



Junior Certificate Examination, 2017

Materials Technology (Wood)

Ordinary Level

Section B (60 marks)

Monday, 19 June

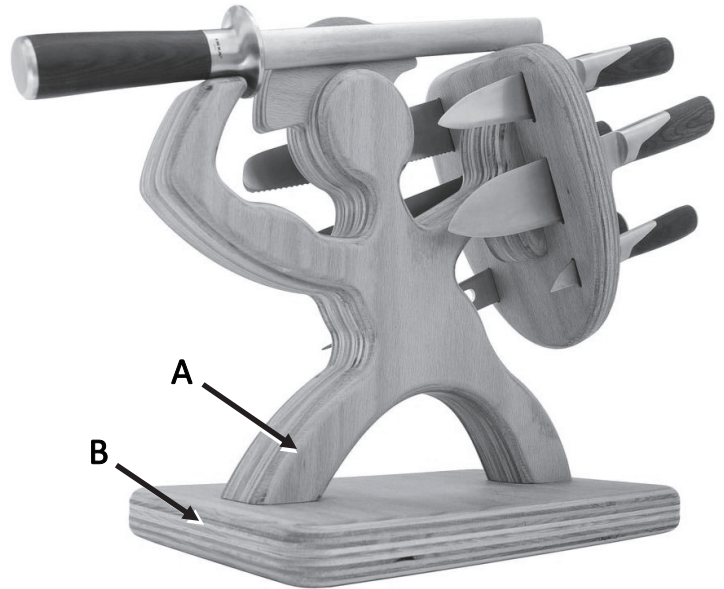
Afternoon, 2:00 - 4:00

Instructions

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

1. The diagram shows a warrior-themed, kitchen-knife stand which is made from wood.

- (i) Describe, using notes and *neat freehand sketches*, how the rectangular slots for the knives could be cut out.
- (ii) Describe, using notes and *neat freehand sketches*, one method of jointing the figure **A** to the base **B** of the stand.
- (iii) Suggest a suitable applied finish for the project.
Give **two** reasons for your choice.



2. The image below shows a phone and a watch on a wooden stand.

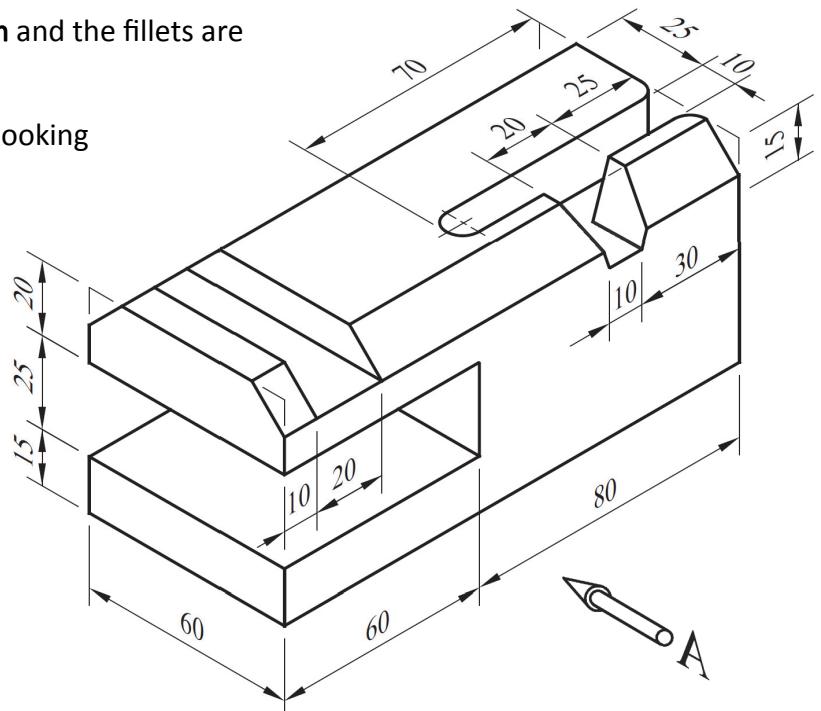
A dimensioned drawing of the wooden stand is given on the right.

All of the chamfers are **10mm × 10mm** and the fillets are of **5mm** radius.

- (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.

