



HIGHER SCHOOL CERTIFICATE EXAMINATION

**1995**

# INDUSTRIAL TECHNOLOGY

**2 UNIT**

## PART A—INDUSTRY STUDY

*Total time allowed for Part A and Part B—Two hours and a half  
(Plus 5 minutes' reading time)*

STUDENT NUMBER

CENTRE NUMBER

TECHNOLOGY STUDIED

Automotive

Ceramics

Drawing

Electronics

Metal

Plastics

Wood

**DIRECTIONS TO CANDIDATES**

- Write your Student Number and Centre Number at the top right-hand corner of this page and *indicate the Technology studied*.
- Where appropriate, show working for solutions neatly and clearly.

**Part A—Industry Study**

- Question 1 is COMPULSORY (10 marks).
- Attempt TWO questions from Questions 2, 3, and 4 (5 marks each).
- Answers in Part A must be written in terms of the Industrial Technology studied, i.e. Automotive, Ceramics, Drawing, Electronics, Metal, Plastics, or Wood.

**EXAMINER'S USE ONLY**

Question			
1			
2			
3			
4			

**PART A—INDUSTRY STUDY**

EXAMINER'S  
USE ONLY

Answers in Part A must be written in terms of the Industrial Technology studied, i.e. Automotive, Ceramics, Drawing, Electronics, Metal, Plastics, or Wood.

**QUESTION 1.** This question is **COMPULSORY**. (10 marks)

Answer this question by referring to **ONE** specific industrial organization within the technology you have studied.

(a) (i) Name the company studied.

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(ii) Briefly describe the products or services of the company.

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.....

.....

(b) Name and describe **TWO** different roles within the organization. One role should be management, the other production.

(i) **Management role**

Position name .....

Position description .....

.....

(ii) **Production role**

Position name .....

Position description .....

.....

(c) How does an organization, such as the one you have studied:

(i) finance the purchase of new equipment?

.....

.....

(ii) finance running costs?

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QUESTION 1. (Continued)

EXAMINER'S  
USE ONLY

(d) How does this organization minimize waste?

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(e) What is the major factor that influenced the location of the organization?

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(f) Identify ONE specific product or service, and refer to it when answering the following questions.

Specific product or service selected .....

(i) List the steps that were involved in the design or development of the product or service.

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(ii) Describe the target market for the product or service.

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(iii) Suggest a way in which the product or service is presented to the target market.

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QUESTION 1. (Continued)

EXAMINER'S  
USE ONLY

(iv) List FOUR factors that would need to be considered when calculating the wholesale cost of the product or service.

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

(v) Suggest a way in which the wholesale cost of the product or service could be reduced.

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.....  
.....

(vi) Suggest TWO reasons why the product or service might be delayed in the production phase.

- 1. ....
- 2. ....

(vii) List and give the function of TWO items of equipment used in the manufacture of the product or the provision of the service.

Item 1 .....

Function .....

.....

Item 2 .....

Function .....

.....

(viii) What advertising medium would be most suitable for the promotion of this product or service? Explain your selection.

Advertising medium .....

Explanation .....

.....

.....

Attempt TWO questions only from Questions 2, 3, and 4.

EXAMINER'S  
USE ONLY

Answers in Part A must be written in terms of the Industrial Technology studied, i.e. Automotive, Ceramics, Drawing, Electronics, Metal, Plastics, or Wood.

**QUESTION 2.** (5 marks)

(a) Industry in Australia has an ongoing influence on society in general.

(i) Describe TWO ways in which the industry you studied has had a positive impact on society.

1. ....  
.....  
.....  
.....

2. ....  
.....  
.....  
.....

(ii) State ONE feature or activity of the company that has a negative impact, and suggest a way in which it may be improved.

Feature or activity

Suggested improvement .....  
.....  
.....

(iii) If the industry you studied did not exist in Australia, state TWO immediate negative consequences to general society.

1. ....  
.....  
2. ....  
.....

QUESTION 2. (Continued)

EXAMINER'S  
USE ONLY

- (b) Name THREE other industries that are related to the industry you studied. List the major product or service supplied by each industry.

Name of industry 1 .....

Product or service .....

