BOARD OF STUDIES
NEW SOUTH WALES

2004
HIGHER SCHOOL CERTIFICATE
EXAMINATION

Industrial Technology
Multimedia 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 13–19

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.

Marks

IND-TECH is a company in the multimedia industry employing a mix of male and female employees. Management has decided to investigate the viability of introducing new technologies to stimulate productivity and expansion in the market.

Question 1 (20 marks)

(a) Identify an example of a new technology that IND-TECH could investigate.   **1**

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(b) Outline the implications of the introduction of new technologies on IND-TECH's existing technologies.   **3**

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Question 1 (continued)

(c)   Describe ways in which IND-TECH's management could evaluate the viability   **4**
of introducing new technologies.

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(d)   Explain how the introduction of new technologies could stimulate IND-TECH's   **4**
productivity.

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Question 1 (continued)

(e) Propose and justify ways in which IND-TECH could measure the efficiency of new technologies after they have been introduced.

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End of Question 1

Industrial Technology
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Section I (continued)

Marks

Question 2 (20 marks)

(a) Identify sources of finance that IND-TECH may use to support the introduction
of the new technologies.

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(b) Outline possible changes to the production manager's responsibilities when new
technologies are introduced.

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Question 2 (continued)

(c)   The introduction of new technologies may enhance IND-TECH's position in the   **4**
product market.

Discuss how the introduction of new technologies could improve the
marketability of IND-TECH's products.

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(d)   As a result of the introduction of new technologies, a number of IND-TECH's   **4**
employees are identified as being redundant and are to be dismissed.

Outline the industrial rights of these employees, and identify appropriate action
that can be taken by them.

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Question 2 (continued)

(e) IND-TECH's management proposes to retrain their female employees to be specialist users of the new technologies. **8**

Analyse this proposal and discuss the responsibilities of IND-TECH's management towards all its employees.

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End of Question 2

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Centre Number

Student Number

Section I (continued)

Question 3 (20 marks)   **Marks**

(a)   Identify the sign shown and state how IND-TECH's employees should respond to   **2**
it.

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(b)   The graph shows IND-TECH's expenditure in the year following the   **2**
introduction of the new technologies.
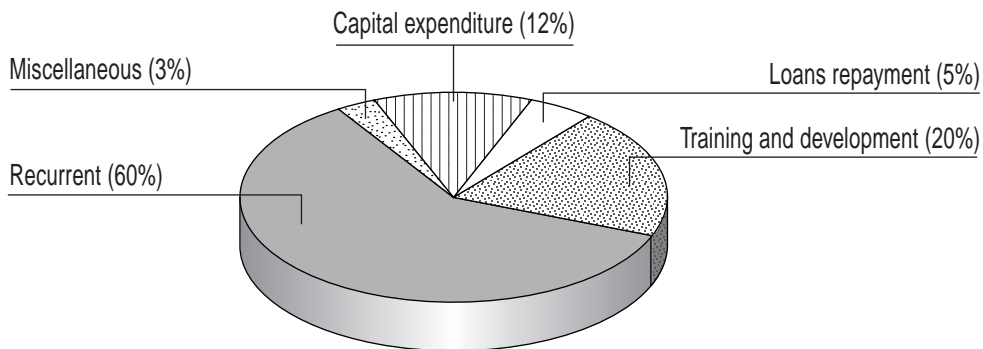
Identify reasons for the proportion being spent on training and development.

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Question 3 continues on page 10

Question 3 (continued)

