2011 HSC Information Processes and Technology Marking Guidelines

Section I

Multiple-choice Answer Key

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

Section II

Question 21 (a)

Criteria	Marks
• Displays appropriate data types and field sizes required for most fields in order table	2
• Identifies some data types or field sizes	1

Question 21 (b)

Criteria	Marks
• Identifies active listening techniques and elaborates to describe how they help identify user needs	2
• Identifies active listening technique(s) to determine needs of restaurant owners	1

Question 21 (c)

Criteria	Marks
• Provides reason(s) why live test data would be appropriate to test the developed application	2
• Identifies a feature or characteristics of testing	1

Question 21 (d)

Criteria	Marks
• Provides a storyboard displaying a clear understanding of the components of the app that includes screens with multiple branches	4
• Provides a storyboard displaying an understanding of the components of the app that includes a screen with multiple branches	3
• Provides a storyboard displaying a understanding of the components of the app	2
• Provides features of a storyboard displaying minimal components of the app	1

Question 22 (a)

Criteria	Marks
• Identifies the headings in the requirement report displaying an understanding of the scenario	2
• Identifies a feature of a requirement report	1

Question 22 (b)

Criteria	Marks
• Draws a substantially correct decision tree that indicates understanding of the context	3
• Draws a decision tree indicating some understanding of the context	2
• Demonstrates limited understanding of a decision tree	1

Question 22 (c)

Criteria	Marks
• Provides an assessment of the impact of the changes on employees AND members indicating clear understanding of the proposed changes	4
• Provides an assessment of the impact of the changes on employees AND/OR members indicating understanding of the proposed changes	3
• Describes impact(s) of change on employees OR members	2
• Identifies an impact of change	1

Question 23 (a)

Criteria	Marks
• Identifies appropriate transmission media and describes features of cable indicating understanding of cable transmission in context	2
• Identifies a medium or a feature of a transmission medium	1

Question 23 (b)

Criteria	Marks
• Designs separate database views indicating understanding of data being used by sales staff AND packing and dispatch staff	3
• Designs a separate database view indicating some of the data being used by sales staff AND/OR packing and dispatch staff	2
• Attempts to design a database view	1

Question 23 (c)

Criteria	Marks
• Provides a clear analysis indicating an understanding of storing corporate data issues, including what needs to be done before using the TPSP.	5
• Provides analysis indicating clear understanding of storing corporate data issues	4
• Provides discussion indicating understanding of storing corporate data issues	3
• Describes issue(s) in context	2
• Identifies an issue relating to data	1

Question 24 (a)

Criteria	Marks
• Indicates understanding of fat clients	1

Question 24 (b)

Criteria	Marks
• Describes a technology issue of data accuracy related to the scenario	2
• Identifies a technology issue of data accuracy	1

Question 24 (c)

Criteria	Marks
• Provides similarities AND/OR differences of 3G mobile communications demonstrating clear understanding of the scenario	3
• Provides similarities AND/OR differences of 3G mobile communications	2
• Identifies features of mobile communications	1

Question 24 (d)

Criteria	Marks
• Provides social and ethical issues and relates the implications arising from data-matching, demonstrating a clear understanding, provides illustrations using examples from the scenario	5
• Provides social and ethical issues and relates the implications arising from data-matching, demonstrating an understanding using some examples from the scenario	4
• Describes issue(s) indicating an understanding of data-matching related to the scenario	3
• Provides characteristics or features of a social or ethical issue indicating a limited understanding of data-matching	2
• Identifies an issue of data-matching	1

Section III

Question 25 (a) (i)

Criteria	Marks
• Indicates an understanding of batch-processing	1

Question 25 (a) (ii)

Criteria	Marks
• Describes online real-time transaction systems indicating understanding of their importance in the scenario	2
• Identifies a feature of online real-time transaction systems	1

Question 25 (a) (iii)

Criteria	Marks
• Demonstrates understanding by providing a concise description of how the output from a TPS can be used as the input to other types of information systems	3
• Describes output from a TPS being used as input to another system	2
• Identifies a feature of TPS data output or input data to other information systems	1

Question 25 (b) (i)

Criteria	Marks
• Describes importance of data integrity in the HRMS	2
• Identifies a feature of data integrity	1

Question 25 (b) (ii)

Criteria	Marks
• Identifies the participants and describes data/information that each would edit in an existing employee's data	3
• Identifies a participant and describes some data/information that they would edit in an existing employee's data	2
• Identifies ONE feature of editing an employee's OR participant's data	1

Question 25 (b) (iii)

Criteria	Marks
• Analyses of various collecting processes for the 'add a new employee' process indicating a clear understanding of the scenario	4
• Analyses the various collecting processes for the 'add a new employee' process indicating understanding of the scenario	3
• Describes the collecting process for the 'add a new employee' process	2
• Identifies a feature of collecting	1

Question 25 (b) (iv)

