



STUDENT NUMBER

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CENTRE NUMBER

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HIGHER SCHOOL CERTIFICATE EXAMINATION

1999

INDUSTRIAL TECHNOLOGY

2 UNIT

SECTION II

GRAPHICS AND MULTIMEDIA
INDUSTRIES

OPTION—ARCHITECTURAL DRAFTING

*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—Architectural Drafting (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.

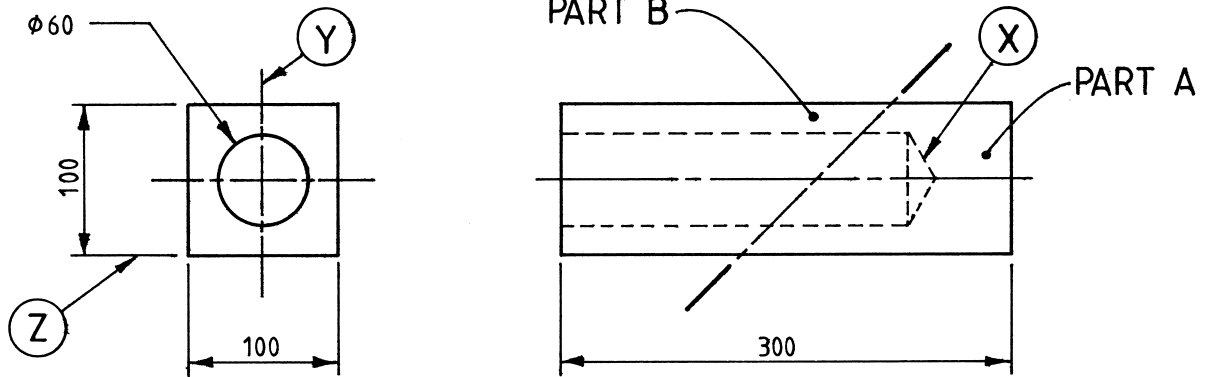
MARKER'S USE ONLY

Question				
4				
5				
6				
7				

SECTION II—ARCHITECTURAL DRAFTING OPTION

(15 Marks)

QUESTION 4 This question is COMPULSORY. (5 marks)



SCALE 1:5

FIG. 1

The object shown in Figure 1 is drawn to scale and has its horizontal axis bisected by a section plane at 45° to the horizontal plane. The section plane divides the object into two parts (Part A and Part B).

- (a) Use the space below to complete a freehand pictorial sketch of Part A. Your sketch should show the maximum detail of Part A.

QUESTION 4 (Continued)

- (b) Complete below a scaled orthogonal sketch of the object (Part A only) showing sufficient views to represent every surface as a true shape. Label each view.

Question 4 continues on page 4

QUESTION 4 (Continued)

- (c) (i) Determine the angle of projection used in Figure 1 on page 2.

Angle of projection

- (ii) Sketch in the space provided below, the AS1100 Drawing Standard symbol for the angle of projection given in part (c) (i).

- (d) Name the features labelled X, Y and Z in Figure 1 on page 2.

X

Y

Z

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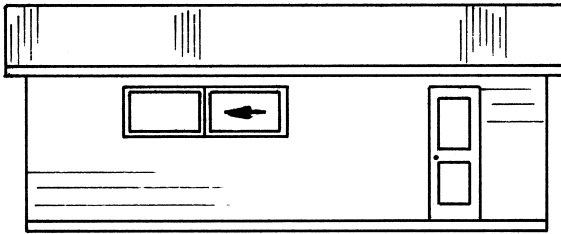
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Attempt TWO questions from Questions 5, 6 and 7.

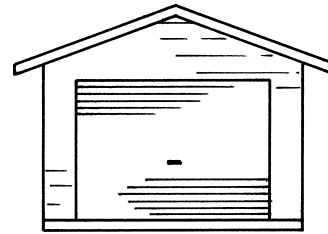
QUESTION 5 (5 marks)

- (a) The front elevation and a side elevation of a garage are shown below. The garage is built on a reinforced concrete slab.

In the space provided, sketch a plan of the garage showing all details. Include on the plan the roof line of the garage.



