

2015 HSC Information and Digital Technology

Digital animation

Marking Guidelines

Section I

Multiple-choice Answer Key

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

Section II

Question 21 (a)

Criteria	Marks
• States what is meant by ‘recommended requirements’	1

Sample answer:

The hardware requirements needed so that the OS can perform at its optimum.

Question 21 (b)

Criteria	Marks
• Outlines the differences between <i>hibernate</i> and <i>suspend</i>	3
• Identifies features of <i>hibernate</i> and/or <i>suspend</i>	2
• Identifies a feature of <i>hibernate</i> or <i>suspend</i>	1

Sample answer:

In a hibernate state, the computer saves data to the hard drive and stops drawing power. In a suspend state, the computer saves data to RAM and still maintains a low power connection. This means the computer will restart more quickly from a suspend position.

Question 21 (c)

Criteria	Marks
• Identifies the difference between <i>batch</i> and <i>real-time</i> systems	2
• Identifies a feature of <i>batch</i> or <i>real-time</i> systems	1

Sample answer:

A real-time system handles events at the time as they occur. A batch system groups the tasks and then processes them at the same time at a later time.

Question 22 (a)

Criteria	Marks
• Identifies TWO relevant aspects of antivirus software	2
• Identifies ONE feature of antivirus software	1

Sample answer:

Antivirus software compares files against its database to ascertain if the file is corrupted. It also provides alerts to show actions taken.

Question 22 (b)

Criteria	Marks
• Outlines TWO relevant tasks	3
• Identifies TWO relevant tasks OR • Outlines ONE relevant task	2
• Identifies ONE relevant task OR • Shows a basic understanding of a routine maintenance schedule	1

Sample answer:

A routine maintenance schedule should include regular scanning to check for viruses and/or malicious software, and perform quarantine and removal if necessary. It should also regularly update security and performance scanning and checking for operating system, application software and firmware.

Answers could include:

- Cleaning and repairing of equipment
- Regular optimisation of HDD

Question 23

Criteria	Marks
• Clearly explains the benefits of effective teamwork	4
• Outlines benefits of effective teamwork OR • Identifies benefits of effective teamwork and explains at least one	3
• Identifies benefits of effective teamwork OR • Outlines a benefit of effective teamwork	2
• Identifies a benefit of effective teamwork	1

Sample answer:

ICT projects are usually complex requiring various areas of expertise. Each team member may contribute their specific skills, such as programming, authoring or graphic design. The project may be completed more quickly if team members work on different components and then bring their contribution to the team to complete the project. This may also allow team members to work from home or work flexible hours.

Answers could include:

- Idea generation
- Area of expertise
- Sharing workload
- Improved efficiency
- Mutual support

Question 24 (a)

Criteria	Marks
• Identifies and justifies a suitable type of software	2
• Identifies a feature of the software required OR • Identifies a type of suitable software	1

Sample answer:

Authoring software – it allows for a timeline, animation creation and the ability to loop.

Question 24 (b)

Criteria	Marks
• Shows a sound understanding of how the addition of text within the animation could help communicate the message	2
• Shows a basic understanding of using text in an animation	1

Sample answer:

It could assist users who are hearing impaired. It could also suit the requirements of the audience who would mainly be over 18 years of age.

Answers could include:

- Text allows the message to be conveyed to those who cannot hear.
- Text complements the graphic.
- Text conveys meaning of the graphic.

Question 24 (c)

Criteria	Marks
• Clearly describes how key frames could be used in an animation using an example	4
• Outlines features of key frames and provides an example	3
• Identifies feature(s) of key frames and/or provides an example	2
• Identifies a feature of key frames	1

Sample answer:

A key frame is a single frame on a timeline that contains an image that defines a start or end point of a particular animated sequence. As an example, a sequence of the sun moving across the sky would have a key frame at the sunrise then another at the sunset.

Question 25

Criteria	Marks
<ul style="list-style-type: none"> • Outlines the techniques used to transform Image 1 to Image 2 	3
<ul style="list-style-type: none"> • Identifies some relevant techniques OR <ul style="list-style-type: none"> • Outlines a relevant technique 	2
<ul style="list-style-type: none"> • Identifies a relevant technique 	1

Sample answer:

A rasterise technique is applied to Image 1 in order to convert it from 2D to 3D. A shading tool or filter is applied to incorporate depth and provide texture to the surface. A lighting and rendering filter is used to highlight the surface and cast shadows.

Question 26

Criteria	Marks
<ul style="list-style-type: none"> • Shows how the roles of the graphic artist and the project manager are different 	4
<ul style="list-style-type: none"> • Outlines the role of the graphic artist or the project manager • Identifies at least a feature of the role not outlined 	3
<ul style="list-style-type: none"> • Identifies features of the roles of the graphic artist and/or the project manager OR <ul style="list-style-type: none"> • Outlines the role of the graphic artist or the project manager 	2
<ul style="list-style-type: none"> • Identifies a feature of the role of the graphic artist or the project manager 	1

Sample answer:

The graphic artist is responsible for creating and producing the artwork associated with the animation. The graphic artist also authors/programs the technical animation.

