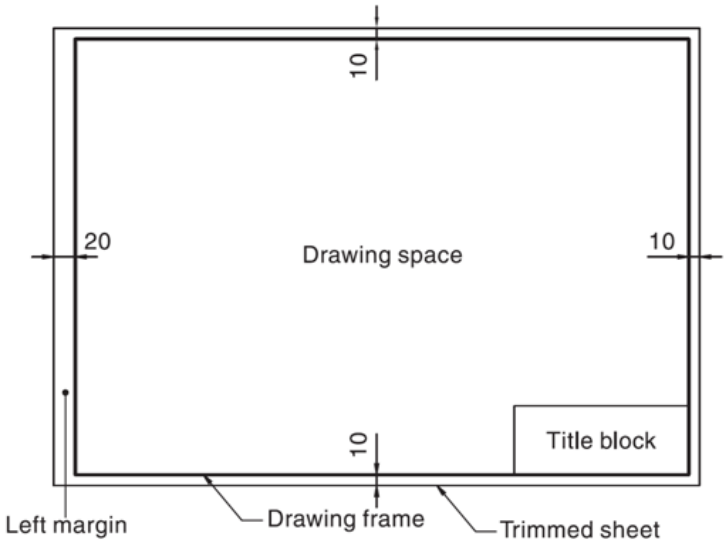
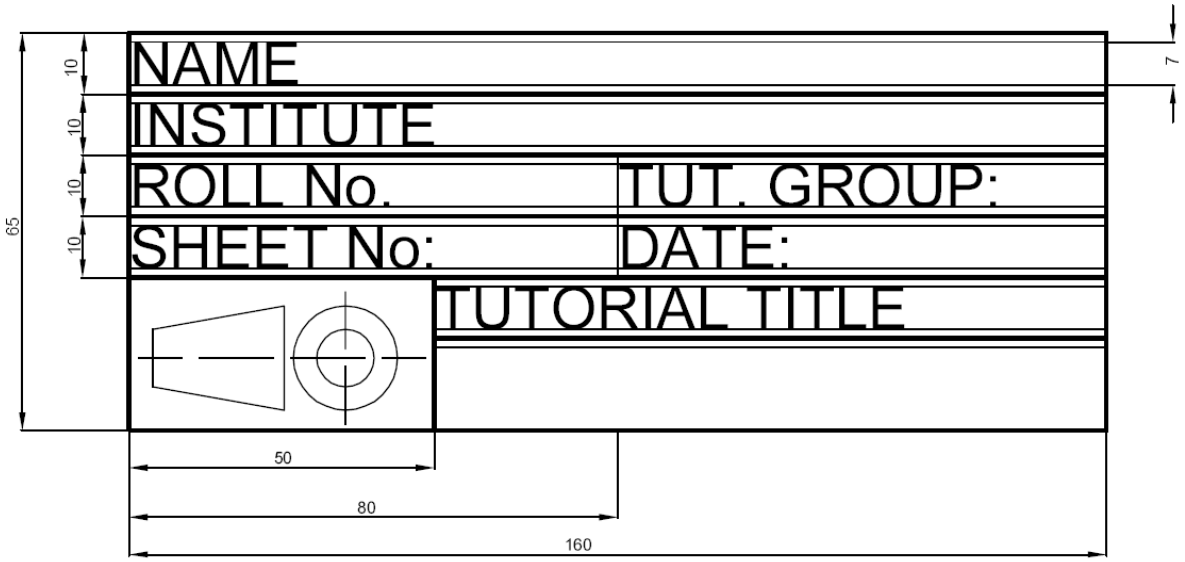
ME 111 Engineering Drawing: July - Nov 2017
Indian Institute of Technology Guwahati
Lab-1 [key] Lettering, Dimensioning and Scales 50 marks Friday Batch