Name of industry 2 .....

Product or service .....

Name of industry 3 .....

Product or service .....

- (c) The training and development of employees is a function of all industries.

- (i) State TWO reasons why training and development must be ongoing.

1. ....

.....

2. ....

.....

- (ii) Explain the roles of the following people in the training and development process.

Company Director .....

.....

.....

Personnel/Training Manager .....

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.....

Supervisor .....

.....

.....

Worker .....

.....

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QUESTION 2. (Continued)

EXAMINER'S  
USE ONLY

(iii) Explain the role of unions in the training and development process.

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(iv) Briefly outline a recent Federal Government initiative that has ensured that training and development is a part of all industries.

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Attempt TWO questions only from Questions 2, 3, and 4.

EXAMINER'S  
USE ONLY

Answers in Part A must be written in terms of the Industrial Technology studied, i.e. Automotive, Ceramics, Drawing, Electronics, Metal, Plastics, or Wood.

**QUESTION 3.** (5 marks)

(a) Computers are an integral part of modern industry.

(i) Explain how computers have modified TWO specific tools, items of equipment, or machines.

1. ....  
.....  
.....  
.....

2. ....  
.....  
.....  
.....

(ii) State ONE positive and ONE negative aspect of the computerization of industry in general.

Positive .....  
.....

Negative .....  
.....

(iii) Describe ONE specific computer application in each of the following areas.

Financial management .....  
.....  
.....

Marketing .....  
.....  
.....



QUESTION 3. (Continued)

EXAMINER'S  
USE ONLY

Customer service .....

.....  
.....

(iv) Give an example of a common method of training staff in computer technology.

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(v) Explain ONE way in which computers have increased efficiency in the industry you studied.

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(b) Intelligent use of resources, both physical and human, can affect a company's profitability and staff satisfaction, and wider environmental issues.

(i) Describe ONE way that a company you studied has increased its profitability through the intelligent use of raw materials.

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

(ii) Explain ONE way that this company could change to be more environmentally friendly.

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

QUESTION 3. (Continued)

EXAMINER'S  
USE ONLY

(iii) Explain ONE method of increasing levels of staff satisfaction in the workplace.

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(iv) What is the role of unions in promoting staff satisfaction?

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.....  
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Attempt TWO questions only from Questions 2, 3, and 4.

EXAMINER'S  
USE ONLY

Answers in Part A must be written in terms of the Industrial Technology studied, i.e. Automotive, Ceramics, Drawing, Electronics, Metal, Plastics, or Wood.

**QUESTION 4.** (5 marks)

(a) The research and development of new products or services is essential to the growth of a company.

(i) Explain how a company may undertake market research to identify a need.

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(ii) Outline the steps in developing the new product once the need is identified.

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(iii) How could the new product be tested on consumers?

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.....  
.....

(iv) Identify TWO steps within product development where formal drawings are used. Nominate the drawing type normally used.

1. Development step .....  
Drawing type .....

2. Development step .....  
Drawing type .....

QUESTION 4. (Continued)

EXAMINER'S  
USE ONLY

(v) What is the role of advertising within the research and development process?

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.....  
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(vi) Discuss TWO applications for computers within this research and development process.

1. ....  
.....  
.....

2. ....  
.....  
.....

(b) (i) Nominate TWO pieces of equipment that are used in the industry you have studied, and explain how they have changed over the past thirty years.

1. Piece of equipment .....  
Changes .....

2. Piece of equipment .....  
Changes .....

(ii) How have these changes to equipment impacted on the workforce?

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

QUESTION 4. (Continued)

EXAMINER'S  
USE ONLY

(c) A company experiencing financial difficulties is attempting to trade out of the problems.

(i) How might efficiency be increased in the areas of levels of mechanization and recycling?

Make ONE suggestion, and give a brief explanation to support your recommendation.

**Mechanization** .....

Explanation .....

.....  
.....

**Recycling** .....

Explanation .....

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.....

(ii) A decision is made to retrench staff to reduce production costs. What is the role of the following people in this situation?

Personnel Manager .....

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Union official .....

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(iii) Explain how multiskilling may relieve the pressures caused by the reduction of staff.

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