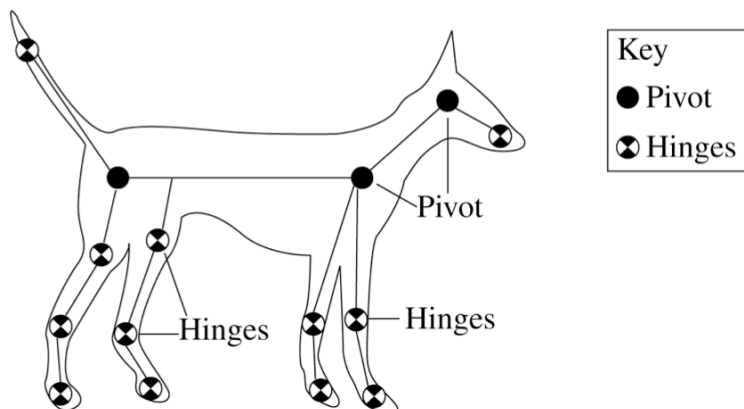
The role of the project manager includes ensuring the required skills and tools are available, managing the team and setting deadlines for the production phases.

Section III

Question 27 (a)

Criteria	Marks
<ul style="list-style-type: none"> Clearly identifies the locations for hinges and pivots on a diagram Describes the movements that could occur at these locations 	7
<ul style="list-style-type: none"> Provides a diagram with hinges and pivots Outlines some movements that could occur at these hinges and pivots 	6
<ul style="list-style-type: none"> Provides a diagram with hinges and pivots Identifies some movements that could occur at these hinges an/or pivots 	5
<ul style="list-style-type: none"> Provides a diagram with hinge(s) and/or pivot(s) Identifies some movements 	4
<ul style="list-style-type: none"> Identifies movement(s) and/or location(s) for hinge(s) and/or pivot(s) 	2–3
<ul style="list-style-type: none"> Identifies a location for a hinge/pivot OR <ul style="list-style-type: none"> Identifies a movement 	1

Sample answer:



Hinges are represented by points on the diagram where movement can occur in one of two directions, up or down/left or right. On this diagram, points at the knees and feet indicate hinges. Pivots are represented by points where movement can occur in either up or down and left or right at the same time. An example of a pivot is at the base of the neck where the dog can move up and down and turn around as well.

Question 27 (b)

Criteria	Marks
<ul style="list-style-type: none"> Provides a storyboard with four frames Shows a good understanding of the key features of a storyboard Shows a comprehensive understanding of the design specifications Includes notes for directing each scene 	8
<ul style="list-style-type: none"> Provides a storyboard with at least three frames Shows a sound understanding of the key features of a storyboard Shows a good understanding of the design specifications Includes notes for directing some scenes 	6–7
<ul style="list-style-type: none"> Provides a storyboard with at least two frames Shows some understanding of the key features of a storyboard Shows a sound understanding of the design specification Better answers should include some notes for direction 	4–5
<ul style="list-style-type: none"> Shows some understanding of a basic storyboard Shows some understanding of the design specifications 	2–3
<ul style="list-style-type: none"> Identifies a feature of storyboards <p>OR</p> <ul style="list-style-type: none"> Shows a basic understanding of the design specifications 	1

Sample answer:

Storyboard description: The storyboard consists of four frames connected by arrows. Frame 1 shows a dog's head with a speech bubble saying 'WOOF!' and a duration of 3 seconds indicated below. Frame 2 shows a bag of 'DOG FOOD' with a bright shine on the top left and the word 'Music' above it. Frame 3 shows a close-up of the 'DOG FOOD' bag with a bowl of food in front of it. Frame 4 shows a boy and a dog eating together, with a speech bubble saying 'YUM!' and 'Music/Cheering' above them.

Direction notes:

- Intro music: '___'
- Bark sound synchronises with dog jaw movement.
- Music continues
- Shine follows edge of product container.
- Frame shots to focus full screen of name
- Music continues.
- Music comes to an end at end of shot
- Thought bubble pops-up gradually (bit by bit).

Section IV

Question 28

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

Sample answer:

There are a variety of internal methods that can be used in order to gather WHS information in the workplace.

Risk management involves:

1. The identification of hazard

Hazards can be defined as any procedure or process that presents potential harm to an individual.

Types of hazards include: electricity, tools and equipment, handling goods and materials, work environment and any other human factor based hazards such as fatigue.

The organisation could use audits and/or inspections with checklists in order to identify potential hazards within the workplace.

2. Formal risk assessments

These could be conducted as audits, inspections, surveys or through meetings. Ordinarily risks are assessed using a risk assessment matrix. Hazards that are identified as risks within the workplace are rated using the matrix. An example of a matrix that could be used is seen below:

		HAZARD		
		RISK	HIGH	MEDIUM
Likelihood	Likely	RED <input checked="" type="checkbox"/>	ORANGE	YELLOW
	Unlikely	RED	YELLOW	GREEN

As an example, the hazard of exposed electrical cabling risk of injury is **HIGH** and Likelihood of injury is likely to occur. Therefore RED.

