JUNIOR LYCEUM ANNUAL EXAMINATION 2002

Educational Assessment Unit. Education Division

FORM IV (4th year) 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 millimetres
- 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

Draw a **Plain/Simple** scale, (a Diagonal scale may be used), to measure up to 120mm at a scale of 5:4 and to read to the nearest millimetre.

You are to draw this scale ruler, carefully and accurately, in the space provided for question number 1 on the starter sheet.

15 marks

Question 2

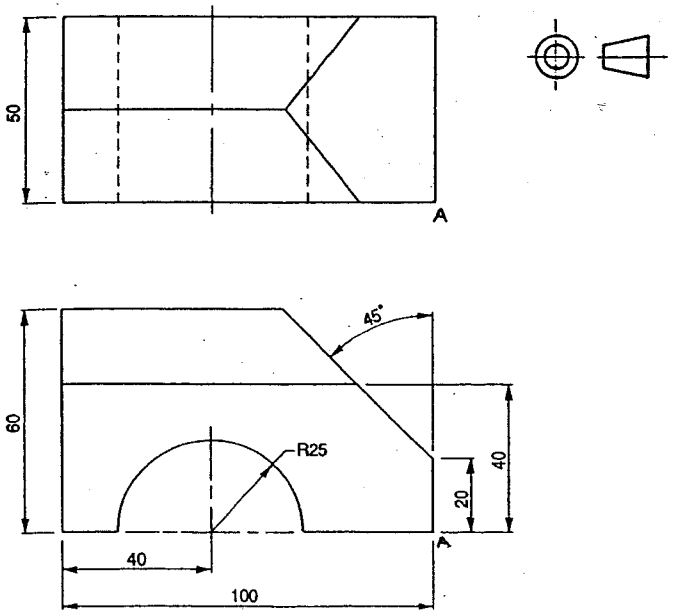
The elevation and plan of a solid are given below.

In the space provided for question 2 on the starter sheet and **using the scale ruler from question 1:**

a) Copy the two views (enlarged 5:4).

b) From the above elevations draw an isometric projection of the solid with corner A as the lowest point.

20 marks



Question 3

Safety signs (ideograms) are obligatory in industry. The following European/British Safety Signs are used:

Prohibition (don't do)

Mandatory (must do)

Warning/Caution (risk of danger)

Safe Condition (the safe way)

General (information)

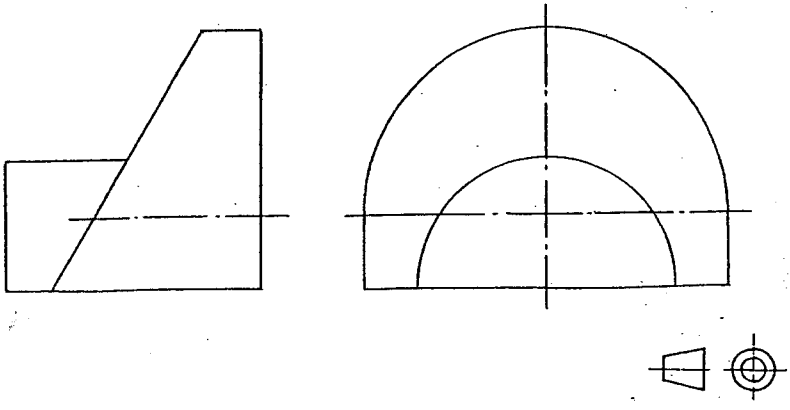
The outlines of these symbols are given on the starter sheet. Your task is to continue their correct design and colours.

20 marks

Question 4

The front and side elevations of a solid are given on the starter sheet. The solid consists basically of 2 semicircular parts, each with a sloping surface and attached to each other as shown. **Project a plan from the front elevation.** All Construction lines are to be shown.