FRONT ELEVATION



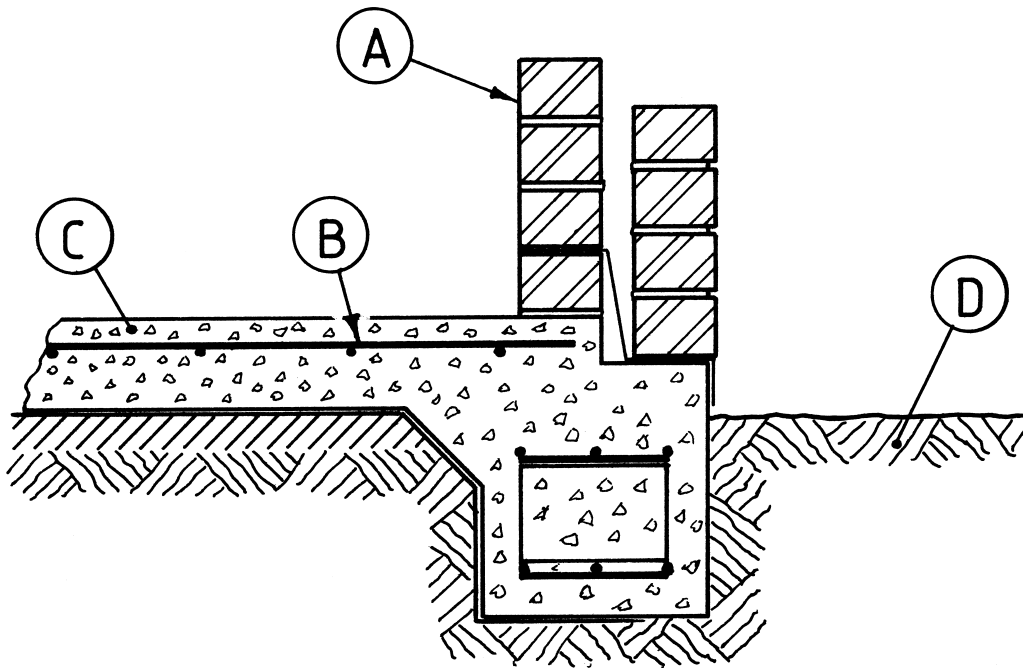
SIDE ELEVATION

QUESTION 5 (Continued)

(b) List the drawings of the garage that would be required for submission to the local building authority.

- (i)
- (ii)
- (iii)
- (iv)

(c) A detailed drawing of the concrete slab is shown below.



Identify the features indicated above.

A

B

C

D

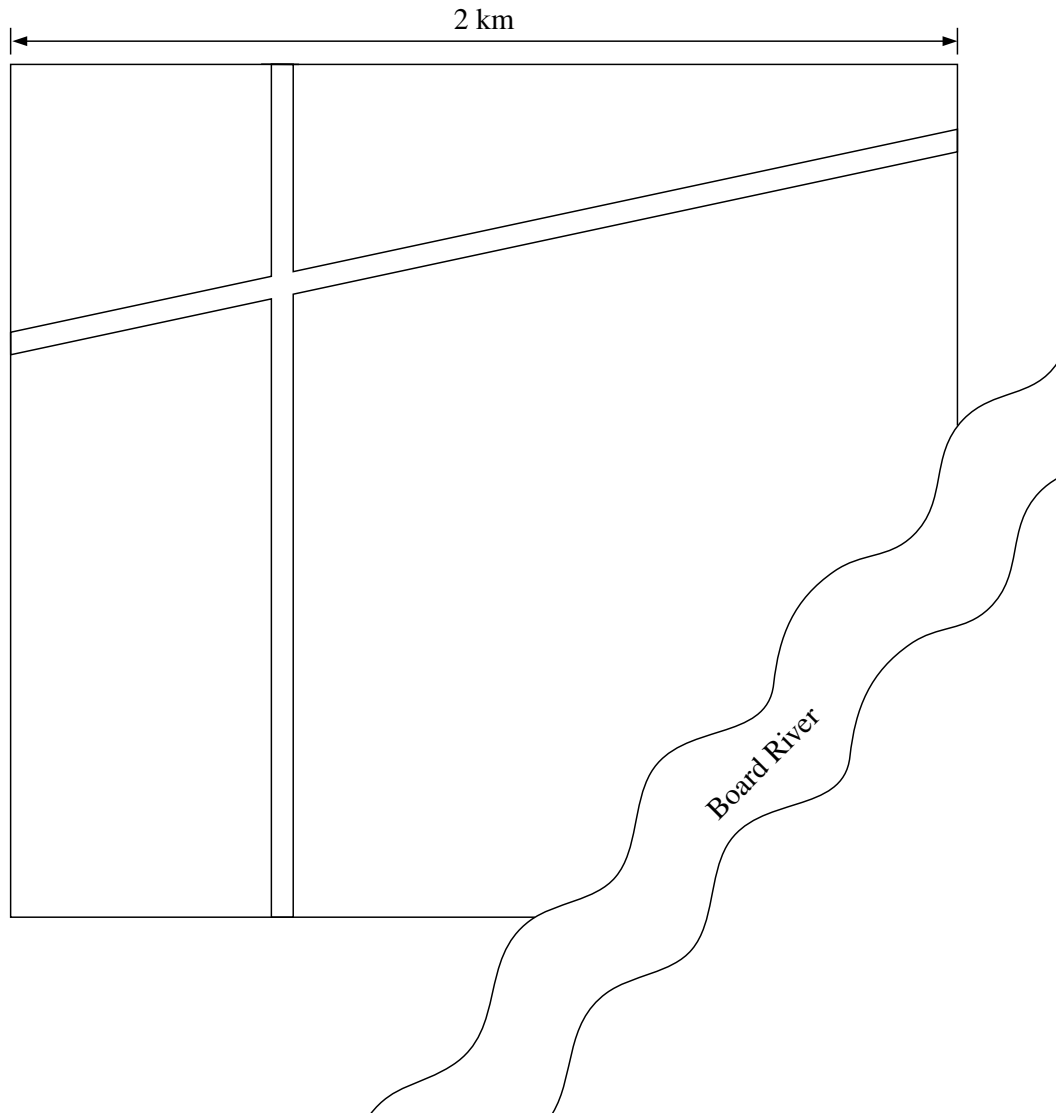
QUESTION 6 (5 marks)

