



STUDENT NUMBER

CENTRE NUMBER

HIGHER SCHOOL CERTIFICATE EXAMINATION

2000

# INDUSTRIAL TECHNOLOGY

2 UNIT

SECTION II

GRAPHICS AND MULTIMEDIA  
INDUSTRIES

OPTION—MULTIMEDIA

*Total time allowed for Sections I and II—One hour and a half  
(Plus 5 minutes reading time)*

**DIRECTIONS TO CANDIDATES**

- Write your Student Number and Centre Number at the top right-hand corner of this page.
- Where appropriate, show all working for solutions neatly and clearly.
- You may use Board-approved drawing instruments and calculators.

**Section II—Multimedia** (15 marks)

- Question 4 is **COMPULSORY**.
- Attempt **TWO** questions from Questions 5, 6, and 7.
- Answer the questions in the spaces provided in this paper.

**MARKER'S USE ONLY**

Question				
4				
5				
6				
7				

**SECTION II—MULTIMEDIA OPTION**

(15 Marks)

**QUESTION 4** This question is **COMPULSORY**. (5 marks)

- (a) A leading architectural hardware supply company is updating its catalogue to include the stainless steel door handle shown in Figure 1.

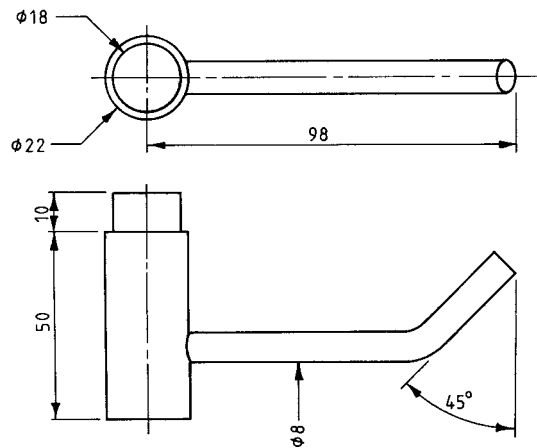


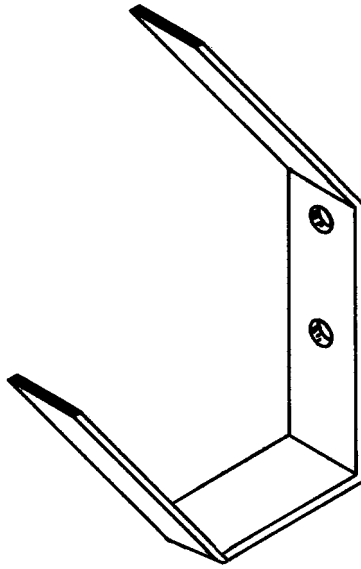
FIG. 1

The stainless steel door handle (Figure 1) is drawn to scale.

In the space below, complete a rendered freehand isometric sketch of the product.

## QUESTION 4 (Continued)

(b)



ISOMETRIC PROJECTION

Complete (in third-angle projection) an orthogonal sketch of the coat hook illustrated above. Show sufficient views to represent every surface as a true shape. Label each view.

QUESTION 4 (Continued)

(c) Drawing office personnel have become aware of the need for ergonomic workspaces.

(i) Explain what is meant by *ergonomic*.

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.....  
.....  
.....

(ii) List FOUR factors that should be taken into account when a person is organising an ergonomic workspace for people working with computer terminals.

1 .....  
2 .....  
3 .....  
4 .....

