



Junior Certificate Examination, 2014

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

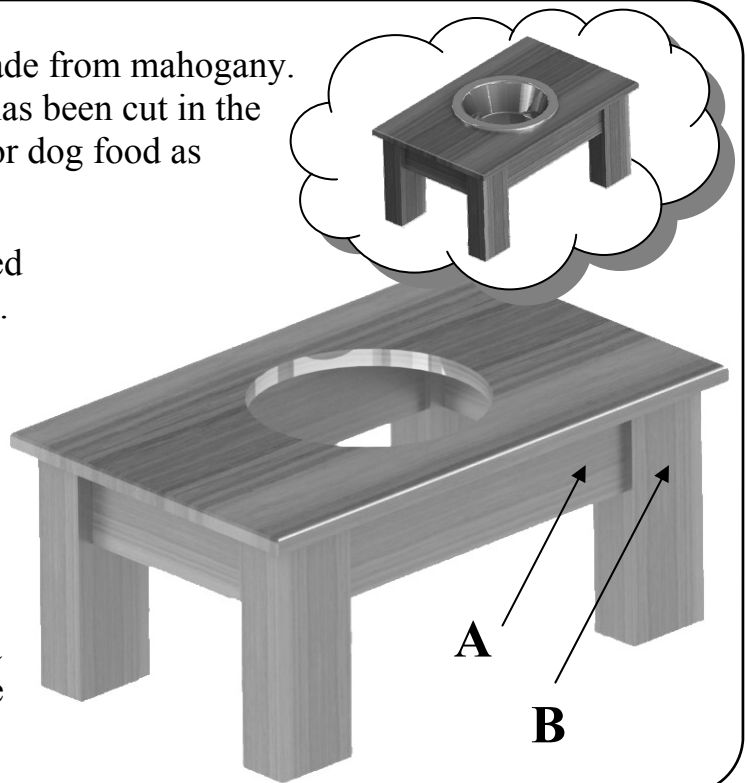
Monday, 16 June
Afternoon, 2:00 - 4:00

Instructions

- (a)*** Answer any **three** questions. All questions carry equal marks.
- (b)*** You may answer either question 5A **or** question 5B but **not both** questions.
- (c)*** Write your examination number on the answerbook 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 answerbook supplied.

1. The graphics show a stand made from mahogany. A hole, 180mm in diameter, has been cut in the top to accommodate a bowl for dog food as shown.

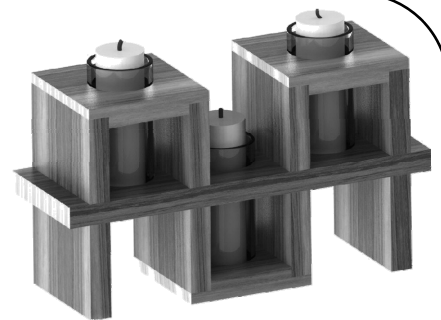
- (i) Name **and** sketch **one** tool used in cutting out the circular hole.
- (ii) Using notes and *neat freehand sketches*, describe how the circular hole could be cut out and given a smooth finish.
- (iii) Using notes and *neat freehand sketches*, describe a suitable method of joining the rail **A** to the leg **B**.



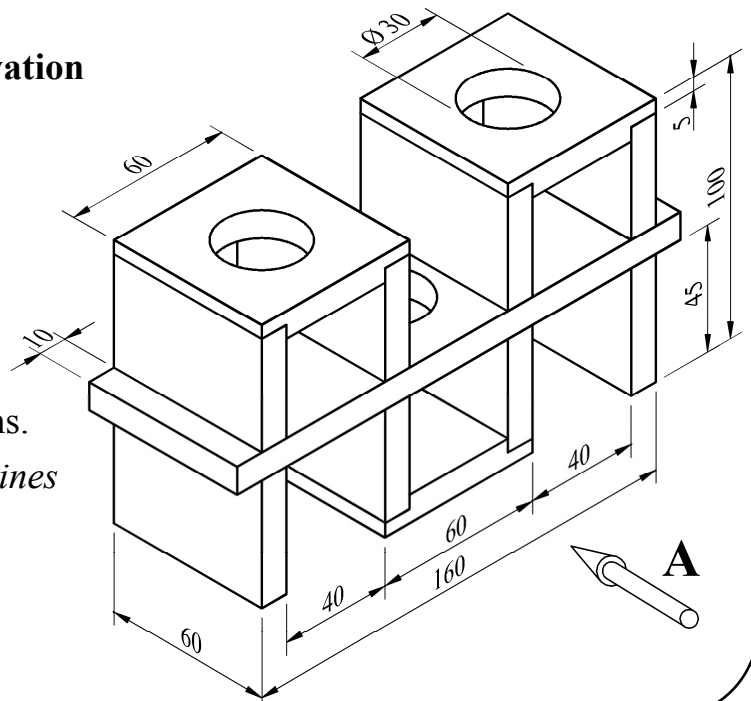
2. The image on the right and the drawing below show a wooden stand for candles.

The stand has three circular holes to accommodate glass containers for the candles as shown.

All material is **10mm** thick.



- (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 and arrowheads.

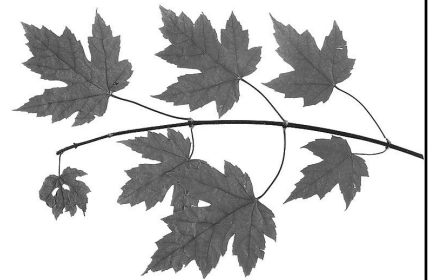


3. Trees are divided into two main groups, coniferous and deciduous.

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



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



(iii) Give **two** uses of the wood from (a) coniferous trees
and
(b) deciduous trees.

4. The diagram shows a wall-mounted wooden letterbox.

(i) Describe, using notes and *neat freehand sketches*, how to improve the design to make the letterbox easier to open.



(ii) Describe, using notes and *neat freehand sketches*, **two** improvements you would make to the design of the letterbox in order to improve its appearance.

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

5. Answer 5A or 5B

5A. The diagram shows a bowl that has been turned on a lathe. The bowl is made from sycamore and mahogany blocks which have been glued together.

(i) Describe, using notes and *neat freehand sketches*, the steps involved in preparing the wood prior to mounting it on the lathe in order to make the bowl.

(ii) Name **one** turning tool that could be used to make the bowl and make a *neat freehand sketch* of the tool.

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



OR

5B. The diagram shows a wooden case for a mobile phone that has been decorated using veneers.

(i) Describe, using notes and *neat freehand sketches*, how veneers are cut from logs.

(ii) Describe, using notes and *neat freehand sketches*, the various steps involved in using veneers to create the decorative effect shown in the diagram.

(iii) Name **one** suitable adhesive for veneering. Give **two** reasons for your choice of adhesive.

