development of multimedia systems	3
• Describes field(s) of expertise of different personnel indicating some understanding of development of multimedia systems	2
• Identifies feature(s) of multimedia systems	1

Question 28 (c) (i)

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

MARKING GUIDELINES

Criteria	Marks
• Provides description of file formats and justification indicating clear understanding of the context	4
• Provides description and justification of file formats indicating understanding of the process of website development	3
• Provides an attempt at description OR justification of file format(s) indicating an understanding of the process of website development	2
• Identifies elements of file format(s) or of website development	1

Question 28 (c) (ii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides analysis with reference to development of the website indicating clear understanding of the context including reference to the required information processes	6
• Provides analysis with reference to development of the website indicating understanding of the context including reference to the required information processes	5
• Provides discussion with reference to development of the website indicating understanding of the process including reference to information processes	4
• Provides description with reference to development of the website OR information process(es) indicating understanding	3
• Provides description with reference to development of the website	2
• Identifies features from the development of the website	1

Question 28 (c) (iii)

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

MARKING GUIDELINES

Criteria	Marks
• Provides analysis of the issues of the use of this technology demonstrating clear understanding of the context	4
• Provides discussion of the issues of the use of this technology demonstrating understanding of the context	3
• Describes issues demonstrating limited understanding	2
• Identifies feature(s) of a multimedia system	1

Information Processes and Technology

2009 HSC Examination Mapping Grid

Question	Marks	Content	Syllabus outcomes
Section I			
1	1	Project management	H5.1
2	1	Project management	H5.1
3	1	Information systems and databases	H1.1
4	1	Project management, Information systems and databases	H5.1
5	1	Information systems and databases	H3.1
6	1	Communication systems	H1.1
7	1	Information systems and databases	H1.2
8	1	Communication systems	H1.1
9	1	Project management	H6.2
10	1	Information systems and databases	H1.1
11	1	Project management	H5.1
12	1	Communication systems	H2.1
13	1	Communication systems	H4.1
14	1	Communication systems	H1.1
15	1	Project management	H6.2
16	1	Information systems and databases	H1.2
17	1	Project management	H7.2
18	1	Project management	H7.2
19	1	Communication systems	H1.2
20	1	Information systems and databases	H1.2
Section II			
21 (a)	3	Project management	H1.2, H2.2, H6.1, H6.2
21 (b)	3	Communication systems	H1.1
21 (c)	3	Communication systems	H1.1, H2.2
22 (a)	3	Communication systems	H1.1
22 (b)	2	Project management	H6.2, H7.1
22 (c)	4	Project management, Information systems and databases	H1.2
23 (a)	1	Information systems and databases	H1.1, H1.2
23 (b)	2	Information systems and databases	H1.1, H1.2
23 (c)	3	Information systems and databases	H3.1
23 (d)	5	Information systems and databases	H1.1
24 (a)	3	Information systems and databases	H5.1
24 (b)	3	Information systems and databases	H3.1, H6.1
24 (c)	5	Information systems and databases	H2.1

Section III				
25 (a) (i)	1	Transaction processing systems	H1.1, H1.2, H6.1
25 (a) (ii)	2	Transaction processing systems	H1.1, H1.2, H6.1, H7.1
25 (b)	3	Transaction processing systems	H1.1, H1.2, H2.2, H6.1
25 (c) (i)	4	Transaction processing systems	H1.1, H1.2, H2.2, H6.1, H6.2
25 (c) (ii)	6	Transaction processing systems	H1.1, H1.2, H2.2, H6.1, H6.2
25 (c) (iii)	4	Transaction processing systems	H1.1, H1.2, H2.2, H3.2, H6.1, H6.2
26 (a) (i)	1	Decision support systems	H1.1, H1.2, H6.1
26 (a) (ii)	2	Decision support systems	H1.1, H1.2, H6.1, H7.1
26 (b)	3	Decision support systems	H1.1, H1.2, H2.2, H6.1
26 (c) (i)	4	Decision support systems	H1.1, H1.2, H2.2, H6.1, H6.2
26 (c) (ii)	6	Decision support systems	H1.1, H1.2, H2.2, H6.1, H6.2
26 (c) (iii)	4	Decision support systems	H1.1, H1.2, H2.2, H3.2, H6.1, H6.2
27 (a) (i)	1	Automated manufacturing systems	H1.1, H1.2, H6.1
27 (a) (ii)	2	Automated manufacturing systems	H1.1, H1.2, H6.1, H7.1
27 (b)	3	Automated manufacturing systems	H1.1, H1.2, H2.2, H6.1
27 (c) (i)	4	Automated manufacturing systems	H1.1, H1.2, H2.2, H6.1, H6.2
27 (c) (ii)	6	Automated manufacturing systems	H1.1, H1.2, H2.2, H6.1, H6.2
27 (c) (iii)	4	Automated manufacturing systems	H1.1, H1.2, H2.2, H6.1, H6.2
28 (a) (i)	1	Multimedia systems	H1.1, H1.2, H6.1
28 (a) (ii)	2	Multimedia systems	H1.1, H1.2, H6.1, H7.1
28 (b)	3	Multimedia systems	H1.1, H1.2, H2.2, H6.1
28 (c) (i)	4	Multimedia systems	H1.1, H1.2, H2.2, H6.1, H6.2
28 (c) (ii)	6	Multimedia systems	H1.1, H1.2, H2.2, H6.1, H6.2
28 (c) (iii)	4	Multimedia systems	H1.1, H1.2, H2.2, H3.2, H6.1, H6.2