



*Junior Certificate Examination, 2015*

***Materials Technology (Wood)***  
***Ordinary Level***  
***Section B (60 marks)***

***Monday, 15 June***  
***Afternoon, 2:00 - 4:00***

***Instructions***

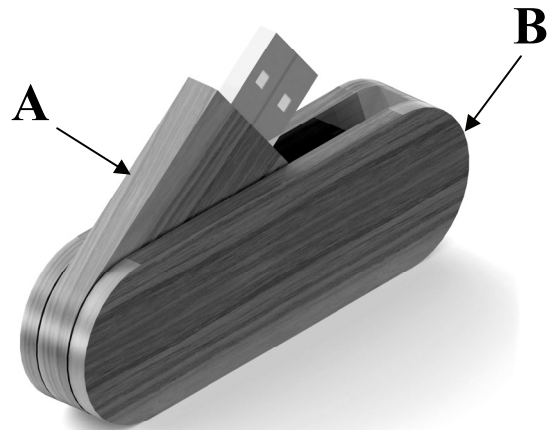
- (a)*** Answer any **three** questions. All questions carry equal marks.
- (b)*** You may answer either question 5A **or** question 5B but **not both** of them.
- (c)*** Write your examination number on the answer book and on all other pages used.
- (d)*** Where sketches are required they may be done freehand or on the graph paper provided.
- (e)*** **Question 2** from this section must be answered on drawing paper.  
All other written answers should be given on the answer book supplied.

1. The diagram shows a wooden casing for a USB memory key. Part A rotates open for use.

(i) Using notes and *neat freehand sketches*, describe a suitable method of jointing the centre piece, A, and the outer case, B, which would allow A to rotate as described.

(ii) Using notes and *neat freehand sketches*, describe how part B could be made, to allow room for part A.

(iii) Name and sketch **one** tool used in shaping the semi-circular ends of part B in this project.

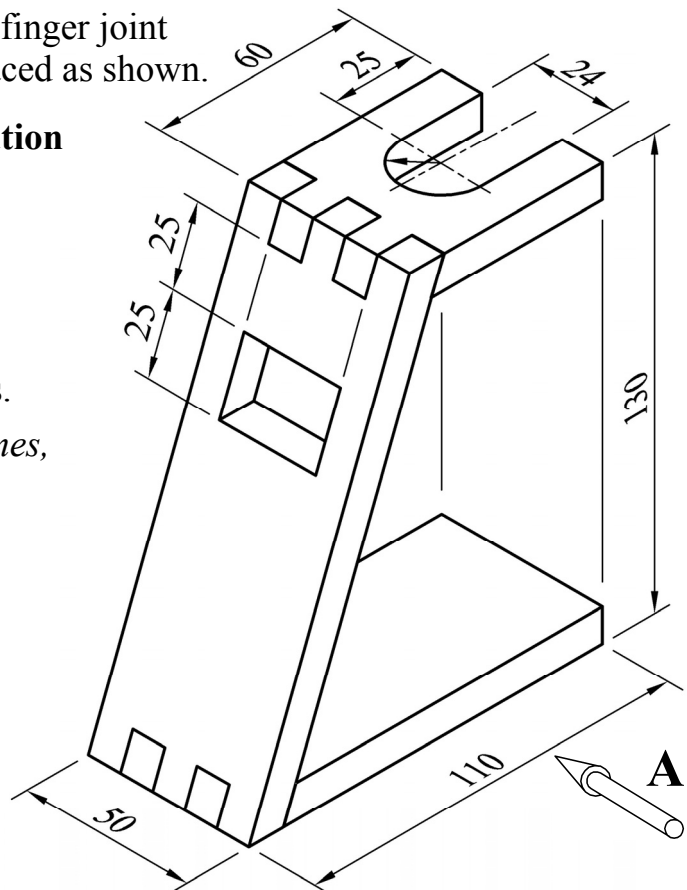


2. The diagrams show a pictorial drawing of a wooden shaving stand. The stand has holes in which to hang a shaving brush and a razor. All of the material is **10mm** thick. The pieces are jointed using a finger joint and the fingers are equally spaced as shown.

(i) Draw, full size, a **Front Elevation** in the direction of arrow A.

(ii) Project an **End View** from the elevation.

(iii) Include **four** main dimensions. Show clearly the dimension lines, arrowheads, etc.



3. The diagram shows planks of wood ready for seasoning.

(i) State **three** reasons why it is important to dry wood before it is used in furniture manufacture.

(ii) Small pieces of wood are used to separate the planks during seasoning as shown. Name these pieces of wood and explain why they are used.



(iii) *Natural/air* seasoning and *kiln* seasoning are the two main methods of drying wood. Compare **both** methods under the following headings:

- (a) Time
- (b) Cost
- (c) Moisture content.

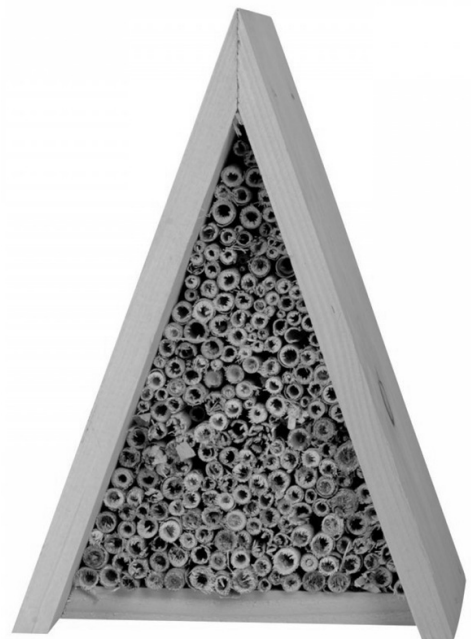
4. The diagram shows a wooden house for wild bees.



(i) Describe, using notes and *neat freehand sketches*, how to hang the bee house on a garden wall.

(ii) Suggest, using notes and *neat freehand sketches*, how to improve the design of the bee house to make it a more attractive feature in a garden.

(iii) Suggest a suitable applied finish for the bee house and give **two** reasons for your choice.



## 5. Answer 5A or 5B

**5A.** The graphic shows a wooden pen, made from mahogany, that has been turned on a lathe.

- (i) Describe, using notes and *neat freehand sketches*, the steps involved in preparing the wood before mounting it on the lathe.
- (ii) The inside of the pen needs to be hollowed out in order to hold the ink cartridge.

Describe, using notes and *neat freehand sketches*, the steps involved in this process.

- (iii) List **two** specific safety precautions that should be followed when using a lathe. Give a reason for **each** precaution.



**OR**

**5B.** The graphic shows a wooden book cover made from plywood. The cover has been decorated using veneers.

- (i) Describe, using notes and *neat freehand sketches*, how the veneers are marked, cut and applied to make this design.
- (ii) Describe, using notes and *neat freehand sketches*, how the edges of the veneered cover are finished to resemble solid wood.
- (iii) Veneers are commonly used in furniture making. State **two** advantages of using veneers instead of solid wood.

