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Centre Number

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Student Number

**2006**  
**HIGHER SCHOOL CERTIFICATE**  
**EXAMINATION**

# Industrial Technology

## Graphics Industries

### General Instructions

- Reading time – 5 minutes
- Working time –  $1\frac{1}{2}$  hours
- Write using black or blue pen
- Draw diagrams using pencil
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of this page and pages 5, 9, 13 and 17

### Total marks – 100

**Section I** Pages 2–12

#### 60 marks

- Attempt Questions 1–3
- Allow about 55 minutes for this section

**Section II** Pages 13–20

#### 40 marks

- Attempt Questions 4–5
- Allow about 35 minutes for this section

**Section I**

**60 marks**

**Attempt Questions 1–3**

**Allow about 55 minutes for this section**

Answer the questions in the spaces provided.

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**Marks**

Use the following information to answer Questions 1 and 2.

IND-TECH is a company in the graphics industry. Competition from cheap imports has led the company to investigate organisational changes to prevent closure. The present workforce is to be retained.

**Question 1 (20 marks)**

- (a) Identify organisational changes that IND-TECH could make to become more competitive. **2**

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- (b) Outline reasons why IND-TECH would want to keep their present workforce. **3**

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**Question 1 continues on page 3**

Question 1 (continued)

- (c) Discuss how retraining some of the workforce could help IND-TECH remain competitive. **4**

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- (d) Outline possible roles for unions during the organisational change. **4**

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**Question 1 continues on page 4**

**Question 1 (continued)**

(e) Discuss equity issues that would need to be considered when changing IND-TECH's organisation. **7**

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**End of Question 1**

# Industrial Technology Graphics Industries

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Centre Number

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Student Number

## Section I (continued)

**Marks**

### Question 2 (20 marks)

- (a) Identify ways in which IND-TECH's costs could be reduced through recycling. **2**

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- (b) Name an emerging technology, and outline how it could improve IND-TECH's production system. **3**

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**Question 2 continues on page 6**

Question 2 (continued)

- (c) What is *mass production*? How could mass production help IND-TECH compete with cheap imports? **4**

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- (d) Describe safe material handling practices and how these practices could improve efficiency and reduce costs for IND-TECH. **4**

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**Question 2 continues on page 7**

Question 2 (continued)

- (e) Discuss how the Environmental Protection Authority (EPA) and the Occupational Health and Safety (OHS) Act may impact on IND-TECH's planning for change. 7

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**End of Question 2**

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# Industrial Technology Graphics Industries

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Centre Number

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Student Number

## Section I (continued)

**Marks**

### Question 3 (20 marks)

- (a) List TWO characteristics of Occupational Health and Safety (OHS) signage that would help employees to understand safe working procedures. **2**

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- (b) Outline the advantages of using computer software graphics to create company documentation. **3**

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**Question 3 continues on page 10**

Question 3 (continued)

(c) An extract from a catalogue is shown.

4

**FABRIC CHAIR**

- Full function ergonomic chair in mesh fabric
- Large, contoured waterfall seat with stylish, supportive backrest
- AFRD1 6 rated – suitable for heavy-duty use
- Made in Australia
- 5 year warranty

Discuss the advantages of displaying graphics AND text in this catalogue extract.

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Question 3 continues on page 11

Question 3 (continued)

(d) An extract from a Material Safety Data Sheet (MSDS) for toner is shown.

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<p><b>Section VI – Health Hazard Data</b></p> <hr/> <p><i>Health Hazards (Acute and Chronic):</i> This material when used as intended, does not represent a health or safety hazard.</p> <hr/> <p><i>Signs and Symptoms of Exposure:</i> Nil</p> <hr/> <p><i>Medical Conditions:</i> None when used as described by product literature.</p>
<p><b>Section VII – Precautions for Safe Handling and Use</b></p> <hr/> <p><i>Steps to be Taken in Case Material is Released or Spilled:</i> Loose toner can be removed using a vacuum cleaner. Residue can be removed with soap and cold water. After removal of loose toner, garments may be washed or dry-cleaned.</p> <hr/> <p><i>Waste Disposal Method:</i> Do not incinerate. No special techniques beyond normal practice. Ensure conformity with federal, state or local regulations.</p> <hr/> <p><i>Precautions to be taken in Handling and Storing:</i> Avoid inhalation of excessive dust. Store below 30°C.</p>

Outline reasons why these sheets are produced, and their relevance for IND-TECH.