Criteria	Marks
• Compares electronic system with a paper-based transaction indicating a clear understanding of the similarities and differences and how improvements are offered related to the scenario	5
• Compares electronic system with a paper-based transaction indicating an understanding of the similarities and/or differences with some explanation of improvements related to the scenario	4
• Provides a discussion of the differences and/or similarities between the electronic system and a paper-based transaction related to the scenario	3
• Describes differences or similarities between the electronic system and a paper-based transaction	2
• Identifies a feature of the electronic system or paper-based transaction	1

Question 26 (a) (i)

Criteria	Marks
• Indicates an understanding of a decision that a what-if analysis would assist	1

Question 26 (a) (ii)

Criteria	Marks
• Provides a description of backward chaining used in an expert system indicating understanding	2
• Identifies a feature of a chaining strategy used in an expert system	1

Question 26 (a) (iii)

Criteria	Marks
• Provides a clear understanding of the role of a knowledge engineer in the creation of an expert system	3
• Provides an understanding of the role of a knowledge engineer in the creation of an expert system	2
• Identifies a feature of an expert system or the role of a knowledge engineer	1

Question 26 (b) (i)

Criteria	Marks
• Demonstrates a good understanding of a GIS by identifying more than one related feature in the scenario	2
• Identifies ONE feature of a GIS	1

Question 26 (b) (ii)

Criteria	Marks
• Provides a description of the structure of decision making supported by this GIS illustrated by an example, indicating a clear understanding of the system	3
• Provides a description of the structure of decision making supported by this GIS illustrated by an example, indicating some understanding	2
• Identifies an example of decision making supported by this GIS or an example in the GIS	1

Question 26 (b) (iii)

Criteria	Marks
• Provides analysis of technologies, different sources of data and different formats required for this system indicating a clear understanding of the GIS in the scenario	4
• Provides analysis of technologies, different sources of data and different formats required for this system indicating understanding of the GIS in the scenario	3
• Provides a substantially complete description of the technologies, different sources of data and different formats of data required by the GIS in the scenario	2
• Provides an identification of characteristics or features of the GIS	1

Question 26 (b) (iv)

Criteria	Marks
• Compares the method of accessing information using the GIS to alternative method(s), indicating a clear understanding of the similarities and/or differences and how the improvements are offered	5
• Compares the method of accessing information using the GIS to alternative method(s), indicating an understanding of the similarities and/or differences with some explanation of improvements	4
• Provides a discussion of the methods of accessing information using the GIS system and/or alternative method(s)	3
• Provides a description of the method of accessing information using the GIS system and/or alternative method(s)	2
• Identifies a feature of data access using the GIS system and/or alternative method(s)	1

Question 27 (a) (i)

Criteria	Marks
• Indicates an understanding of damping	1

Question 27 (a) (ii)

Criteria	Marks
• Describes the use of a CAD/CAM system in the manufacture of a wooden jigsaw puzzle	2
• Identifies a feature of CAD/CAM or the manufacturing of a wooden jigsaw puzzle	1

Question 27 (a) (iii)

Criteria	Marks
• Provides an explanation of the reasons why manufacturing systems are automated	3
• Provides a description of why manufacturing systems are automated	2
• Identifies a feature of automation	1

Question 27 (b) (i)

Criteria	Marks
• Identifies an actuator and how it would be used in the luggage-handling system indicating understanding	2
• Identifies an actuator or feature of an actuator	1

Question 27 (b) (ii)

Criteria	Marks
• Refines the block diagram to include the position of the mechanical arm indicating understanding of labelled inputs and outputs of the luggage-handling system	3
• Refines the block diagram to include the position of the mechanical arm indicating basic understanding of the labelled inputs and outputs of the luggage-handling system	2
• Provides an attempt at block diagram	1

Question 27 (b) (iii)

Criteria	Marks
• Provides analysis of the processes in the block diagram including an outline of the sequence of steps indicating clear understanding of the luggage-handling system	4
• Provides analysis of some processes and outlines some sequence of steps indicating understanding of the luggage-handling system	3
• Provides a description of the processes OR outlines the sequence of steps in the luggage-handling system	2
• Provides identification of a characteristic or feature of the luggage-handling system	1

Question 27 (b) (iv)

Criteria	Marks
• Compares the RFID luggage handling system to the manual/ barcode system indicating a clear understanding of the similarities and differences and how improvements are offered	5
• Compares the RFID luggage handling system to the manual/ barcode system indicating an understanding of the similarities and/or differences with some explanation of improvements	4
• Provides a discussion of the RFID system and/or the manual/ barcode system	3
• Provides a description of the RFID system and/or the manual/ barcode system	2
• Identifies a feature of the RFID system or the manual/ barcode system	1

Question 28 (a) (i)

Criteria	Marks
• Demonstrates an understanding of hyperlinks	1

Question 28 (a) (ii)

Criteria	Marks
• Provides an outline of suitable IT technical skills required in developing multimedia	2
• Identifies IT skill(s) required in developing multimedia	1

Question 28 (a) (iii)

Criteria	Marks
• Provides a substantially correct description of the process of analog data conversion for use in multimedia products	3
• Provides incomplete description of digital conversion of analog data for use in multimedia products	2
• Identifies a feature of analog to digital conversion	1

Question 28 (b) (i)

