

2014 HSC Information and Digital Technology Web and Software Applications Marking Guidelines

Section I

Multiple-choice Answer Key

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

Section II

Question 21 (a)

Criteria	Marks
• Provides a full explanation as to why power leads are tagged	2
• Provides some relevant information	1

Sample answer:

To indicate that they are tested and are ready to use. Tags also record the date when it was tested.

Question 21 (b)

Criteria	Marks
• Shows a thorough understanding of how a workstation can be set up to minimise neck, back and wrist pain	4
• Shows a sound understanding of how a workstation can be set up to minimise neck and back pain OR neck and wrist pain OR back and wrist pain	3
• Shows some understanding of how a workstation can be set up to minimise neck and/or back and/or wrist pain	2
• Identifies an ergonomic feature of a workstation	1

Sample answer:

The chair should be adjustable and have a back support. It should be at a height that enables the user to have their feet flat on the floor, their elbows at 90 degrees and their knees at 90 degrees. The desk should be at a height that enables the user to have their wrists straight. A wrist support should be used when not typing. The mouse should be placed as close to the keyboard as possible. The top of the monitor should be just below eye level and at about an arm's length from the user. Monitor at arm's length away.

Question 22 (a)

Criteria	Marks
• Correctly identifies TWO key features that make BullsEye OS open source	2
• Correctly identifies a feature that makes BullsEye OS open source	1

Sample answer:

The source code is available free of charge and the code is available for public use.

Answers could include:

The code may be modified.

Question 22 (b)

Criteria	Marks
• Provides a suitable procedure	2
• Provides some relevant information	1

Sample answer:

The specifications should be checked. The image needs to be downloaded and expanded to a bootable media. The installation can then be completed from the bootable media.

Question 23 (a)

Criteria	Marks
• Provides a reason as to why it is unnecessary to run a disk defragmenting utility for a solid state drive	1

Sample answer:

Because a solid state drive stores data differently to a hard disk drive.

Question 23 (b)

Criteria	Marks
<ul style="list-style-type: none"> Identifies the most efficient procedure and provides reasons for the choice, showing thorough understanding of full, differential and incremental backups 	4
<ul style="list-style-type: none"> Attempts a procedure and shows a sound understanding of full backup and/or incremental backup 	3
<ul style="list-style-type: none"> Shows some understanding of full and/or differential and/or incremental backup 	2
<ul style="list-style-type: none"> Provides some relevant spreadsheet information 	1

Sample answer:

- Restore all data from 131003–A and 131003–B from the latest full backup. Both media need to be stored in order (A first then B) as the data is written across both media starting with A.
- Restore all data from 131008–A to the same location as the full backup. Because this is a differential backup, it has all the changes since the last full backup.
- Restore all data from 131009–A to the same location as the full backup. Because this is an incremental backup, it has all changes since the last backup.

Question 24 (a)

Criteria	Marks
<ul style="list-style-type: none"> Clearly notes difference(s) between a formula and a function using a relevant example 	2
<ul style="list-style-type: none"> Shows a basic understanding of a formula/function OR <ul style="list-style-type: none"> Provides a relevant spreadsheet example 	1

Sample answer:

=A1 + B2 is an example of a formula. It is the complete calculation to produce the result in a spreadsheet. A function is the first part of a formula, for example SUM, IF, VLOOKUP.

Question 24 (b)

Criteria	Marks
<ul style="list-style-type: none"> Correctly describes file management functions that ensure the confidential document is secure AND up to date 	4
<ul style="list-style-type: none"> Elaborates on file management functions that ensure the confidential document is secure AND/OR up to date 	3
<ul style="list-style-type: none"> Identifies file management functions that ensures the confidential document is secure AND up to date OR <ul style="list-style-type: none"> Elaborates on a file management function that ensures the confidential document is secure OR up to date 	2
<ul style="list-style-type: none"> Shows a basic understanding of file management functions/confidentiality/security/document currency 	1

Sample answer:

The file needs to be protected from unauthorised access by user access levels providing access based on user rights and permissions. The file can be stored on a device with limited access, again based on users' rights. Rights can be Read only or Read/Write or no access based on requirements.

