



Junior Certificate Examination 2012

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

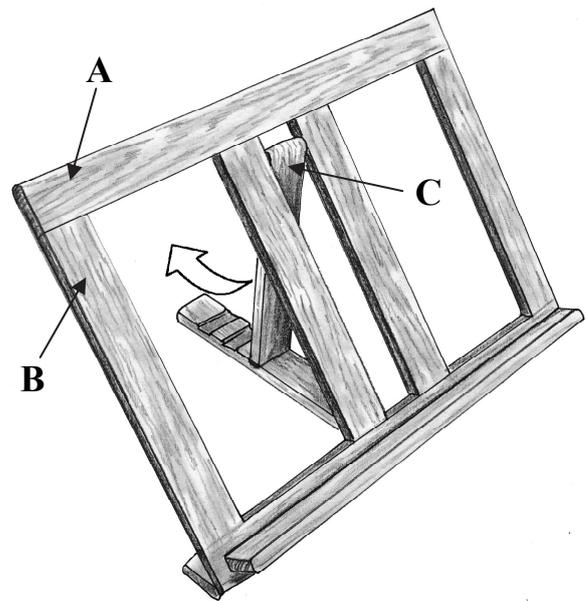
Monday 18 June
Afternoon, 2.00 - 4.00

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 an adjustable stand for cookery books which is made from oak.

- (i) Describe, using notes and *neat freehand sketches*, a suitable method of **jointing** the top **A** to the side **B**.
- (ii) Part **C** must be able to move in the direction of the arrow to change the angle of the stand.



Using notes and *neat freehand sketches* describe one way of jointing the top of part **C** to allow for this movement.

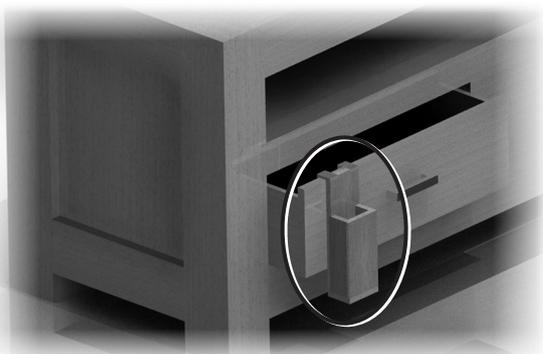
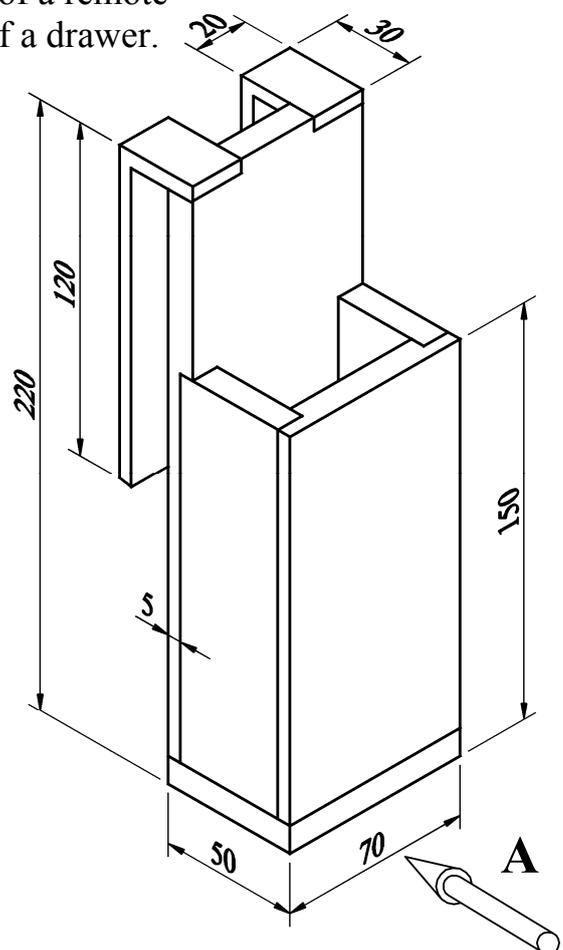
- (iii) Suggest a suitable applied finish for the stand. Give **two** reasons for your choice.

