

JUNIOR LYCEUM ANNUAL EXAMINATIONS 2002

Educational Assessment Unit. Education Division

FORM V

TECHNICAL DESIGN

Time 2 hours

Instructions

- Write your name and class on **ALL** sheets.
- Attempt **ALL** questions.
- Questions should be attempted on the pre-printed answer sheets provided.
- All answers are to be drawn accurately, with instruments, unless otherwise stated.
- All construction lines **MUST** be left on each solution to show the method employed.
- Drawing aids may be used.
- Colour/shading should be used where appropriate.

Information

- All dimensions are in millimeters
- Estimate any dimensions not given.
- Marks will be awarded for accuracy, clarity and appropriateness of construction

NAME _____

CLASS _____

QUESTION	1	2	3	4	5
MARK					

QUESTION 1

Figure 1 on the starter sheet for this question shows two views of a bent sheet of metal with a circular hole in it. The bent sheet is resting on the horizontal plane, and the hole appears as a circle in the elevation.

From these two views project:

- a) A side elevation.
- b) The development (the shape of the metal sheet when opened flat including the hole).

25 Marks

QUESTION 2

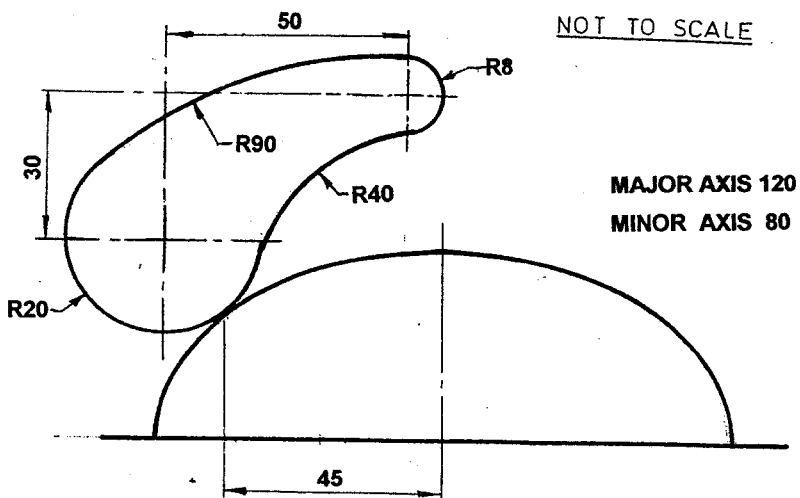
The figure below shows the outline of a logo for a manufacturer of toys.

On the given centre lines, on the starter sheet, draw full size the outline of the logo.

Clearly show your constructions for

- The semi-ellipse
- The circle touching the ellipse (showing the foci and normal)
- Finding the centres of the blending arcs.

15 Marks



QUESTION 3

The densities of 8 commercial grade metals are:

- Aluminium 2.8
- Zinc 7.2
- Iron 8.0
- Copper 9.0
- Silver 10.5
- Lead 11.3
- Gold 19.4
- Platinum 21.6

(Grams per cubic cm.)

Design and draw (in the space for question no 3 on the starter sheet) 2 different forms of charts showing the comparisons between the 8 metals.

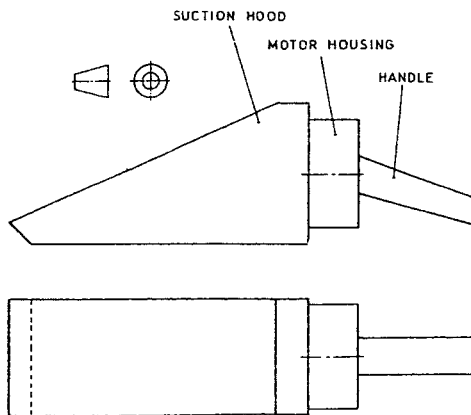
15 Marks

QUESTION 4

Two views of a hand held vacuum cleaner are given on the starter sheet. The cleaner is made up of the suction hood, cylindrical motor housing and handle.

From the plan and in the direction given project an auxiliary elevation.

25 Marks



QUESTION 5

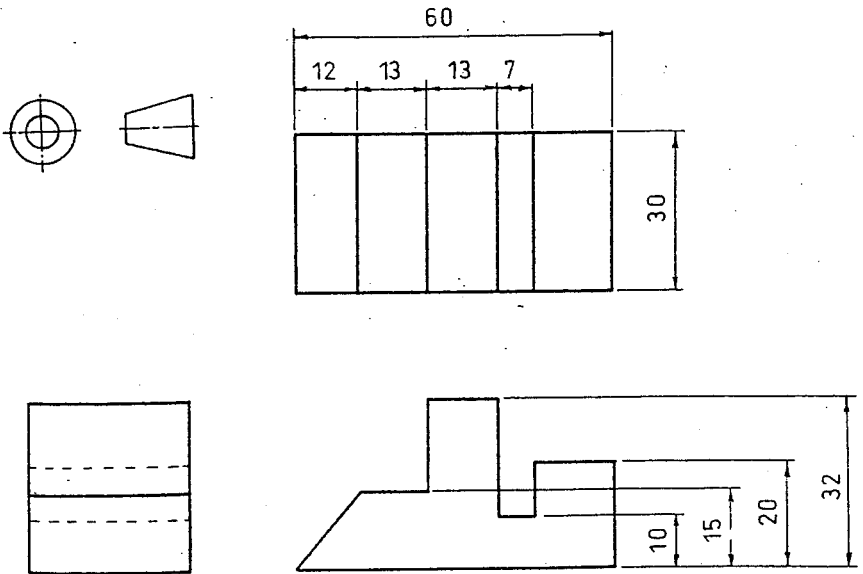
Your teacher has asked you to produce a wall chart on PICTORIAL PROJECTIONS.