3. Controlling risks

The workplace would use the risk assessment to determine controls in order to either eliminate the risks, minimise the risks or whether to implement other controls such as administrative controls.

Using the risk matrix tool or checklists used to audit the potential hazards, the workplace could determine what controls could be implemented to change practices and procedures to eliminate risks, minimise by either substitution or modification or isolating the risk. The workplace could use the methods implemented to create other controls such as changes in policy management procedures that may also contribute to eliminating or minimising the risk.

As an example, the exposed electrical cabling could be replaced to eliminate risk.

4. Monitoring and Reviewing.

The workplace should consistently review previously assessed hazards and refer to controls and checklists used in audits in order to improve and minimise risks. A process of review should also be conducted of the procedures for auditing and inspecting. These practices need to fall in line with changes in order to maintain validity.

As an example, implement a system of yearly electrical components tagging.

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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	3.2.4 – Operating Systems – licensing (p28)					X			X
2	1	3.1.4 – Employment – the difference between an award, agreement and contract (p24)				X				
3	1	3.3.4 – Diagnostic testing – strategies for troubleshooting (p32)	X					X		
4	1	3.1.4 – Employment – purpose and value of a code of conduct (p24)				X	X			
5	1	3.3.4 – Preventative maintenance – backup (p33)			X		X		X	X
6	1	3.4.3 – Work health and safety (WHS) – the cost of workplace injury (p36)	X			X				
7	1	3.4.3 – Risk management – risk control (p37)	X	X	X		X	X		X
8	1	3.3.4 – Destructive and malicious software – phishing (p33)			X					X
9	1	3.4.3 – Safe work practices and procedures – tagging (p38)			X	X				X
10	1	3.2.4 – Configuring an operating system – file attributes, creation, extensions and permissions (p29)			X		X			X
11	1	3.7.4 – Creative principles – principles of visual design (p56)	X			X				X
12	1	3.7.4 – Creative principles – principles of animation (p55-p56)			X				X	X
13	1	3.7.4 – Creative principles – principles of animation (p55-p56)			X					X
14	1	3.7.4 – Animation techniques – registration points (p55)			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
15	1	3.7.4 – Creative principles – basic screen principles (p56)							X	X
16	1	3.7.4 – Creative principles – principles of visual design (p56)					X			X
17	1	3.7.4 – Planning a digital animated sequence –production team members (p56)	X	X			X			
18	1	3.7.4 – Tools – industry-current tools used to create 2D and 3D digital animated sequences (p55)			X	X	X			
19	1	3.7.4 – Animation techniques – registration points, motion path (p55)	X		X					X
20	1	3.7.4 – Tools – industry-current tools used to create 2D and 3D digital animated sequences (p55)					X	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)	1	3.2.4 –Selecting an operating system – how a range of requirements can impact on the choice of an operating system (p29)			X	X			X	X
21 (b)	3	3.2.4 – Installing an operating system – configuration of power management (p29)							X	X
21 (c)	2	3.2.4 – Operating Systems – features and capabilities of different types of operating systems (p28)		X			X			X
22 (a)	2	3.4.4 – Diagnostic testing – troubleshooting (p33)		X	X					
22 (b)	3	3.3.4 – Diagnostic testing – preventative maintenance (p33)			X		X			X
23	4	3.1.4 Working with others – importance of teamwork in an ICT work environment (p26)	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
24 (a)	2	3.7.4 – Tools – industry-current tools used to create 2D and 3D digital animated sequences (p55)				X			X	
24 (b)	2	3.7.4 – Digital animation – examples of typical 2D and/or 3D digital animation products (p55)		X			XX	X	X	
24 (c)	4	3.7.4 – Animation technique – techniques commonly used in the digital animations industry (p55)		X	X		X	X	X	
25	3	3.7.4 – Creative principles – basic screen principles (p56)							X	X
26	4	3.7.4 – Planning a digital animated sequence – production team members (p57)	X				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
27 (a)	7	3.7.4 – Animation technique – techniques commonly used in the digital animations industry (p55) 3.7.4 – Digital animation – general features of, and differences between, a 2D digital animation and a 3D digital animation, examples of typical 2D and/or 3D digital animation products (p55)	X		X		X		X	
27 (b)	8	3.7.4 – Producing a digital animation sequence – develop a final design concept, requirements and techniques used to create a short digital animated sequence (p57) 3.7.4 – Planning a digital animation sequence – interpreting the requirements of a production brief related to – storyboard (p57)	X	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
28	15	3.4.3 – Risk management – its application in the workplace (p37) 3.4.3 – WHS information and data – internal and external sources of WHS information and data, methods and procedures for gathering WHS information and data (p39)	X	X	X	X	X	X	X	