Criteria	Marks
• Identifies the hardware required to display the interactive features of a website	2
• Identifies a feature of hardware required to display the interactive features of a website	1

Question 28 (b) (ii)

Criteria	Marks
• Provides a substantially correct description of an animation process used to create a virtual tour related to the scenario	3
• Provides an incomplete description of an animation process used to create a virtual tour indicating an understanding of animation techniques	2
• Identifies a feature of an animation process	1

Question 28 (b) (iii)

Criteria	Marks
• Provides an analysis of the storing process of different data types and their file formats for the website	4
• Discusses the storing process of different data types and file formats for the website	3
• Describes the storing process of different data types and/or file formats for the website	2
• Identifies a file format or storing process used to store a type of data on the website	1

Question 28 (b) (iv)

Criteria	Marks
• Compares the method of accessing property information using the website to alternative methods, indicating a clear understanding of the similarities and differences for the scenario and how improvements are offered	5
• Compares the method of accessing property information using the website to alternative methods, indicating an understanding of the similarities and/or differences with some explanations of improvements	4
• Provides a discussion of the method of accessing property information using the website and/or alternative methods	3
• Provides a description of the method of accessing information using the website and/or alternative method(s)	2
• Identifies a feature of data access using the website and/or alternative methods	1

Information Processes and Technology
2011 HSC Examination Mapping Grid

Section I

Question	Marks	Content	Syllabus outcomes
1	1	Information Systems and Databases	H1.2
2	1	Information Systems and Databases	H1.1
3	1	Information Systems and Databases	H3.1
4	1	Project Management	H5.1
5	1	Communication Systems	H1.1
6	1	Communication Systems	H1.1
7	1	Project Management	H6.1
8	1	Project Management	H5.1, H5.2
9	1	Information Systems and Databases	H1.2
10	1	Information Systems and Databases	H1.1
11	1	Communication Systems	H1.1
12	1	Communication Systems	H6.1
13	1	Communication Systems	H4.1
14	1	Project Management	H5.1
15	1	Information Systems and Databases	H1.1, H5.1
16	1	Information Systems and Databases	H1.2
17	1	Project Management	H2.2
18	1	Project Management	H5.1
19	1	Information Systems and Databases	H2.1
20	1	Information Systems and Databases	H1.1

Section II

Question	Marks	Content	Syllabus outcomes
21 (a)	2	Information Systems and Databases	H6.2
21 (b)	2	Project Management	H2.2, H5.1
21 (c)	2	Project Management	H5.1
21 (d)	4	Project Management	H6.2
22 (a)	2	Project Management	H7.1, H7.2
22 (b)	3	Project Management	H5.1, H6.2
22 (c)	4	Project Management	H3.1
23 (a)	2	Communication Systems	H4.1
23 (b)	3	Communication Systems	H2.2, H6.1
23 (c)	5	Communication Systems	H3.1, H3.2
24 (a)	1	Communication Systems	H2.2, H5.1
24 (b)	2	Information Systems and Databases	H3.1, H5.2
24 (c)	3	Communication Systems	H1.1, H1.2, H4.1
24 (d)	5	Information Systems and Databases	H3.2, H5.2

Section III

Question	Marks	Content	Syllabus outcomes
25 (a) (i)	1	Transaction Processing Systems	H1.1
25 (a) (ii)	2	Transaction Processing Systems	H1.2
25 (a) (iii)	3	Transaction Processing Systems	H2.1
25 (b) (i)	2	Transaction Processing Systems	H3.2
25 (b) (ii)	3	Transaction Processing Systems	H3.2, H5.2
25 (b) (iii)	4	Transaction Processing Systems	H2.1
25 (b) (iv)	5	Transaction Processing Systems	H1.1, H1.2, H2.1
26 (a) (i)	1	Decision Support System	H1.1
26 (a) (ii)	2	Decision Support System	H2.2
26 (a) (iii)	3	Decision Support System	H5.1
26 (b) (i)	2	Decision Support System	H2.1
26 (b) (ii)	3	Decision Support System	H2.2
26 (b) (iii)	4	Decision Support System	H5.1
26 (b) (iv)	5	Decision Support System	H1.2, H1.1, H2.1
27 (a) (i)	1	Automated Manufacturing Systems	H1.1
27 (a) (ii)	2	Automated Manufacturing Systems	H2.2
27 (a) (iii)	3	Automated Manufacturing Systems	H2.1
27 (b) (i)	2	Automated Manufacturing Systems	H1.1
27 (b) (ii)	3	Automated Manufacturing Systems	H6.2
27 (b) (iii)	4	Automated Manufacturing Systems	H6.2
27 (b) (iv)	5	Automated Manufacturing Systems	H1.2, H1.1, H2.1
28 (a) (i)	1	Multimedia Systems	H1.1
28 (a) (ii)	2	Multimedia Systems	H3.2
28 (a) (iii)	3	Multimedia Systems	H2.1
28 (b) (i)	2	Multimedia Systems	H1.2
28 (b) (ii)	3	Multimedia Systems	H6.1
28 (b) (iii)	4	Multimedia Systems	H3.2
28 (b) (iv)	5	Multimedia Systems	H1.2