



B O A R D O F S T U D I E S
NEW SOUTH WALES

2013

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Industrial Technology

Multimedia Technologies

General Instructions

- Reading time – 5 minutes
- Working time – $1\frac{1}{2}$ hours
- Write using black or blue pen
Black pen is preferred
- Draw diagrams using pencil
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of page 5

Total marks – 40

Section I Pages 2–4

10 marks

- Attempt Questions 1–10
- Allow about 20 minutes for this section

Section II Pages 5–7

15 marks

- Attempt Questions 11–15
- Allow about 35 minutes for this section

Section III Page 9

15 marks

- Attempt Question 16
- Allow about 35 minutes for this section

Section I

10 marks

Attempt Questions 1–10

Allow about 20 minutes for this section

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

- 1 In which of the following do all the file formats refer to video?
 - (A) AVI, MP4, MPEG
 - (B) AVI, MP4, WAV
 - (C) MP3, PNG, WMA
 - (D) MP3, MP4, MPEG

- 2 Which of the following devices is most suitable for producing an original digital sketch?
 - (A) A graphics tablet
 - (B) A flatbed scanner
 - (C) A computer mouse
 - (D) A digital stills camera

- 3 Which type of graphic maintains quality when it is rescaled?
 - (A) Bitmap
 - (B) JPEG
 - (C) TIFF
 - (D) Vector

- 4 Which aspect of sound is measured in decibels?
 - (A) Pitch
 - (B) Volume
 - (C) Frequency
 - (D) Wavelength

- 5** A game designer uses code written by someone else and presents the code as their own.
Which word best defines this practice?
- (A) Copyright
 - (B) Piracy
 - (C) Plagiarism
 - (D) Privacy
- 6** Which of the following best describes the technique used to apply a time lapse effect to video footage?
- (A) Using still photography images to create a sequence for video playback
 - (B) Lowering the frame rate of footage to slow down the motion when played back
 - (C) Capturing video footage at a slower frame rate than the frame rate when played back
 - (D) Capturing a sequence of images to create the illusion of movement when played back
- 7** Which type of animation process allows for multiple components to animate automatically?
- (A) Behaviour
 - (B) Cel-based
 - (C) Path-based
 - (D) Stop-motion
- 8** What is the purpose of rendering 3D animations?
- (A) To apply motion to the objects in the animation
 - (B) To transform the wire frame model into the animation
 - (C) To apply a colour to the surface of the wire frame models
 - (D) To transform the animation into a format to be played back using other software

- 9** An internet connection has a download speed of 16.8 megabits per second.
Approximately how long would it take to download a 120.6 megabyte video file?
- (A) 7 seconds
 - (B) 8 seconds
 - (C) 57 seconds
 - (D) 58 seconds
- 10** What is the maximum number of 1.8 MB photos that can be saved to an external drive with 50 GB of free space?
- (A) 27 666
 - (B) 27 777
 - (C) 28 444
 - (D) 28 888



Industrial Technology Multimedia Technologies

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Centre Number

Section II

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Student Number

15 marks

Attempt Questions 11–15

Allow about 35 minutes for this section

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

Question 11 (2 marks)

A logo with a transparent background is to be incorporated into a website. **2**

Identify TWO appropriate graphics file formats to display the logo.

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Question 12 (3 marks)

A video preview of a new computer game is to be created using screen capture techniques. **3**

Describe factors that will affect the quality of video captured using such techniques.

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Question 13 (3 marks)

How is the quality of a graphic affected if the colour depth is reduced? **3**

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Question 14 (3 marks)

What are the advantages of using cascading style sheets (CSS) to produce a website? **3**

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Question 15 (4 marks)

Complete the table outlining an advantage and disadvantage of cel-based animation techniques and path-based animation techniques.

4

	<i>Cel-based animation</i>	<i>Path-based animation</i>
<i>Advantage</i>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<i>Disadvantage</i>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

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Multimedia Technologies**

Section III

15 marks

Attempt Question 16

Allow about 35 minutes for this section

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

Question 16 (15 marks)

- (a) Explain why a company should comply with safety standards. **6**
- (b) Assess strategies that a company could implement to establish and maintain a safe work culture. **9**

End of paper

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