The file needs to include version control to ensure that only the latest version is available to everyone. Version control can be achieved through file naming conventions, for example Report_Version2.

Question 25 (a)

Criteria	Marks
<ul style="list-style-type: none"> Correctly outlines a benefit 	1

Sample answer:

CSS can provide layout consistency for every page in a website. The layout is coded only once but is used by every page in the website.

Answers could include:

- Speed of access
- Less code to write

Question 25 (b)

Criteria	Marks
• Provides an explanation as to why it is useful for a web author to understand coding as well as WYSIWYG authoring	2
• Provides some relevant information	1

Sample answer:

WYSIWYG authoring software produces HTML code. It is useful for a web author to understand code to be able to tweak the code in order to make specific design adjustments to the page.

Answers could include:

- Page compatibility between browsers
- File editing/tuning
- Error detection in code
- Build a more efficient website

Question 25 (c)

Criteria	Marks
• Produces a webpage that reflects the features specified in the code	6
• Produces a webpage that reflects a substantial number of features specified in the code	4–5
• Produces a webpage that reflects some of the features specified in the code	2–3
• Shows a basic understanding of HTML or a webpage	1

Sample answer:

My Holiday

We went to *Hawaii* by plane, then cruised to 4 *Tahitian islands* on a cruise boat

We came back to Sydney on the cruise boat which was very *relaxing*

Oahu Hawaii

In Hawaii we stayed on the Island of Oahu

While in Oahu we visited the following places

- **Honolulu**, Capital of Hawaii
- Pearl Harbour
- “USS Arizona” Monument
- Image USS Arizona monument
- Waikiki Beach
- Diamond Head
- Sunset Beach
- Waimea Bay

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Section III

Question 26 (a)

Criteria	Marks
<ul style="list-style-type: none"> Provides a clear justification for the use of online documentation over paper-based documentation with reference to game support 	3
<ul style="list-style-type: none"> Shows some understanding of online documentation and/or paper-based documentation 	2
<ul style="list-style-type: none"> Shows a basic understanding of online documentation/paper-based documentation/online gaming 	1

Sample answer:

Online documentation can be more user friendly because it can incorporate video, text and audio information rather than just text and graphics. Online documentation can be updated more easily and at a reduced cost because much of the original material can be reused. For online games, online documentation can be contextualised to provide information for specific areas of the game, rather than the user having to look through a large book.

Question 26 (b)

Criteria	Marks
<ul style="list-style-type: none"> Identifies copyright issues associated with the purchasing of images Provides points for and/or against these issues Shows a thorough understanding of copyright in the context 	4
<ul style="list-style-type: none"> Outlines some copyright issues associated with the purchasing of images Shows a sound understanding of copyright in the context 	3
<ul style="list-style-type: none"> Identifies copyright issues associated with the purchasing of images OR <ul style="list-style-type: none"> Outlines a copyright issue associated with the purchasing of images 	2
<ul style="list-style-type: none"> Shows a basic understanding of copyright 	1

Sample answer:

An image is the intellectual property belonging to a person. That person owns the copyright of that image. If another person wishes to use the image, they may have to pay an initial fee as well as an ongoing fee depending on the person owning the copyright. There may also be a fee if the person wishes to make changes to an image. Should have a written agreement.

Answers could include:

Changing an image may not be allowed. May be a delay in getting permission to use an image.

