2014 HIGHER SCHOOL CERTIFICATE EXAMINATION

Information and Digital Technology

Digital Animation

General Instructions
- Reading time – 5 minutes
- Working time – 2 hours
- Write using black or blue pen
  Black pen is preferred
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of pages 9, 11 and 13

Total marks – 80

(**Section I**) Pages 2–7

20 marks
- Attempt Questions 1–20
- Allow about 30 minutes for this section

(**Section II**) Pages 9–15

30 marks
- Attempt Questions 21–25
- Allow about 40 minutes for this section

(**Section III**) Page 17

15 marks
- Attempt Question 26
- Allow about 25 minutes for this section

(**Section IV**) Page 18

15 marks
- Attempt Question 27
- Allow about 25 minutes for this section

1080

Section I

20 marks
Attempt Questions 1–20
Allow about 30 minutes for this section

Use the multiple-choice answer sheet for Questions 1–10.

1 Which of the following is managed by a computer's operating system?

    (A) BIOS

    (B) CPU usage

    (C) Power supply

    (D) CMOS battery

2 Which of the following is an internal source of work health and safety (WHS) information in an ICT organisation?

    (A) Minutes of a compliance meeting

    (B) A hardware manufacturer's manual

    (C) A WorkCover information document

    (D) An Australian Computer Society publication

3 Which of the following is the best method for safely removing a portable flash media device from a computer?

    (A) Pull the device out gently

    (B) Hibernate the computer then remove the device

    (C) Close any open windows then remove the device

    (D) Stop all related processes then remove the device

4   Read the following conversation.

> CLIENT: Are you coming over to fix my printer?
>
> TECHNICIAN: I'm busy at the moment. I'll be there around three.
>
> CLIENT: Three is okay.
>
> TECHNICIAN: Cool, see you at three.

What type of feedback does the client give to the technician?

(A)   Direct

(B)   Formal

(C)   Indirect

(D)   Negative

5   Which of the following is an example of diagnostic testing?

(A)   Running a file search on a hard drive

(B)   Configuring partitions on a hard drive

(C)   Backing up a faulty hard drive to a new hard drive

(D)   Checking the number of bad blocks on a hard drive

6   What is a *virus signature*?

(A)   The damage done by a computer virus

(B)   The code used to specifically identify a virus

(C)   The trail left behind after a virus infects a computer

(D)   The specific message the virus leaves on a computer

7   When should a risk assessment be adjusted?

(A)   On a daily basis

(B)   As soon as a worker makes a complaint

(C)   Where there is evidence that a risk is no longer valid

(D)   When no injuries have been recorded recently against a risk

8   What is a purpose of equal employment opportunity (EEO) in the workplace?

(A)   To ensure that all job interviews are recorded correctly

(B)   To provide procedures for reducing bullying and intimidation

(C)   To prohibit changes to conditions without consulting employees

(D)   To ensure that people from minority groups are not disadvantaged

9   A DVD is inserted into a computer then the computer is restarted. The computer connects to the network and retrieves a task sequence to install an operating system image.

Which installation method is described above?

(A)   Boot media installation with a recovery disk

(B)   Recovery disk installation with a network image

(C)   Network installation using boot media

(D)   Install from an image using a network boot

10   What form of risk control is applied when a hazard is isolated?

(A)   Administration

(B)   Assessing

(C)   Elimination

(D)   Minimisation

Use the multiple-choice answer sheet for Questions 11–20.

11 What is this multimedia form element?

  (A) A radio button

  (B) A toggle switch

  (C) A Boolean selector

  (D) A command button

12 Which of the following should be used to generate an animation that begins and ends on the same frame?

  (A) Looping

  (B) Motion path

  (C) Morphing

  (D) Overlapping action

13 A designer wishes to include an image from the internet in a production.

  Which of the following is the best approach to obtain copyright for the image?

  (A) Download, modify and use the image

  (B) Download, use the image and acknowledge the source

  (C) Contact the owner of the image and get permission before using

  (D) Contact the owner of the website and get permission before using

14 Which of the following is most effective in creating a sense of natural action in an animation?

  (A) Appeal

  (B) Arcs

  (C) Exaggeration

  (D) Timing

15 An image, 640 × 480 pixels, has been resized to 25% of its original size.

What is the new size of the image in pixels?

