

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 How many channels does 5.1 Surround Sound contain?
 - (A) 4
 - (B) 6
 - (C) 8
 - (D) 10

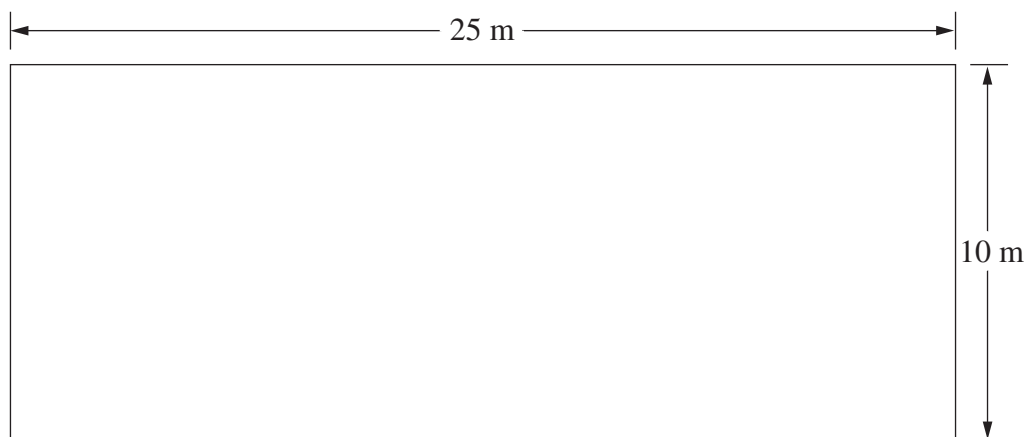
- 2 What is a simulated experience generated by computer known as?
 - (A) Virtual reality
 - (B) Vital reality
 - (C) Visual reality
 - (D) Visible reality

- 3 Which of the following is true of the mp4 file format?
 - (A) It is a computer file format for storing raster graphic images.
 - (B) It was introduced as a video file format for mobile devices.
 - (C) It is used to store video and audio in a compressed format.
 - (D) It is an audio file standard format used for storing sound data for personal computers and other audio devices.

- 4 The process of recording a sound in the form of individual measurements, each at a discrete point in time, is called
 - (A) downloading.
 - (B) sampling.
 - (C) streaming.
 - (D) synthesising.

- 5 The bit depth of an image can be altered by changing which of the following?
- (A) File name
 - (B) Image dimension
 - (C) Number of pixels
 - (D) Number of colours
- 6 Keyframes in an animation are frames
- (A) where the motion of an object stops.
 - (B) where significant changes take place.
 - (C) that have been tagged for removal.
 - (D) where the FPS increases or decreases.
- 7 A computer game has copyright protection when
- (A) it is created.
 - (B) it is registered.
 - (C) it is sold commercially.
 - (D) the creator pays the copyright fee.

- 8 The dimensions of a computer repair shop are shown. 15 m^2 of its floor area is dedicated to storage.



- What percentage of the total floor area is dedicated to storage?
- (A) 6%
(B) 12%
(C) 60%
(D) 67%
- 9 Which type of authoring software is most useful for a multimedia project requiring complicated navigational structures?
- (A) A time-based tool
(B) A web-based tool
(C) A card or page-based tool
(D) An icon-based, event-driven tool
- 10 A large multimedia company pays for its workers' professional association fees. The fee is \$457 for a full-time worker and \$250 for a part-time worker. An apprentice fee is 48% of a part-time worker's fee.

How much does it cost the company if there are 137 full-time workers, 22 part-time workers and 27 apprentices?

- (A) \$65 849
(B) \$68 109
(C) \$71 349
(D) \$74 589

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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 (1 mark)

Identify one injury that can result from excessive computer use.

1

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Question 12 (3 marks)

Describe how motion capture has improved 3D character animation.

3

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Question 13 (3 marks)

What are the advantages and disadvantages of using a midi format in a multimedia product?

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Question 14 (3 marks)

Describe the differences between video streaming using hypertext transfer protocol (HTTP) and real time streaming protocol (RTSP).

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Question 15 (5 marks)

Describe the legal and ethical issues that should be considered in developing a multimedia presentation aimed at teenagers for the World Wide Web.

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Section III

15 marks

Attempt Question 16

Allow about 35 minutes for this section

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

Question 16 (15 marks)

- (a) Describe the impact of government legislation on work practices. **6**
- (b) Evaluate the effect of new and emerging technologies on work practices in industry. **9**

End of paper

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