Question 26 (c)

Criteria	Marks
<ul style="list-style-type: none"> Identifies suitable strategies for testing the website Provides clear justification for these strategies, linking their features to the requirements of the scenario Shows a comprehensive understanding of website testing in this context 	8
<ul style="list-style-type: none"> Identifies suitable strategies for testing the website in the scenario Provides justification for these strategies Shows a thorough understanding of website testing in the context 	7
<ul style="list-style-type: none"> Identifies suitable strategies for testing the website in the scenario Provides some justification/descriptions for these strategies Shows a sound understanding of website testing in the context 	5–6
<ul style="list-style-type: none"> Identifies strategies for website testing Outlines a range of strategies for website testing 	3–4
<ul style="list-style-type: none"> Identifies strategies for website testing OR <ul style="list-style-type: none"> Identifies a strategy for website testing and elaborates on the strategy 	2
<ul style="list-style-type: none"> Shows a basic understanding of website testing 	1

Sample answer:

There are many different aspects of a website that need to be tested to ensure that it is working correctly. Firstly a peer check of the code can be conducted to walk through each line and examine whether there are any errors in syntax or structure related to XHTML.

The code should be tested to make sure it adheres to the current standards. Validation sites are available online to test that code is correct and free from errors based on the current standards of website production. This validation can highlight both errors and warnings. Code line and messages are provided for each error and warning so a developer can pinpoint the line that needs correcting and the reason for the error.

The links between pages and within pages need to be tested to make sure that all work correctly and the intended destination is reached. This test should be completed on a computer different to the computer on which the website was developed. This will ensure that the links are directed to the correct place rather than to a file on the original computer.

Images within the website also need to be tested on a different computer to make sure that all the required images are stored within the same folder as the website pages and that they display correctly.

The code should be tested through different browsers across different operating systems, in order to maintain consistency in appearance and performance. There should also be consideration for versions of the browser as older versions may affect the final output of the code.

The client also needs to be included in this phase. The code and final output need to be viewed and approved by the client. Any changes that the client wants must be addressed to meet their requirements.

Section IV

Question 27

Criteria	Marks
<ul style="list-style-type: none"> • Addresses all components of the question • Provides a cohesive well-reasoned response that reflects a high level of organisation, judgement, synthesis and problem-solving skills • Demonstrates an in-depth understanding of ICT functions with reference to the scenario used in the question • Consistently uses precise ICT terminology to a professional level 	13–15
<ul style="list-style-type: none"> • Addresses most components of the question • Provides a cohesive well-reasoned response showing significant organisational and problem-solving skills • Demonstrates a detailed understanding of ICT functions with reference to the scenario used in the question • Uses precise ICT terminology to a level acceptable in industry 	10–12
<ul style="list-style-type: none"> • Addresses most components of the question • Provides a response displaying sound organisational and problem-solving skills • Demonstrates a sound understanding of ICT functions with limited reference to the scenario used in the question • Uses relevant ICT terminology 	7–9
<ul style="list-style-type: none"> • Addresses some components of the question • Provides a response displaying some organisational and problem-solving skills • Demonstrates some understanding of ICT functions 	4–6
<ul style="list-style-type: none"> • Addresses minimal components of the question • Provides a response displaying basic organisation • Demonstrates a basic understanding of ICT functions 	1–3

Sample answer:

There are a number of communication methods that can be used by the university. Lessons can be produced on podcasts that includes both visual and audio information. Students can view the podcasts in their own time, but still get exactly the same information as all the other students in their class. Podcasts can be used as a reference to review information many times. Students can stop and replay important parts of the podcast as many times as they wish.

Chat sessions allow students to work in groups and have real-time communication with other students in their group. They can also have real-time individual or group access to their lecturers to obtain feedback and answers to questions. Chat sessions can be used to brainstorm ideas for group projects and a record of the session can be saved for future reference.

Videoconferencing is another method of communication for students to view lessons or work in groups. Although these conferences must be viewed in real-time it is a more personalised method of working in groups than chat because students can see each other and information can be displayed on the screen for students to view. Videoconferences can also provide a sense of community for the students and lecturer.

Emails are a method of sending the same information to a group of students at the same time. Information can be viewed by each student at different times when it is convenient for them. Emails can also contain attached documents including text documents, images and recordings. Emails are an extremely common method of communication and can be accessed wherever an internet connection is available.

