



**B O A R D O F S T U D I E S**  
NEW SOUTH WALES

**2013**

**HIGHER SCHOOL CERTIFICATE  
EXAMINATION**

# Industrial Technology

## Timber Products and Furniture Technologies

### General Instructions

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

### Total marks – 40

**Section I** Pages 2–4

#### 10 marks

- Attempt Questions 1–10
- Allow about 20 minutes for this section

**Section II** Pages 5–7

#### 15 marks

- Attempt Questions 11–15
- Allow about 35 minutes for this section

**Section III** Page 9

#### 15 marks

- Attempt Question 16
- Allow about 35 minutes for this section

## Section I

10 marks

Attempt Questions 1–10

Allow about 20 minutes for this section

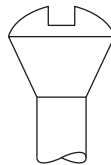
Use the multiple-choice answer sheet for Questions 1–10.

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1 Which marking tool is used to make two parallel lines along the edge of timber at the same time?

- (A) A cutting gauge
- (B) A marking gauge
- (C) A mortise gauge
- (D) A pencil gauge

2 What is the name of the screw shown?



- (A) Bugle head
- (B) Round head
- (C) Raised head
- (D) Countersunk head

3 What is the most appropriate tool for removing bent nails from timber?

- (A) A pair of pliers
- (B) A pair of pincers
- (C) A ball pein hammer
- (D) A warrington hammer

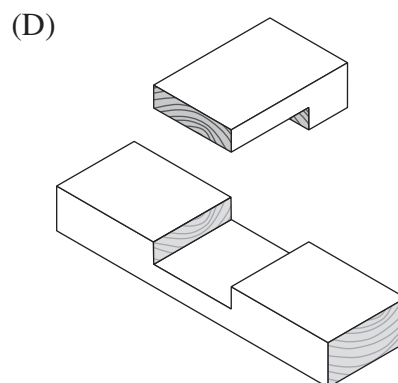
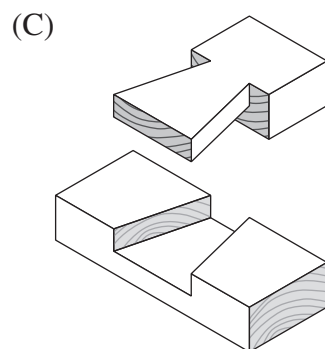
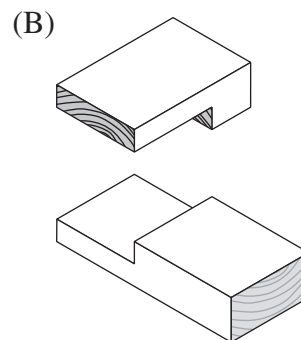
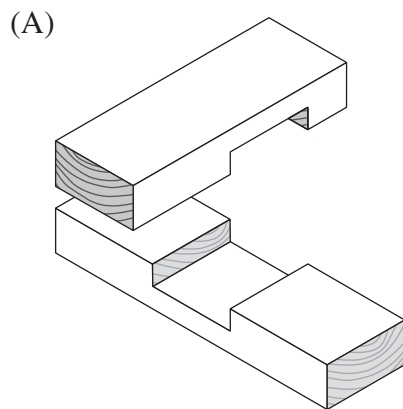
4 A coffee table top has the edge shaped as shown.



Which portable power tool was used to create the shape?

- (A) A router
- (B) A jigsaw
- (C) A rebate plane
- (D) A domino machine

5 Which of the following is a cross halving joint?



6 What is the purpose of dovetailed nailing in timber?

- (A) To hide the nails
- (B) To allow for timber movement
- (C) To prevent the timber from splitting
- (D) To give the nails better holding power

7 The length of a table top in a working drawing is 60 mm. If the actual length of the table top is 1500 mm, what scale is used in the working drawing?

- (A) 1:10
- (B) 1:15
- (C) 1:20
- (D) 1:25

8 What is the aim of sustainable forestry?

- (A) To minimise pollution
- (B) To reduce the hole in the ozone layer
- (C) To ensure the continued availability of natural resources
- (D) To ensure that timber used in production is recyclable or reusable

9 The cutting list for a cabinet is given below. The cost of timber is \$6.50 per linear metre.

<i>Part</i>	<i>Quantity</i>	<i>Length (mm)</i>	<i>Width (mm)</i>	<i>Thickness (mm)</i>
Sides	2	600	300	25
Top/Bottom	2	1200	300	25
Shelves	1	1160	300	25

What is the approximate cost of the materials to make TWO cabinets?

- (A) \$20.00
  - (B) \$31.00
  - (C) \$62.00
  - (D) \$78.00
- 10 A litre of lacquer covers an area of 7.5 square metres. If ONE litre of lacquer costs \$9.50, how much would it cost to apply TWO coats of lacquer on 25 dining tabletops (2500 mm × 1500 mm)?
- (A) \$71.25
  - (B) \$118.75
  - (C) \$187.50
  - (D) \$237.50

# Industrial Technology Timber Products and Furniture Technologies

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Centre Number

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Student Number

## Section II

15 marks

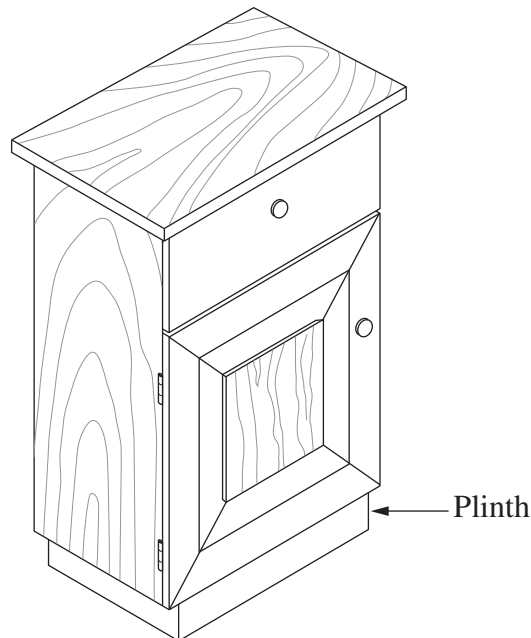
Attempt Questions 11–15

Allow about 35 minutes for this section

Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.

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A bedside cabinet is shown below. Use the drawing to answer Questions 11–15.



### Question 11 (2 marks)

Name TWO plantation timbers that can be used to construct this cabinet.

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**Question 12** (3 marks)

Name a manufactured board suitable to use as the bottom of the cabinet drawer. Give reasons for this choice.

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**Question 13** (3 marks)

A butt joint has been used for the corner of the carcass construction.

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Name and sketch an alternative joint for this corner.

Name of the joint .....

**Question 14** (3 marks)

Outline how a 75 mm plinth would be screwed to the cabinet. Include a labelled sketch in your response.

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**Question 15** (4 marks)

Describe a process for attaching the door to the carcass using butt hinges.

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**Industrial Technology**  
**Timber Products and Furniture Technologies**

**Section III**

**15 marks**

**Attempt Question 16**

**Allow about 35 minutes for this section**

Answer the question in a writing booklet provided. Extra writing booklets are available.

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**Question 16** (15 marks)

- (a) Explain why a company should comply with safety standards. **6**
- (b) Assess strategies that a company could implement to establish and maintain a safe work culture. **9**

**End of paper**

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