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Question 3 continues on page 12



**Industrial Technology**  
**Graphics Industries**

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**Section II**

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**40 marks**

**Attempt Questions 4–5**

**Allow about 35 minutes for this section**

Answer the questions in the spaces provided.

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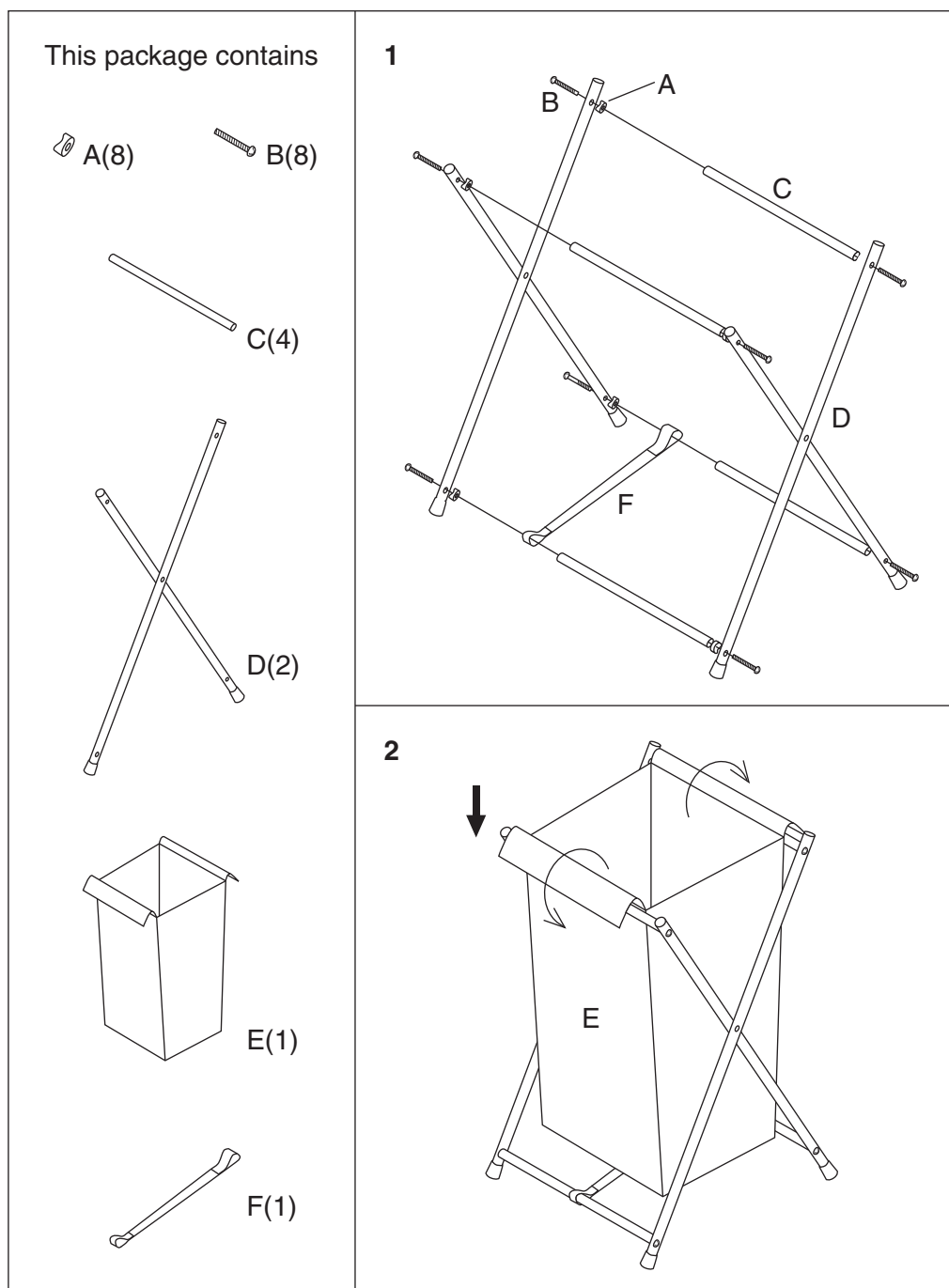
**Question 4** (20 marks)

