



NSW Education Standards Authority

**2018** HIGHER SCHOOL CERTIFICATE EXAMINATION

# Industrial Technology

## Timber Products and Furniture Technologies

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### General Instructions

- Reading time – 5 minutes
- Working time –  $1\frac{1}{2}$  hours
- Write using black pen
- Draw diagrams using pencil
- Calculators approved by NESA may be used
- Write your Centre Number and Student Number at the top of page 9

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### Total marks: 40

#### Section I – 10 marks (pages 2–6)

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

#### Section II – 15 marks (pages 9–12)

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

#### Section III – 15 marks (page 13)

- 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

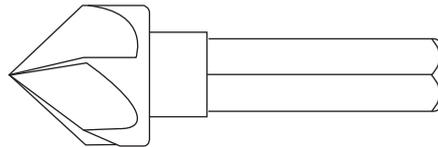
Use the multiple-choice answer sheet for Questions 1–10.

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1 Which type of hammer is best suited for driving in small panel pins?

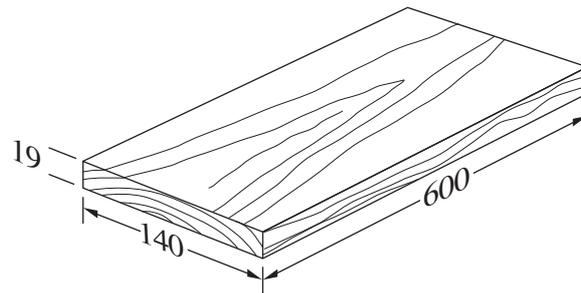
- A. Claw hammer
- B. Lump hammer
- C. Ball pein hammer
- D. Warrington hammer

2 Identify the tool shown.



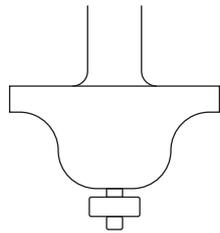
- A. Driver bit
- B. Twist drill
- C. Centre drill
- D. Countersink bit

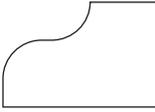
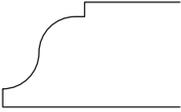
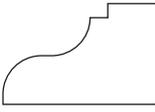
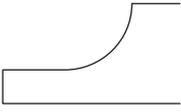
- 3 Which hand tool is most appropriate to reduce the width of the 600 mm board shown, from 140 mm to 137 mm?



- A. Rip saw  
B. Jack plane  
C. Tenon saw  
D. Block plane
- 4 Which of the following drawer joints would allow for a dry assembly to test for fit, strength and operation?
- A. Butt  
B. Dovetail  
C. Mitre  
D. Rebate
- 5 Which of the following is the correct sequence for drilling and driving a countersunk screw into hardwood?
- A. Countersink, clearance, pilot, insert screw  
B. Countersink, pilot, clearance, insert screw  
C. Pilot, clearance, countersink, insert screw  
D. Pilot, clearance, insert screw, countersink

- 6 Which of the following best represents the edge treatment that would be produced by the router bit shown?



- A.  B. 
- C.  D. 

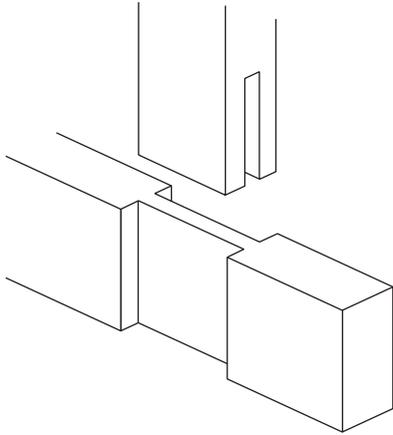
- 7 In which of the following do all features describe the fitting shown?



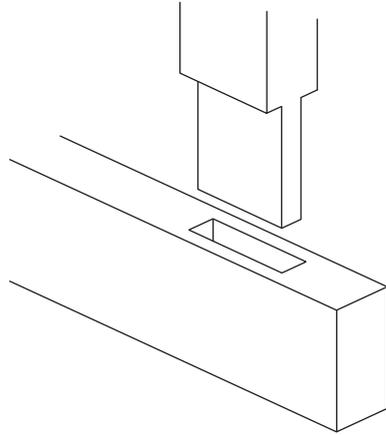
- A. Allows timber movement, easy to install, allows disassembly  
B. Allows timber movement, hard to install, allows disassembly  
C. Restricts timber movement, easy to install, allows disassembly  
D. Allows timber movement, easy to install, prevents disassembly
- 8 What is measured to determine the length of a roundhead screw?
- A. The length of the thread  
B. The total length of the shank  
C. The overall length of the screw  
D. The length embedded in the material

9 Which of the following diagrams shows a bridle joint?

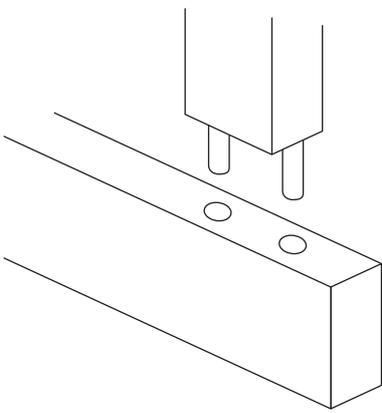
A.