1. Draw the margins as per the following drawing and draw the title block. [10 marks]

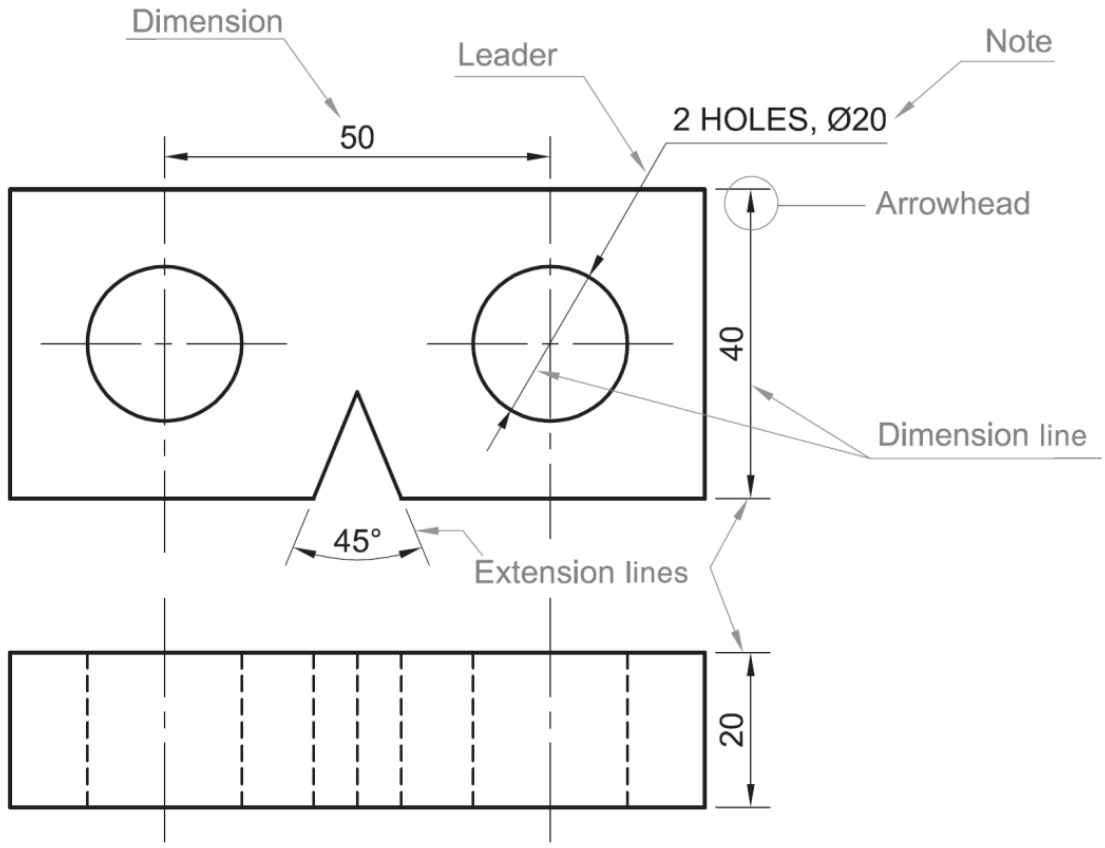


Drawing margins and location of title block



2. Write the following lines (*a* and *b*) in single-stroke vertical letters. Consider the height of capital letters as 8 mm. [15 marks]
   a. FINE LETTERING MAKES FINE DRAWING
   b. He Who Hesitates Is Lost

3. Learn the elements of dimensioning and draw the following figure on the drawing sheet neatly and label it properly. [10 marks]



4. On a map, a distance of 11 km is shown by a 22 cm long line. Find the RF. Construct the forward Vernier scale of this RF to read decameter (dam) and measure up to 4 km. Show distance of 1.37 km on your scale. [15 marks]