(A) 80 × 60

(B) 160 × 120

(C) 320 × 240

(D) 480 × 360

16 What type of sound element is a voice-over?

(A) Music

(B) Narration

(C) Audio-clip

(D) Reverberation

17 This text is used in a document.

Which of the following describes the text above?

(A) Serif font, filled, shadowed

(B) Serif font, italics, embossed

(C) Sans serif font, filled, shadowed

(D) Sans serif font, italics, embossed

18 While an animator creates digital animation sequences the computer stops responding.

Which of the following is the most effective long-term solution to the problem?

(A) Install more RAM

(B) Replace the hard disk

(C) Update the video driver

(D) Close some of the open applications

19 Onion skinning is a technique that allows an animator to edit a single frame within a tweened animated sequence.

In which of the following would onion skinning be used?

(A) Looping

(B) Rotation

(C) Motion blur

(D) Motion path

20 Which technique could be used to accelerate a scene within an animated sequence without affecting the quality?

(A) Remove some of the key-frames from the scene and increase its frame-rate

(B) Increase the number of frames and apply a greater change of action between them

(C) Reduce the number of frames used in the tweens and increase the number of key-frames

(D) Separate the scene from the sequence and increase its frame-rate, then return it to the sequence

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Digital Animation

Centre Number

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Section II

30 marks
Attempt Questions 21–25
Allow about 40 minutes for this section

Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.

Question 21 (6 marks)

(a) Why are power leads tagged? **2**

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(b) Describe how a workstation can be set up to minimise neck, back and wrist pain. **4**

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Question 22 (4 marks)

This diagram shows the home page for the 'BullsEye' operating system.
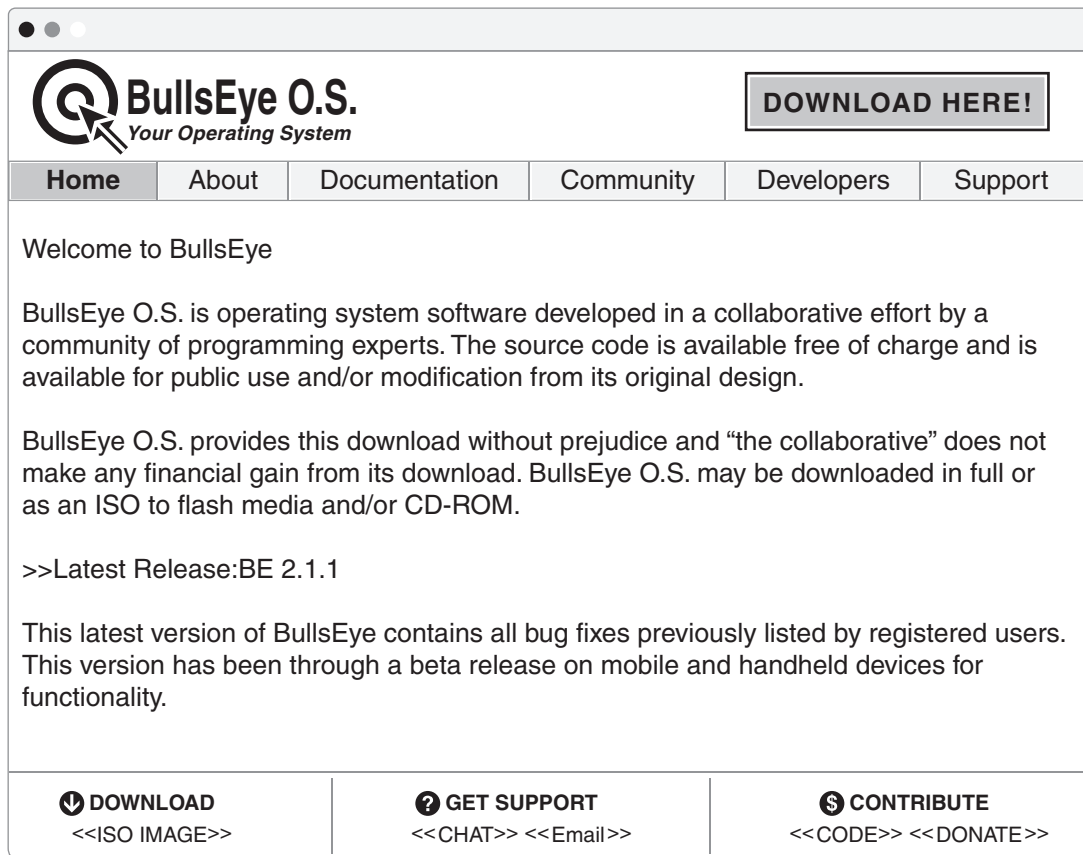
(a) Identify TWO key features that define BullsEye O.S. as open source software. **2**