Mobile phones are a common communication device that most students own. They can be used for text messages as well as phone calls. The university can automatically send text messages to groups of students depending on different criteria, for example to remind students to pay fees. Mobile phones are highly portable with wide coverage over most of Australia. They can also be used to access the internet and emails.

Blogs and Wikispaces are two communication methods that are commonly used to collaborate within a group environment. Blogs allow short messages, brainstorming, just the facts to be viewed by students and lecturers at their convenience. Wikispaces allow students and lecturers to collaborate on the same document in their own time.

Work can be submitted by attaching files to emails, uploading to a website or wiki. Work can also be in the form of a discussion forum.

All these communication methods could be used by students and lecturers at the university. Using a number of different methods would allow each student to choose the methods that best suit them and methods with which they are most comfortable.

Information and Digital Technology

Web and Software Applications

2014 HSC Examination Mapping Grid

Section I

Question	Marks	HSC content – focus area	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
1	1	Operating System Software – Operating systems – page 28								X
2	1	Safety – WHS information – page 39	X				X			
3	1	Operating System Software – Installing an operating system – page 29			X				X	X
4	1	Working in the Industry – Communication – page 26	X			X		X		
5	1	Diagnostic Testing – Troubleshooting – page 32			X				X	X
6	1	Diagnostic Testing – Destructive & malicious software protection – page 33	X		X		X		X	X
7	1	Safety – Risk management – page 37	X	X	X	X	X		X	
8	1	Working in the Industry – Employment – page 24	X	X	X	X	X	X	X	X
9	1	Operating System Software – Installing an operating system – page 29	X		X	X	X		X	X
10	1	Safety – Risk management – page 37	X	X	X	X	X		X	
11	1	Web and software applications – Commercial software packages – page 42			X					X
12	1	Web and software applications – Additional features & functions – page 44			X					X
13	1	Web and software applications – Additional features & functions – page 44	X				X			X
14	1	Web and software applications – Document & website production requirements – page 42	X							X
15	1	Web and software applications – Additional features & functions – page 43	X				X			X

Question	Marks	HSC content – focus area	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
16	1	Web and software applications – Commercial software packages – page 42		X	X	X	X	X	X	X
17	1	Web and software applications – Features and functions common – page 43	X				X			
18	1	Web and software applications – Features and functions common – page 43								X
19	1	Web and software applications – Additional features & functions – page 43				X	X			X
20	1	Web and software applications – Additional features & functions – page 43					X			X

Section II

Question	Marks	HSC content – focus area	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
21 (a)	2	Safety – Safe work practices – page 38	X	X	X	X	X		X	
21 (b)	4	Safety – Safe work practices – page 38	X	X	X	X	X		X	
22 (a)	2	Operating System Software – Operating systems – page 28	X		X	X	X		X	X
22 (b)	2	Operating System Software – Installing an operating system – page 29	X		X	X	X		X	X
23 (a)	1	Diagnostic Testing – Troubleshooting – page 32	X		X		X			X
23 (b)	4	Diagnostic Testing – Preventative maintenance – page 33	X		X		X			X
24 (a)	2	Web and software applications – Additional features & functions – page 44			X				X	
24 (b)	4	Web and software applications – Features and functions common – page 43	X				X			
25 (a)	1	Web and software applications – Additional features & functions – page 44				X				X

Question	Marks	HSC content – focus area	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
25 (b)	2	Web and software applications – Additional features & functions – page 44			X					X
25 (c)	6	Web and software applications – Additional features & functions – page 44				X				X

Section III

Question	Marks	HSC content – focus area	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
26 (a)	3	Web and software applications – Problem solving – page 44	X				X			X
26 (b)	4	Web and software applications – Document and website production – page 42				X				
26 (c)	8	Web and software applications – Website testing – page 44			X	X	X			X

Section IV

Question	Marks	HSC content – focus area	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
27	15	Working in the Industry – Nature of industry, communication – pages 24 & 26	X	X	X	X	X	X	X	X