On a map, the distance of 11 km is shown by a 22 cm long line. Find the RF. Construct the forward vernier scale of this RF to read dam & measure upto 5.4 km. On this scale show distance 1.37 km

$$RF = \frac{22\text{ cm}}{11\text{ km}} = \frac{22}{(11\times100\times100)} = \frac{1}{5\times10^4}$$

$$LOS = \frac{1}{5\times10^4}\times 4\times10^5 = 8\text{ cm}$$

1 MSD = 1 hm

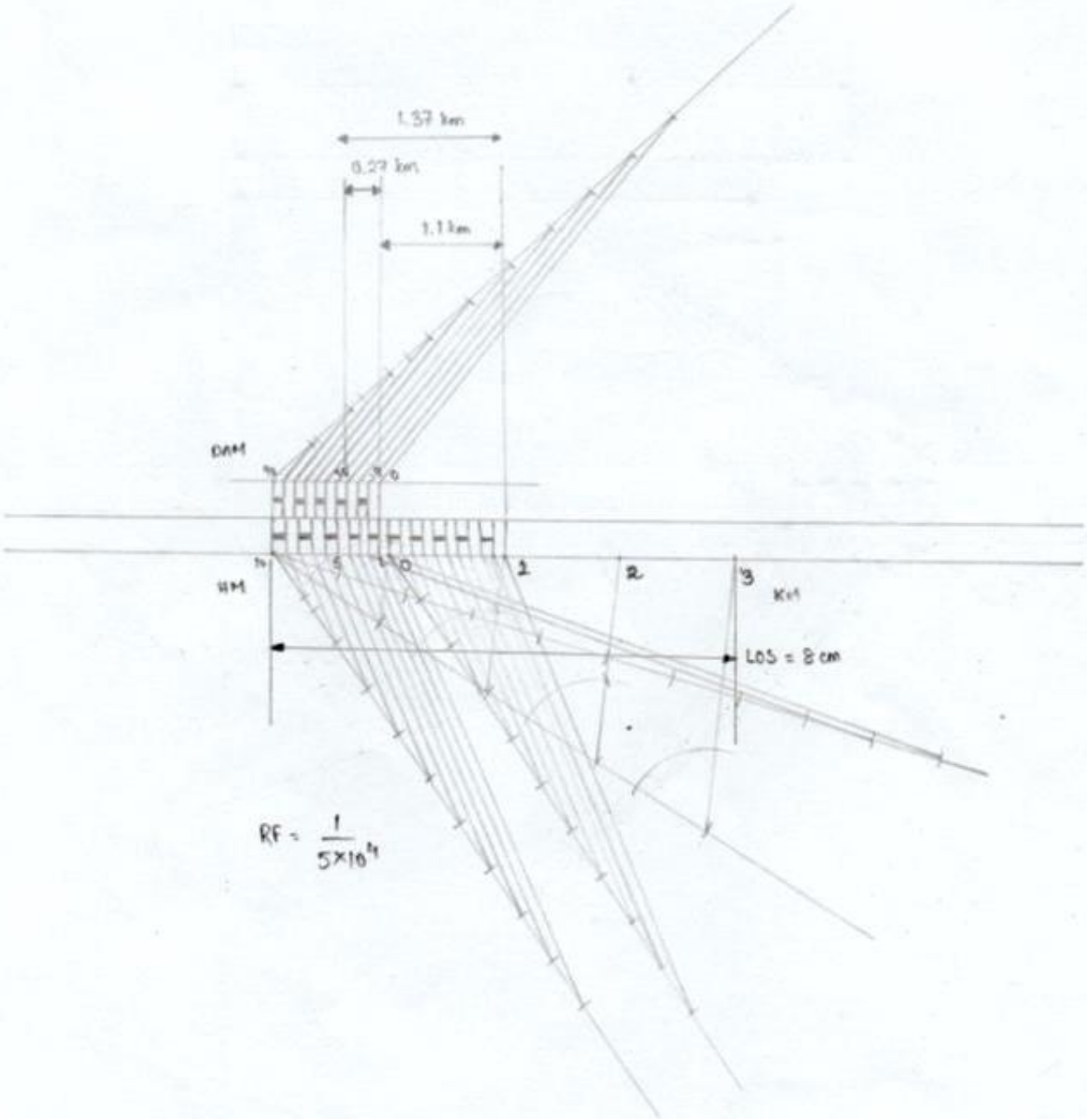
LC = 1 dam = $\frac{1}{10}$ MSD

LC = MSD − VSD

∴ 10 VSD = 9 MSD

length of vernier = 9 MSD

Each VSD = 0.9 hm = 9 dam



Paper ends.