



BOARD OF STUDIES
NEW SOUTH WALES

HIGHER SCHOOL CERTIFICATE EXAMINATION

1999
**INDUSTRIAL
TECHNOLOGY**
2 UNIT
SECTION I

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

STUDENT NUMBER

CENTRE NUMBER

FOCUS AREAS

(Tick the Focus Area you studied.)

Automotive Industries	
Building and Construction Industries	
Electronics Industries	
Furniture and Timber Industries	
Graphics and Multimedia Industries	
Metals and Engineering Industries	
Plastics Industries	

DIRECTIONS TO CANDIDATES

- Write your Student Number and Centre Number at the top right-hand corner of this page and tick (✓) the Focus Area you have undertaken.
- Where appropriate, show all working for solutions neatly and clearly.
- You may use Board-approved drawing instruments and calculators.

Section I (25 marks)

- ALL questions in Section I are **COMPULSORY**.
- Answer the questions in the spaces provided in this paper.

Section II (15 marks)

- Question 4 is **COMPULSORY**.
- Attempt **TWO** questions from Questions 5, 6 and 7.
- Attempt only questions from the Focus Area you studied.
- Answer the questions in the spaces provided in the Section II paper.
- Write your Student Number and Centre Number at the top right-hand corner of the first page of the Section II paper.

SECTION I

(25 Marks)

Attempt ALL questions.

QUESTION 1 (10 marks)

A small company designs and manufactures products for the local and export markets. The company is situated in an industrial complex on the outskirts of a city.

(a) List TWO reasons why the company would choose such a location.

Reason 1

Reason 2

(b) In order to compete locally and globally the company must become more *efficient*.

(i) Explain the term *efficient* when used in this context.

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(ii) Describe how a company could restructure ONE of the following areas to become more efficient.

- Research and design

OR

- Management

OR

- Production

Area to be restructured

Restructuring

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(iii) As part of the restructuring process the morale of the workers needs to be addressed. Discuss how management could deal with this issue.

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QUESTION 1 (Continued)

(c) Road transport is used extensively for the movement of products.

(i) State ONE advantage and ONE disadvantage of using road transport.

Advantage

Disadvantage

(ii) Explain how the time taken to load and unload products has been reduced over recent years.

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(d) The company has aimed its product range at the international market.

(i) Name an effective method of promoting the product to the international market.

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(ii) Explain how this method could be implemented by the company.

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Question 1 continues on page 4

QUESTION 1 (Continued)

- (e) The company is trying to determine the best strategy for the research and development of new product lines. The options available are:

Option *A* — Establish its own research and development team.

Option *B* — Send the work to an off-site specialist group.

Option *C* — Hire an on-site contract consultant.

- (i) Select ONE of these options.

Option

- (ii) State ONE advantage and ONE disadvantage of using this option.

Advantage

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Disadvantage

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- (f) Identify TWO strategies that could be used by the company to reduce the amount of waste that is currently dumped as landfill.

Strategy 1

Strategy 2

QUESTION 2 (5 marks)

Computer technology is used extensively in industry as a management tool.

(a) Choose ONE of the areas listed below. Explain how computer technology can improve that area.

- Staffing

OR

- Finance

OR

- Marketing

(i) Selected area

(ii) Explanation

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(b) The manager has to prepare an annual report. Explain TWO advantages of using word processing for this report.

(i)

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(ii)

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(c) Suggest TWO methods that can be used to train employees in computer technology.

Method 1

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Method 2

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Question 2 continues on page 6

QUESTION 2 (Continued)

- (d) Describe ONE way in which computer technology might be used to maximise productivity.

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- (e) Discuss the role of union representatives in the resolution of disputes between fellow workers.

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- (f) In some industries, production is controlled by management. In other industries, worker participation in management decision-making is encouraged.

Explain a benefit of each of the management styles.

Management control
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Worker participation
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QUESTION 3 (10 marks)

A manufacturing company has a workforce that is made up of people from a multicultural background.

- (a) Identify TWO areas of safety that need to be considered by this company. Explain how the company should deal with these issues.

Area of safety 1

Explanation

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Area of safety 2

Explanation

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- (b) In relation to workplace safety, briefly outline the role of:

- (i) the safety officer;

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- (ii) Workcover.

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QUESTION 3 (Continued)

(c) (i) Identify TWO main features of effective workplace safety signs.

- 1
- 2

(ii) Explain the importance of ONE of these features and how it affects the design of the sign.

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(d) Environmental concerns in industry are monitored by government regulatory organisations.

(i) Name ONE government regulatory organisation that monitors environmental concerns.

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(ii) Explain the role of this organisation.

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QUESTION 3 (Continued)

(e) Quality control is the process of checking products to ensure they meet established standards.

(i) Describe ONE method of carrying out quality control.

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(ii) Explain how management would use information obtained from this process to improve the product.

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End of Section I

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