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(b) Outline a procedure for installing BullsEye O.S. using the ISO image from this website. **2**

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Section II (continued)

Question 23 (5 marks)

(a)   Why is it NOT necessary to run a disk defragmenting utility on a solid state   **1**
        drive?

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(b)   The following is part of a server backup log from a small business.   **4**

Date	Backup type	Media type	Media ID	Verified
3/10/2014	Full	HDD	131003–A 131003–B	✓
6/10/2014	Incremental	Cloud	131006–A	✓
7/10/2014	Incremental	Cloud	131007–A	✓
8/10/2014	Differential	DVD	131008–A	✓
9/10/2014	Incremental	Cloud	131009–A	✓

Using the information in the backup log, describe and justify the most efficient
procedure for restoring the full system in the event of a hardware failure on
10/10/2014.

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Question 24 (6 marks)

(a) What occurs when you apply the animation principle of 'squash and stretch'? **2**

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(b) Describe skills that an instructional designer needs when working in a production team. **4**

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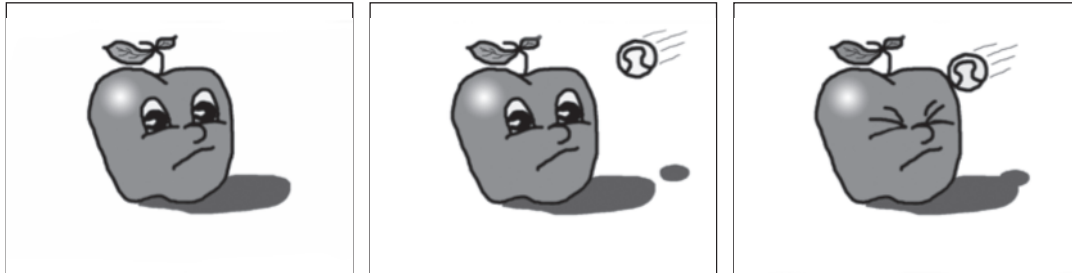**Section II (continued)**

Question 25 (9 marks)

Please turn over

Question 25 (9 marks)

(a)   Outline ONE difference between a 2D digital animation and a 3D digital animation.   **1**

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Use this digital animation sequence to answer parts (b) and (c).

(b)   Describe how 'perspective' can be introduced into this sequence.   **2**

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Question 25 (continued)

(c)   Describe the creative principles used in the production of this digital animated   **6**
      sequence.

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End of Question 25

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Section III

15 marks
Attempt Question 26
Allow about 25 minutes for this section

Answer the question in a writing booklet. Extra writing booklets are available.

Question 26 (15 marks)

You are applying for a position as an animation programmer. You need to demonstrate your knowledge and skills by responding to the criteria below.

(a)   Draw a series of basic line sketches showing the movement of the sun on a path   **3**
across the sky, from sunrise to sunset. Label all relevant features.

(b)   Explain how the use of transitions between different scenes enhances an   **4**
animated sequence.

(c)   Create a storyboard with a minimum of four scenes, using the theme of two   **8**
people arriving at a fancy dress party.

Please turn over

Section IV

15 marks
Attempt Question 27
Allow about 25 minutes for this section

Answer the question in a SEPARATE writing booklet. Extra writing booklets are available.

In your answer you will be assessed on how well you:

■ demonstrate knowledge and understanding relevant to the question
■ communicate ideas and information using relevant workplace examples and industry terminology
■ present a logical and cohesive response

Question 27 (15 marks)

An online university, with staff and students physically located in different parts of Australia, requires communication resources for its staff and students to interact at any time.

Recommend and justify electronic communication methods and tools that could be used by the staff and students to communicate, collaborate within teams, access resources and submit work.

End of paper