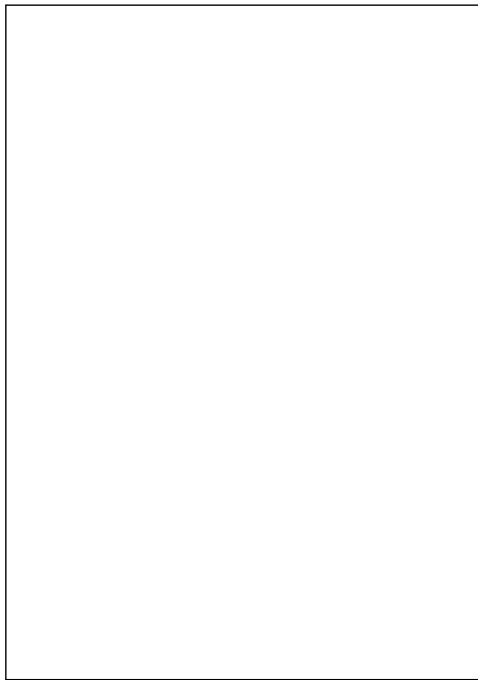
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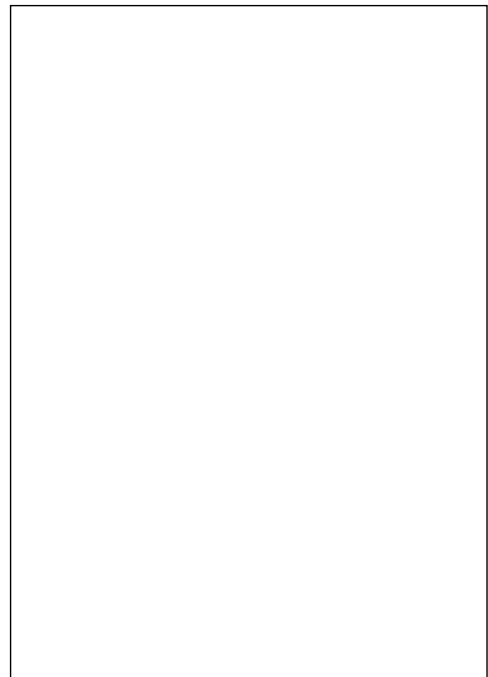
Attempt TWO questions from Questions 5, 6, and 7.

**QUESTION 5** (5 marks)

- (a) A multimedia company has been contracted to design an interactive game aimed at educating primary school-aged children about road safety.
- (i) Create TWO consecutive pages of a storyboard for the road safety game mentioned above.



Page 1



Page 2

QUESTION 5 (Continued)

- (ii) Give TWO reasons for the creation of a storyboard when developing multimedia publications.

Reason 1 .....

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Reason 2 .....

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**Question 5 continues on page 8**

QUESTION 5 (Continued)

(b) Name FOUR design considerations that should be taken into account in the development of the road safety game. Explain why these should be taken into account.

(i) Consideration 1 .....

Explanation .....

.....

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.....

(ii) Consideration 2 .....

Explanation .....

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(iii) Consideration 3 .....

Explanation .....

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.....

(iv) Consideration 4 .....

Explanation .....

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QUESTION 5 (Continued)

- (c) The road safety game is to include some video components. Name TWO file formats that could be used for the video components, and explain ONE advantage and ONE disadvantage of each.

File format 1 .....

Advantage .....

.....  
.....  
.....

Disadvantage .....

.....  
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File format 2 .....

Advantage .....

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Disadvantage .....

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Attempt TWO questions from Questions 5, 6, and 7.

**QUESTION 6** (5 marks)

(a) Multimedia encyclopaedias often include short video clips to illustrate important historical events, such as the first moon landing.

(i) Describe TWO factors that affect the playback quality of digital video.

Factor 1 .....

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Factor 2 .....

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(ii) Describe TWO changes in CD-ROM technology that have led to the development of the DVD.

Change 1 .....

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Change 2 .....

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(iii) What do the initials DVD stand for?

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QUESTION 6 (Continued)

(b) Explain the following multimedia terms.

(i) Copyright

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(ii) Text wrap

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(iii) Hyperlink

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(iv) File compression

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**Question 6 continues on page 12**



QUESTION 6 (Continued)

(iii) Give ONE example of where each of the types of graphics in part (ii) would be used, and state the reason for its use.

1 Bit-mapped graphics

Example .....

Reason for use .....

.....

.....

.....

2 Vector-mapped graphics

Example .....

Reason for use .....

.....

.....

.....

**Please turn over**

Attempt TWO questions from Questions 5, 6, and 7.

**QUESTION 7** (5 marks)

(a) Multimedia publications require the use of various resources. For each resource listed, name TWO input devices and describe how each device, with the use of suitable software, manipulates the data for inclusion in multimedia publications.

(i) Text

Input device 1 .....

Description .....

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Input device 2 .....

Description .....

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(ii) Images

Input device 1 .....

Description .....

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Input device 2 .....

Description .....

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QUESTION 7 (Continued)

(iii) Sound

Input device 1 .....

Description .....

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Input device 2 .....

Description .....

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**Question 7 continues on page 16**

QUESTION 7 (Continued)

(b) Explain the following terms.

(i) Multimedia

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(ii) Interactive

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(iii) Electronic publishing

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(iv) Clip art

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## QUESTION 7 (Continued)

(c) Complete the following table.

<i>File format</i>	<i>File type</i>	<i>Description</i>
.rtf	Text	
.wave		
.htm		
.mpeg		
.gif		

(d) (i) Use a sketch to show the difference between a graphic produced on a 300 dpi laser printer and a graphic produced on a 600 dpi laser printer.

(ii) Explain the impact of postscript technology on the process of printing graphics.

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