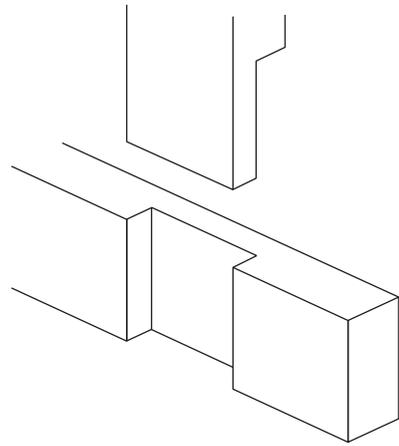
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C.

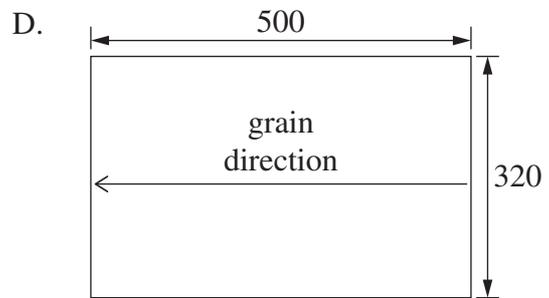
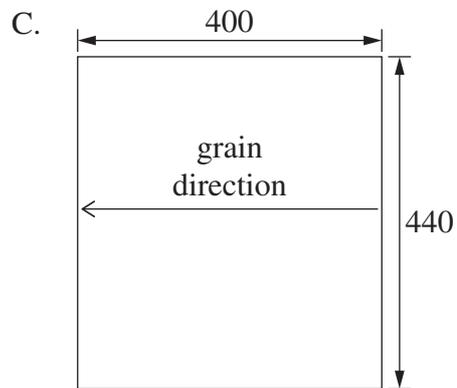
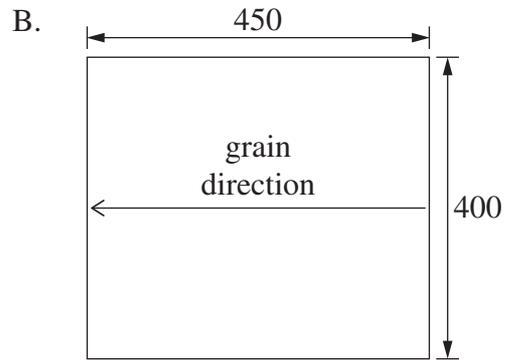
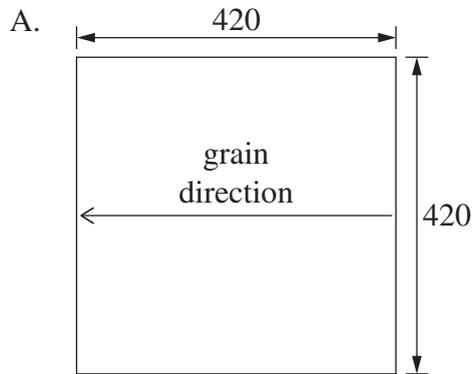


D.



10 A table top is to be constructed using 140 mm wide timber with widening joints.

Which of the following uses the minimum length of timber to create this table top?



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Centre Number

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

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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.

Show all relevant working in questions involving calculations.

**Question 11** (1 mark)

Identify the portable power tool that would produce the most accurate rebate in a frame where glass is to be installed.

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**Question 12** (2 marks)

Outline a method for checking a rectangular table frame for squareness without using a right angle square.

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**Question 13** (3 marks)

Justify the selection of a specific manufactured board for use in a bathroom cabinet carcass.

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**Question 14** (4 marks)

Describe ONE technique of inlaying timber, including the benefits of using this technique.

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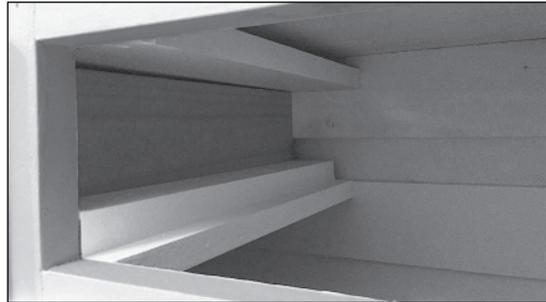
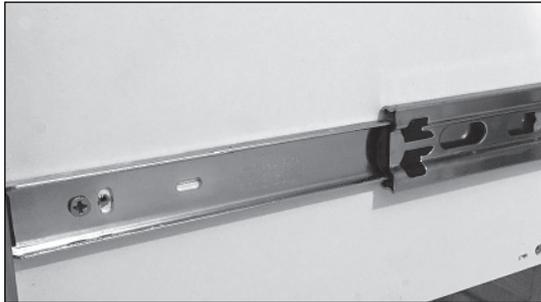
**Please turn over**





**Question 15** (5 marks)

Describe the advantages of each of the drawer runners shown.



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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 the Section III Writing Booklet. Extra writing booklets are available.

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#### **Question 16 (15 marks)**

Answer part (a) of the question on pages 2–4 of the Writing Booklet.

- (a) Explain the effects of both land costs and transportation facilities on the viability of a business in the timber products and furniture industry. **5**

Answer part (b) of the question on pages 5–8 of the Writing Booklet.

- (b) Evaluate how changes in resource management have affected the timber products and furniture industry. **10**

**End of paper**

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