



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.

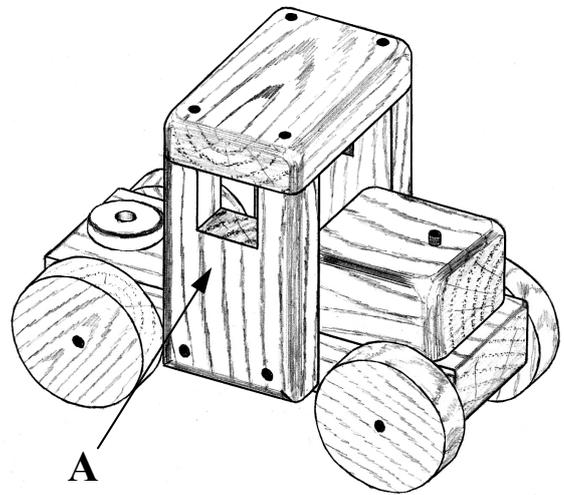
(i) Describe, using notes and sketches, how the window could be cut out in the piece of wood marked **A**.

(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.

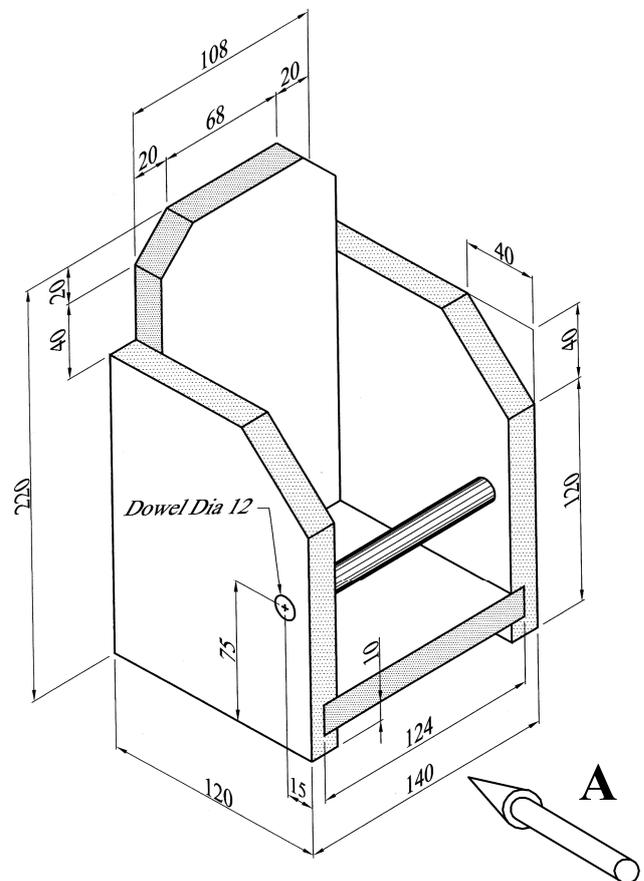
(i) Draw, full size, a **Front Elevation** looking in the direction of arrow **A**.

(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.



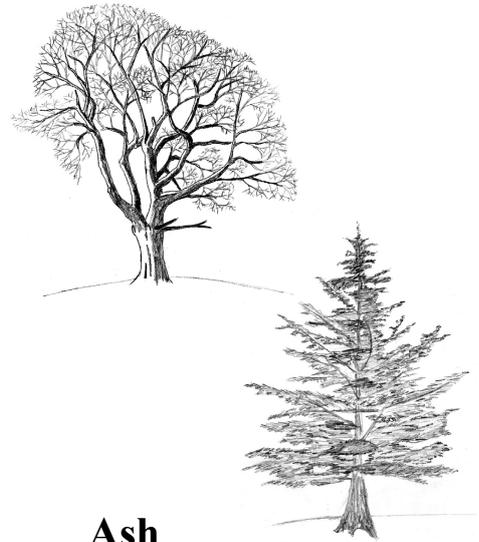
3. Trees are divided into two groups, deciduous and coniferous.

(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

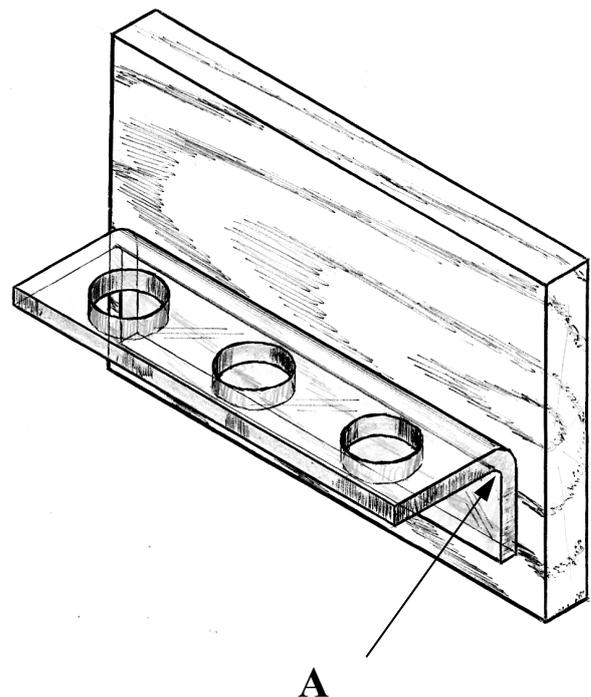
Beech

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.

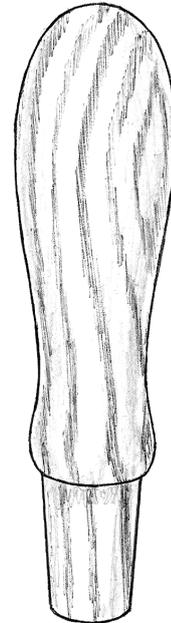
- (i) Name **one** turning **tool** that would be used to make this piece.

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.