2. The diagram shows a pictorial drawing of a remote control holder that hangs from the top of a drawer.

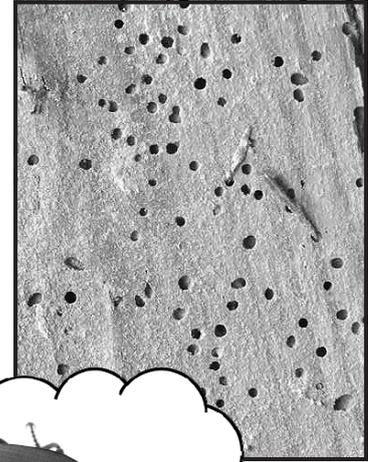
The material is **10mm** thick for the holder and **5mm** thick for the 'hooks'.

- (i) Draw, full size, a **Front Elevation** looking 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.

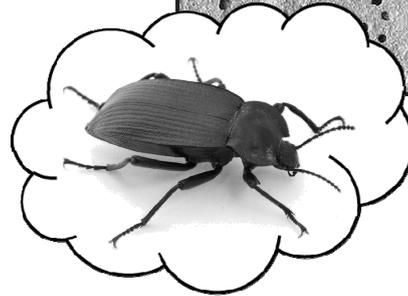


3. The diagram shows wood that has been damaged by woodworm. An enlarged view of a common furniture beetle is also shown.



(i) Describe, using notes and *neat freehand sketches*, the life cycle of the common furniture beetle.

(ii) Describe, using notes and *neat freehand sketches*, how the holes are made in the wood by the woodworm. Indicate at which stage in the lifecycle this occurs.



(iii) Describe one method of treating wood to help prevent an attack of woodworm.

4. The diagram shows a wooden snow sled.

(i) It is difficult to stay on the sled when it is moving. Using notes and *neat freehand sketches* show how you would change the design of the sled to solve this problem.



(ii) Suggest a suitable wood for the sled and give **two** reasons for your answer.

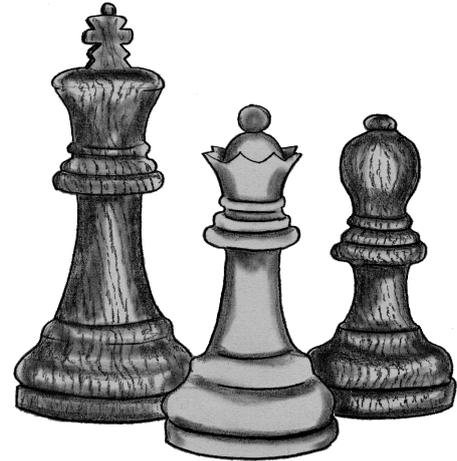
(iii) Suggest a suitable applied finish for the sled and give **two** reasons for your choice of finish.

5. Answer 5A or 5B

5A. The diagram shows a number of wooden chess pieces that have been turned on a lathe.

- (i) The chess pieces need to be copied in order to complete the full set.

Describe, using notes and *neat freehand sketches*, **one** method that could be used to make sure that the copies are the same size and shape as the originals.



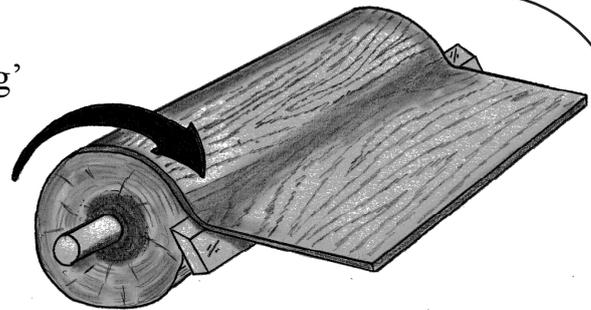
- (ii) Name **one** tool that could be used when wood turning and make a *neat freehand sketch* of it.

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

OR

5B. The diagram shows the 'rotary cutting' of veneers from a log.

- (i) List **two** advantages of using veneers instead of solid wood when making furniture.



- (ii) Veneers can be glued together to form a manufactured board. Name this type of board and, using notes and *neat freehand sketches*, explain how the veneers are arranged in terms of grain direction and the number of layers.

- (iii) The diagram shows a picture made from wooden veneers (marquetry). Describe, using notes and *neat freehand sketches*, the steps involved in making such a picture.