20 marks



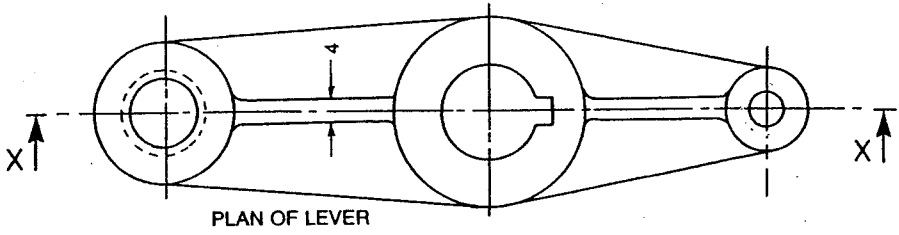
Question 5

The figure shows an elevation and a plan of a **ROTARY LEVER**. To the dimensions given and using 3rd angle orthographic projection:

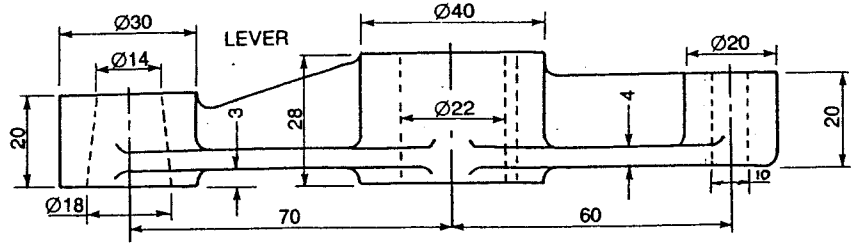
a) Copy the plan and

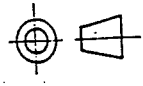
b) Draw a sectional elevation **X-X.**

25 marks



PLAN OF LEVER





QUESTION 1

QUESTION 2

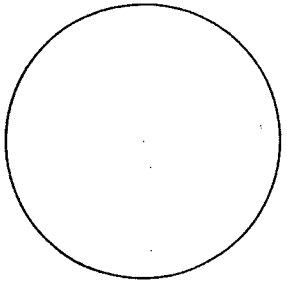
Orthographic Projection

Isometric Projection

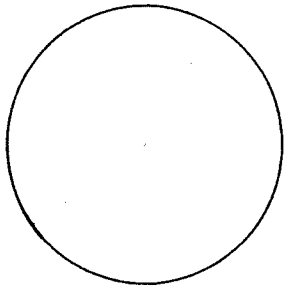
CLASS

NAME

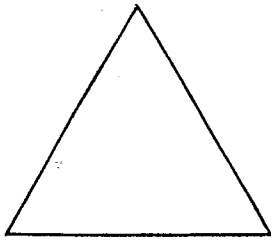
QUESTION 3



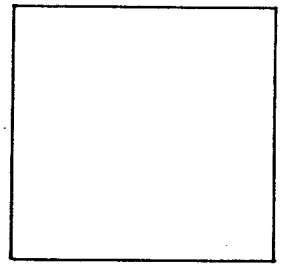
Prohibition



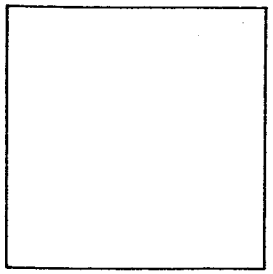
Mandatory



Warning/ Caution

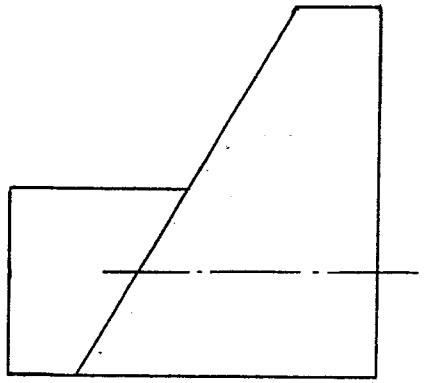


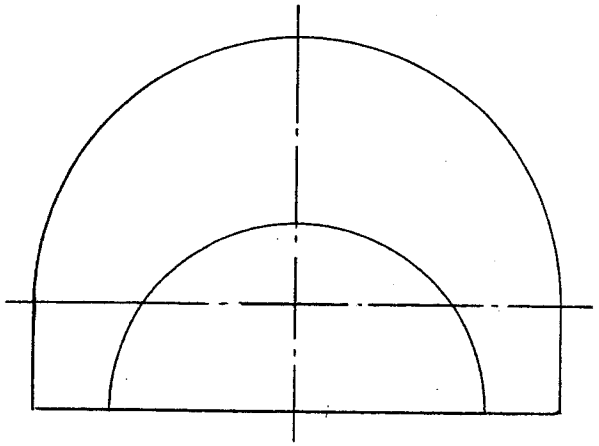
Safe way



Information

QUESTION 4





CLASS

NAME

QUESTION 5

CLASS

NAME