An incomplete layout is prepared for you. Your task is to complete this layout with the following types of pictorial projections together with their correct projection angles.

- Isometric projection
- Cabinet Oblique projection
- Planometric projection
- Planometric projection

Use the simple dimensioned figure below.

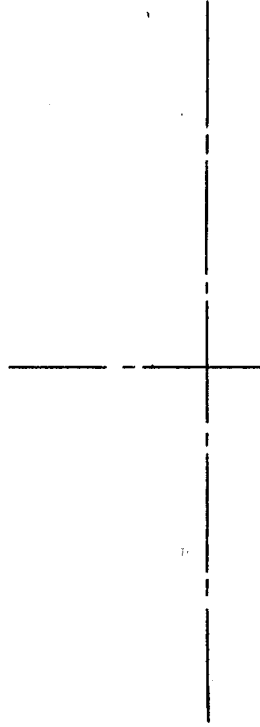
20 Marks



NOT TO SCALE

QUESTION 3

QUESTION 2

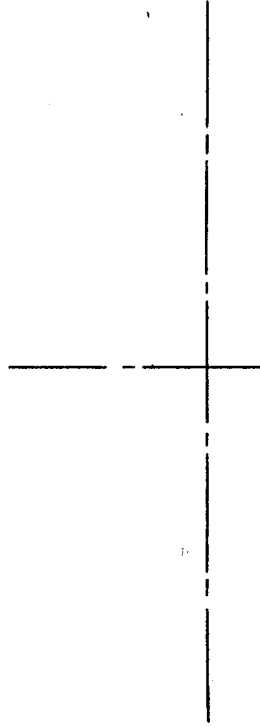


CLASS

NAME

QUESTION 3

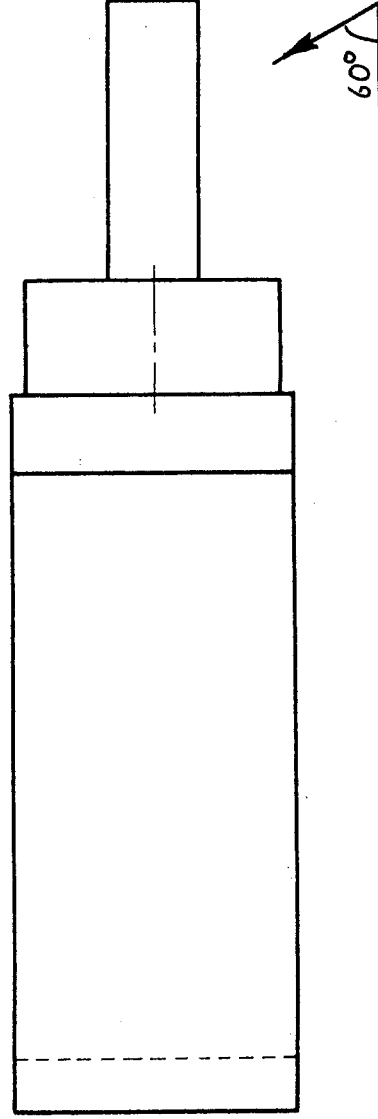
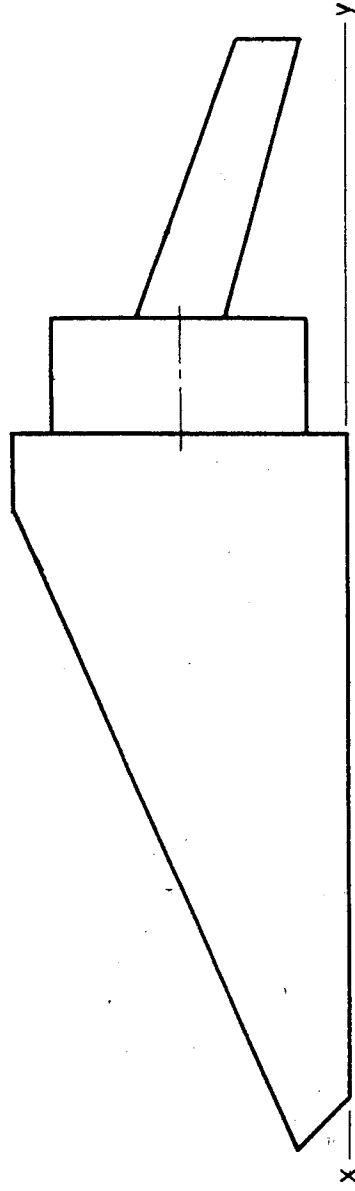
QUESTION 2



CLASS

NAME

QUESTION 4



CLASS

NAME

QUESTION 5

CLASS

NAME