(a) Architects often work closely with their clients when planning residential dwellings.

List FOUR essential considerations that must be discussed with the client in the planning stages of a residential home.

- (i)
- (ii)
- (iii)
- (iv)

(b) A plan for a proposed residential housing development of 200 hectares is shown below. Indicate on the plan the acceptable method of showing that the block slopes towards the river. The slope of the block is gradual and measures 100 m in vertical height.



QUESTION 6 (Continued)

- (c) The process of developing the drawings for a new residential building commences well before the final drawings are produced.

By referring to FOUR stages, explain the processes leading to the final drawings of the building.

Stage 1

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Stage 2

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Stage 3

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Stage 4

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Question 6 continues on page 10

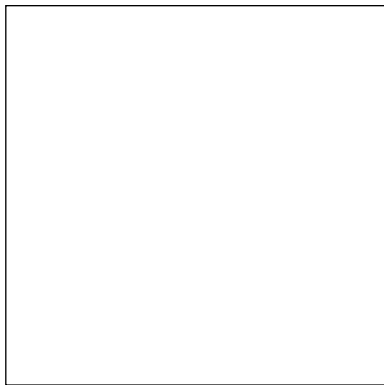
QUESTION 6 (Continued)

(d) Australian buildings reflect a number of architectural styles.

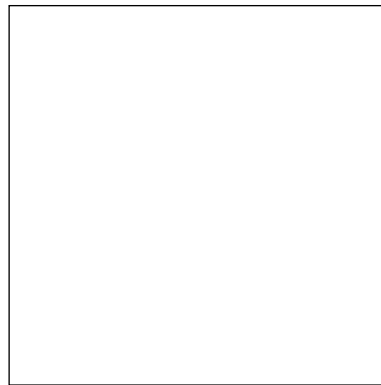
(i) Complete the following table by indicating TWO key features of each style below.

<i>Style</i>	<i>Feature 1</i>	<i>Feature 2</i>
Rural		
Religious		
Early Australian		

(ii) Use sketches to illustrate TWO of the styles of architecture named above.



Name of style



Name of style

QUESTION 7 (5 marks)

- (a) The table below indicates a variety of drawing/graphic types utilised by architects.

Indicate in the spaces provided in the table where each type of drawing/graphic would be most appropriately used in architectural drafting.

<i>Drawing/Graphic type</i>	<i>Appropriate use</i>
2D sketch
Perspective sketch
Sectional view
Computer generated 'fly through'
Graphic illustration

Question 7 continues on page 12

QUESTION 7 (Continued)

- (b) Which of the drawing types, from part (a), would be most suitable for presenting a building design concept to an inexperienced consumer?

Drawing types

Explain your answer.

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- (c) Architectural drawings are developed using appropriate scales.

- (i) Explain what is meant by reduction scales.

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- (ii) List TWO factors that need to be considered when determining the particular scale for an architectural drawing.

1

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2

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QUESTION 7 (Continued)

(d) Architectural drafting has undergone rapid technological change in recent years.

(i) Name a new technology relevant to the architectural drafting industry.

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(ii) Explain the use of this technology.

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(iii) Explain the technology it replaces.

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(iv) Describe the impact of the new technology on an organisation in terms of workplace reform.

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(v) Describe an impact of the new technology on the environment.

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