**Please turn over**

**Question 4** (20 marks)

Use the assembly instructions for a laundry basket to answer parts (a) and (b).

**Assembly instructions**



(a) Identify the drawing types shown in the assembly instructions.

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**Question 4 continues on page 15**

Question 4 (continued)

- (b) Outline the advantages of using these drawings for assembly instructions. **3**

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- (c) Name a commonly used Australian drawing standard, and explain the importance of its use. **4**

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- (d) First and third angle projections are used in engineering drawings. With the aid of labelled sketches, explain the differences between the two projection methods. **4**

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**Question 4 continues on page 16**

Question 4 (continued)

- (e) Product designers use a variety of techniques to develop and communicate their initial ideas. Identify these techniques, and discuss their advantages. 7

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End of Question 4



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Centre Number

Section II (continued)

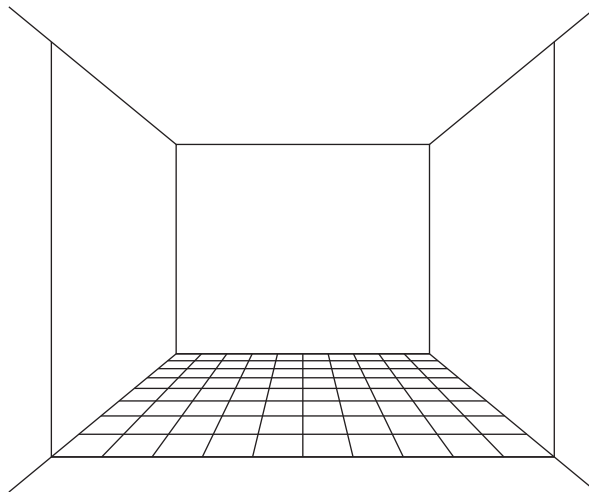
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Student Number

**Marks**

**Question 5** (20 marks)

A pictorial drawing of the floor and walls of a kitchen is shown.



- (a) (i) Name this type of pictorial drawing and locate the vanishing point. **2**

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- (ii) Outline the advantages of using computer-generated drawings for drawings such as that shown above. **3**

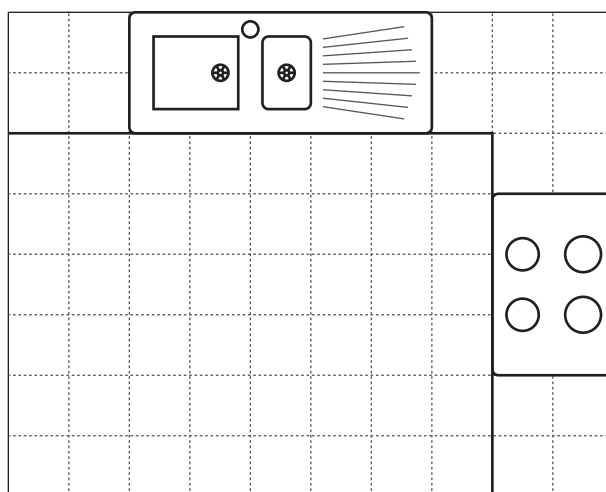
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**Question 5 continues on page 18**