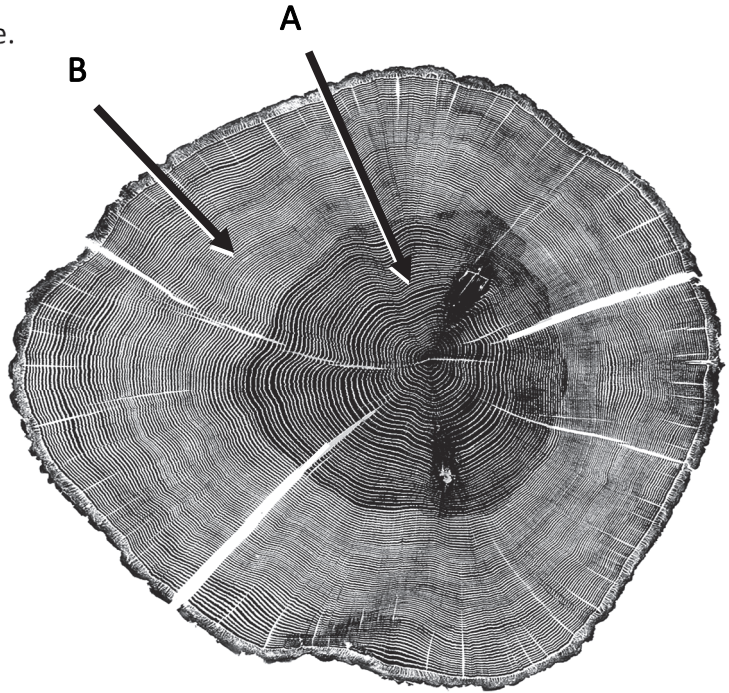
Show clearly the dimension lines, arrowheads etc.

(Hidden detail is not required.)



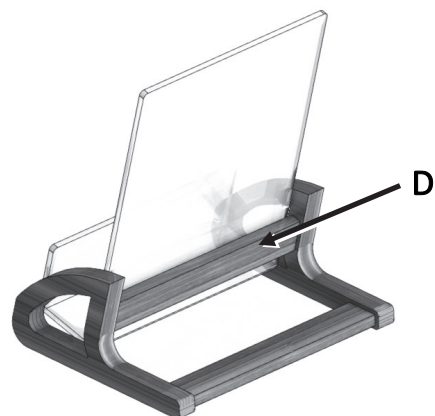
3. The diagram shows a cross section of a tree.

- (i) Name the darker wood shown at **A** and the lighter wood shown at **B** in the diagram.
- (ii) State **two** differences between the wood at **A** and the wood at **B**.
- (iii) Draw a *neat freehand sketch* of the cross section of a tree and label any **three** other parts.
- (iv) State **one** function of **each** of the following parts of a tree:
 - (a) Trunk
 - (b) Roots
 - (c) Crown



4. The diagrams show a front and rear view of a leaflet stand which has been made from wood and acrylic.

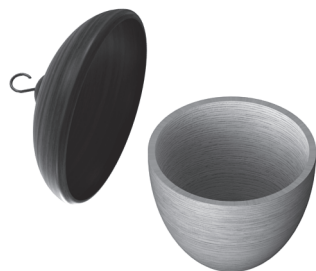
- (i) Describe, using notes and *neat freehand sketches*, how the acrylic sheet is bent at a 90° angle as shown at **C**.
- (ii) Describe, using notes and *neat freehand sketches*, one suitable method of attaching the acrylic piece to the wooden back rail **D**.
- (iii) Describe, using notes and *neat freehand sketches*, how the design of the stand could be improved in order to make it more attractive in appearance.



5. Answer 5A or 5B

5A. The diagram shows a bird house, in the shape of an acorn, that has been made from two blocks of wood using a lathe.

- (i) Describe, using notes and *neat freehand sketches*, the steps involved in preparing one of the square blocks of wood before it is mounted on a lathe.
- (ii) Name **one** tool that can be used to check the diameter of the pieces and make a *neat freehand sketch* of it.
- (iii) List **three** specific safety precautions that should be observed when working on a lathe. Give a reason for **each** safety precaution.



OR

5B. The diagram shows an image that has been carved from wood.

- (i) Name this method of carving.
- (ii) Describe, using notes and *neat freehand sketches*, how the shape of the cat could be transferred from a sheet of paper to the wood.
- (iii) Name **one** carving tool that could be used for this project and make a *neat freehand sketch* of it.
- (iv) Name **one** other method of carving.

Using notes and *neat freehand sketches* describe this other method.

