



*Junior Certificate Examination 2010*

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

*Monday 21 June*  
*Afternoon, 2.00 - 4.00*

***Instructions***

- (a) Answer **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.*

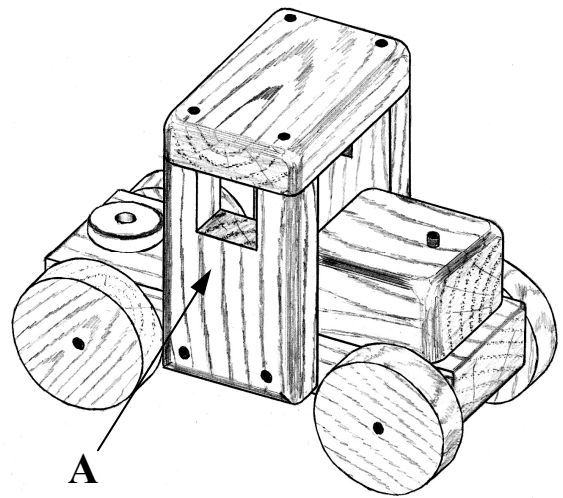
1. The diagram shows a toy truck. The truck is made from pine.

(i) Describe, using notes and sketches, how the window could be cut out in the piece of wood marked **A**.

*(There is no need to describe the marking out.)*

(ii) For safety reasons all the corners of the truck are rounded off and sanded. Describe, using notes and sketches, how this could be done.

(iii) Suggest a suitable applied finish for the project. Give **two** reasons for your choice.



2. The diagram shows a pictorial drawing of a desk storage unit. All material is **16mm** thick.

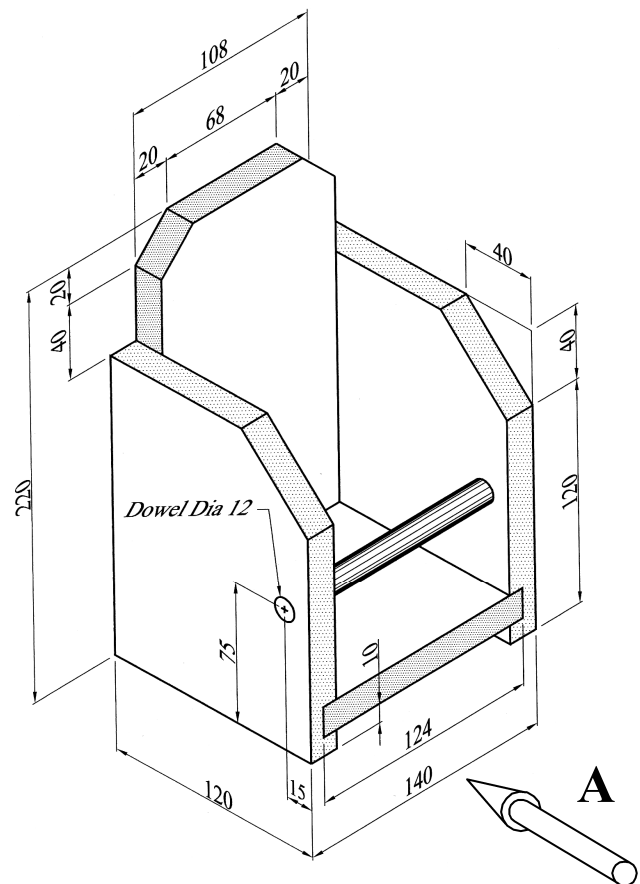
(i) Draw, full size, a **Front Elevation** looking in the direction of arrow **A**.

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

Show the position of the dowel centre.

(iii) Include **four** main dimensions on the drawing.

*Show clearly, the dimension lines, arrowheads, etc.*



3. Trees are divided into two groups, deciduous and coniferous.

(i) Describe, using notes and neat freehand sketches, **four** characteristics of deciduous trees.

(ii) Describe, using notes and neat freehand sketches, **four** characteristics of coniferous trees.

(iii) Choose a tree from the list on the right. Using notes and sketches, describe this tree under the following headings:

- (a) Leaves and seeds
- (b) Uses for the wood.



**Ash**

**Oak**

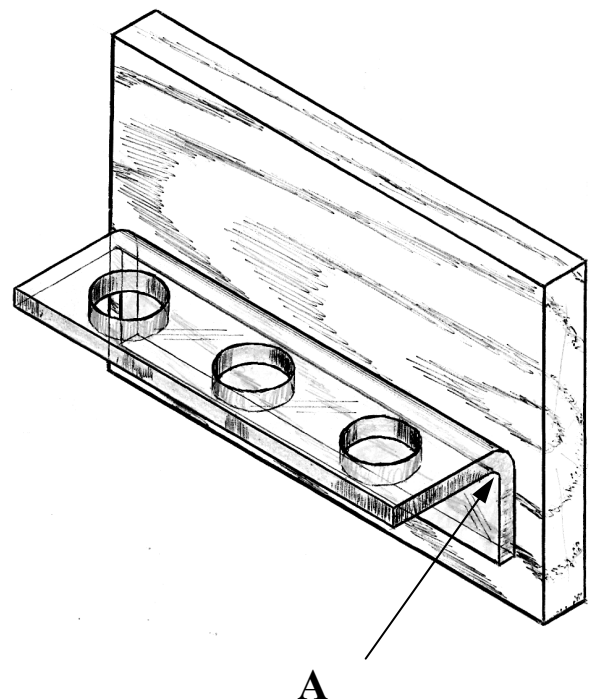
**Beech**

4. The diagram shows a toothbrush holder.

(i) Describe, using notes and sketches, how the acrylic sheet is bent to a 90° angle, as shown at **A**.

(ii) Using notes and sketches, describe a method that would prevent the acrylic from shattering when drilling the holes.

(iii) The back board is very plain. Using notes and sketches, suggest **two** design changes you would make to improve the appearance of this back board.



## 5. Answer 5A or 5B

**5A.** The diagram shows a wooden handle which has been turned on a lathe. The handle is to be used for a garden trowel.

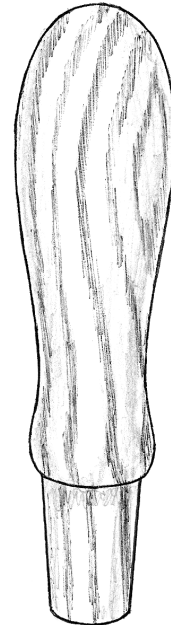
- (i) Name **one** turning **tool** that would be used to make this piece.

Make a neat sketch of this turning tool.

- (ii) You wish to make several handles similar to the one shown in the diagram.

With the aid of notes and sketches, describe **one** method that could be used to make sure that all the handles are the same size and shape as the first one.

- (iii) List **three** specific safety precautions that should be followed when using a lathe.



**OR**

**5B.** The diagram shows an incised carving project.

- (i) Incised carving involves cutting along the outline of a design using a vee-tool or veiner.

Make a neat diagram of **one** of these tools.

- (ii) Carving often involves transferring a design from paper onto wood.

Using notes and diagrams explain how this can be done.

- (iii) Selecting the correct wood for your carving is important. Suggest **three** things that you would consider important when choosing a piece of wood for carving.