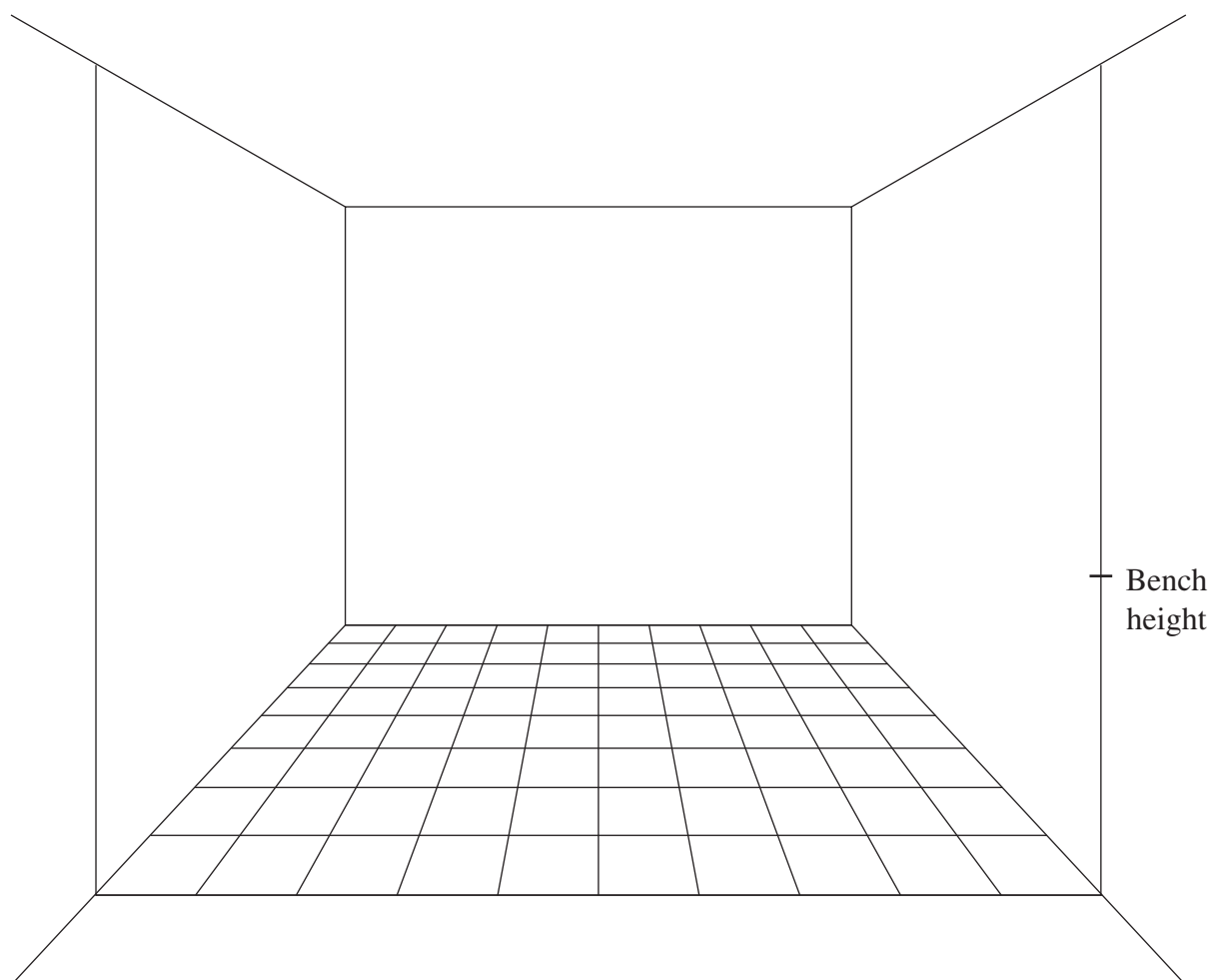
Question 5 (continued)

(b) A plan view of the kitchen bench layout is shown.

4



Sketch the kitchen bench details on the pictorial drawing below.



Question 5 continues on page 19

Question 5 (continued)

- (c) Outline the additional information that would need to be included in these drawings to allow the kitchen to be completed. **4**

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**Question 5 continues on page 20**

Question 5 (continued)

- (d) An architect is presenting the final proposal for a major shopping complex to a client. Describe presentation techniques that could be used, and explain their purpose. 7

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