

Indian Institute of Technology Kanpur
TA101AA: Engineering Graphics
2021 - 2022 Sem II

Home Assignment no.1
Constructional Geometry

- a) All problems to be done on A4 size sheet in drawing book/sketch book.
- b) Write your name, roll no. etc. in the title block using **BLUE PEN**.

Question 1

Reproduce the letters of the alphabet and numbers as shown in figure 1. Draw guide lines so that the letters and numbers are properly aligned. Height of Capital letters and numbers should be 10 mm. **(30 Marks)**

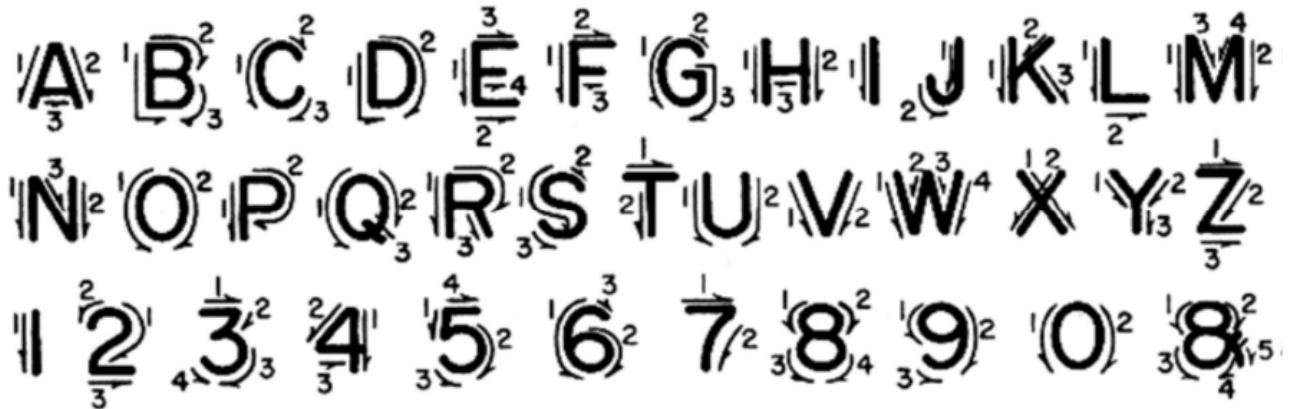


Figure 1: Lettering

Question 2

Draw an ellipse using the circle method having conjugate diameters of 120 mm and 60 mm with an angle of 60° between them. Mark the major axis and the minor axis of the ellipse, and write down the lengths of the major and minor axis. **(20 Marks)**

Question 3

Draw an ellipse using the four centered method, having major diameter of 100 mm and minor diameter 70 mm. **(20 Marks)**

Question 4

Draw the machine part as shown in figure 2. Carefully note the various geometrical features contained (e.g. tangent arc to circles, etc.). Use scale 1:2 if required so that centers of the various tangent arcs fit in the A4 sheet. **(30 Marks)**

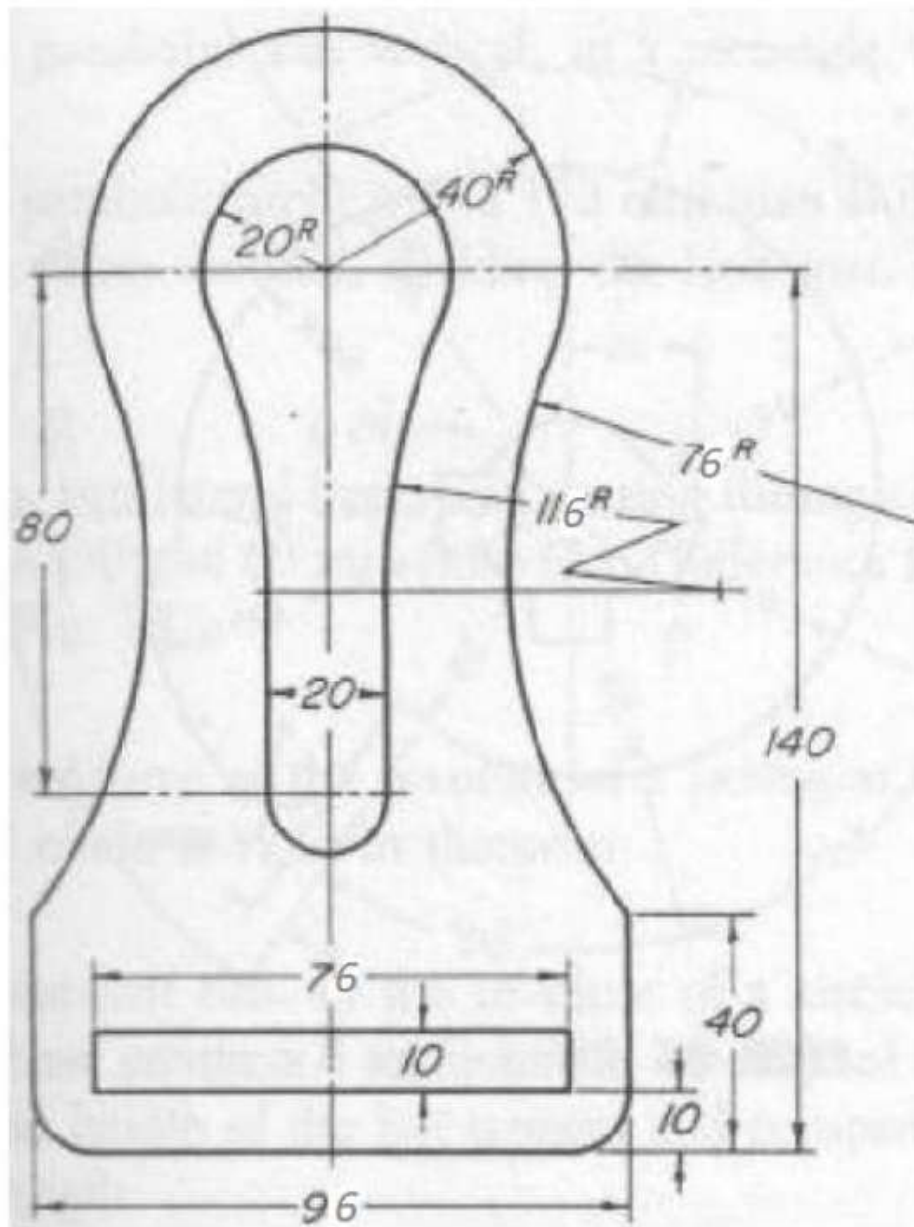


Figure 2