(c)   The graphs below illustrate IND-TECH's capital expenditure and output before,   **4**
      during and after the introduction of new technologies.
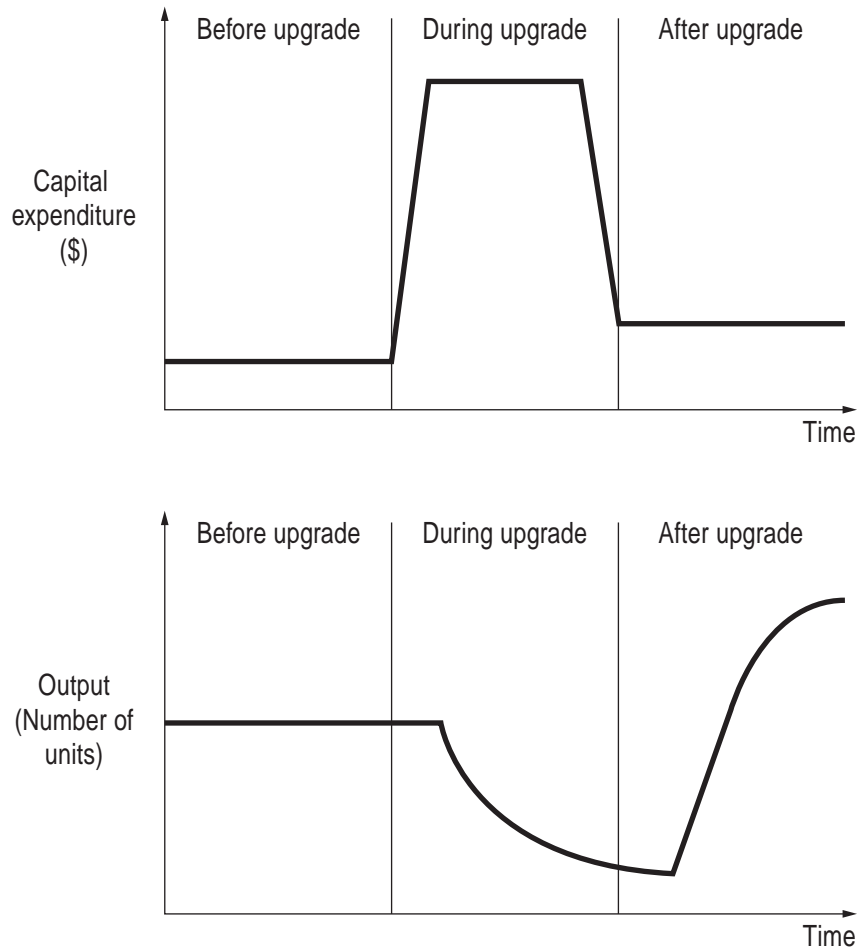
Explain the reasons for the changes in capital expenditure and output during and
after the upgrade phases.

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Question 3 (continued)

(d)   Complete the diagram to show a sequence plan for the introduction of the new   **4**
technologies at IND-TECH.

Introduction of new technologies plan

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┌──────────────────────┐
│ Decision to investigate │
│ introduction of new    │──────────┐
│ technologies           │          │
└──────────────────────┘          ▼
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        │         ┌──────────────┐
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                  └──────────────┘
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Question 3 (continued)

(e) With the introduction of new technologies, IND-TECH proposes to use an external agency to assess the possible changes to the work environment.

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Outline the issues that could be identified. Propose and justify methods that IND-TECH's management could use to effectively communicate these issues to its employees.

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End of Question 3

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Section II

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

Answer the questions in the spaces provided.

Marks

Question 4 (20 marks)

(a)   Outline the functions of authoring tools.

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(b)   Identify the advantages of a liquid crystal display over a cathode ray tube display.

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Question 4 (continued)

(c)   The final logo shown was developed from the original graphic. Identify and   **4**
describe the formatting processes that would be used in the development of the
final logo.
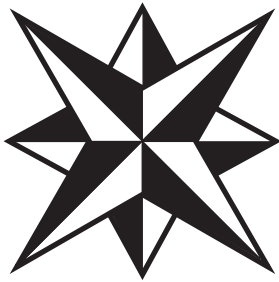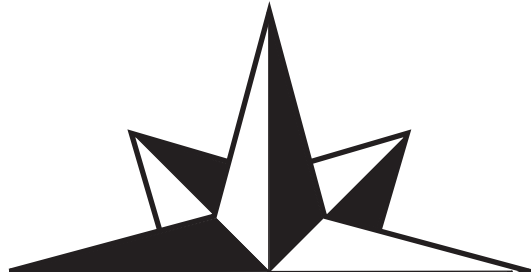
Original   Final logo

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Question 4 (continued)

(d) Clip art is an integral part of many multimedia presentations. Discuss factors to   **4**
     be considered in the selection and use of clip art for this purpose.

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Question 4 (continued)

(e) A storyboard can be a useful tool in the development of multimedia presentations. Describe the function of a storyboard, and with the aid of sketches, identify and evaluate TWO storyboard layouts used in the development of multimedia presentations.

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End of Question 4

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Section II (continued)

Marks

Question 5 (20 marks)

(a)   Describe the purpose of a hyperlink.   **2**

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(b)   Outline TWO methods that are commonly used to produce animation.   **2**

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(c)   Outline the advantages of saving information in a portable document format (pdf).   **4**

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Question 5 (continued)

(d) Discuss the implications of using high resolution digital cameras when developing multimedia presentations that are to be used on the World Wide Web.

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Question 5 (continued)

(e) Multimedia computers generally have higher specifications than many other computers. IND-TECH needs a computer that would be suited to the production of a video-based project.

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Identify and analyse the essential specifications that you would expect to find for such a computer.

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