

18MES101L - Engineering Graphics and Design

Reg. No		Ex. No	1
Name of the student		Week. No	1
Department		Title of the exercise	Introduction, lettering, 2D Geometrical constructions
Section		Date	

Regular class problems

WEEK #1. introduction, lettering and 2D Geometric construction.

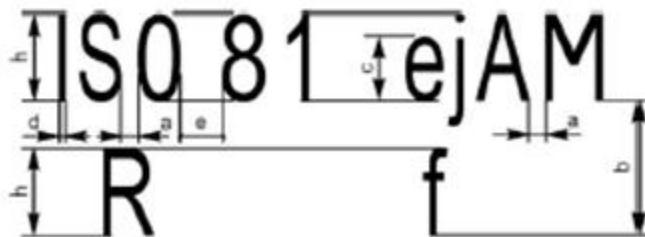
1. Write (Manually or using CAD software) the *Capital* letters A to Z, *small* letters a to z, and *Arabic numbers* 0 to 9 with 0.7 mm thick - lines and 0.5 mm thick line pencils.

2 Marks

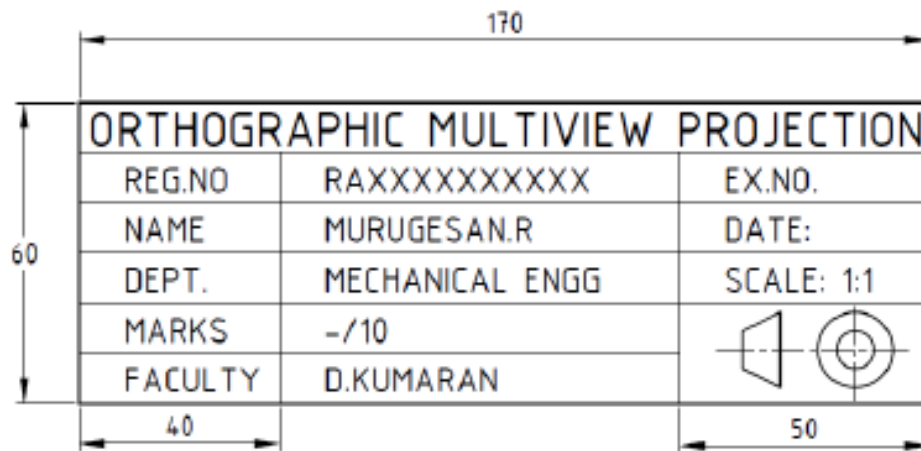
(Refer Table 1 for lettering specifications) 35 min/ 10 marks/ level 1/ Tech writing

Table 1 Lettering B ($d=h/10$)

Characteristic	Ratio	Dimensions, (mm)							
Lettering height (Height of capitals)	h (10/10) h	2.5	3.5	5	7	10	14	20	
Height of lower-case letters (without stem or tail)	e (7/10) h	—	2.5	3.5	5	7	10	14	
Spacing between characters	a (2/10) h	0.5	0.7	1	1.4	2	2.8	4	
Minimum spacing of base lines	b (14/10) h	3.5	5	7	10	14	20	28	
Minimum spacing between words	c (6/14) h	1.5	2.1	3	4.2	6	8.4	12	
Thickness of lines	d (1/10) h	0.25	0.35	0.5	0.7	1	1.4	2	



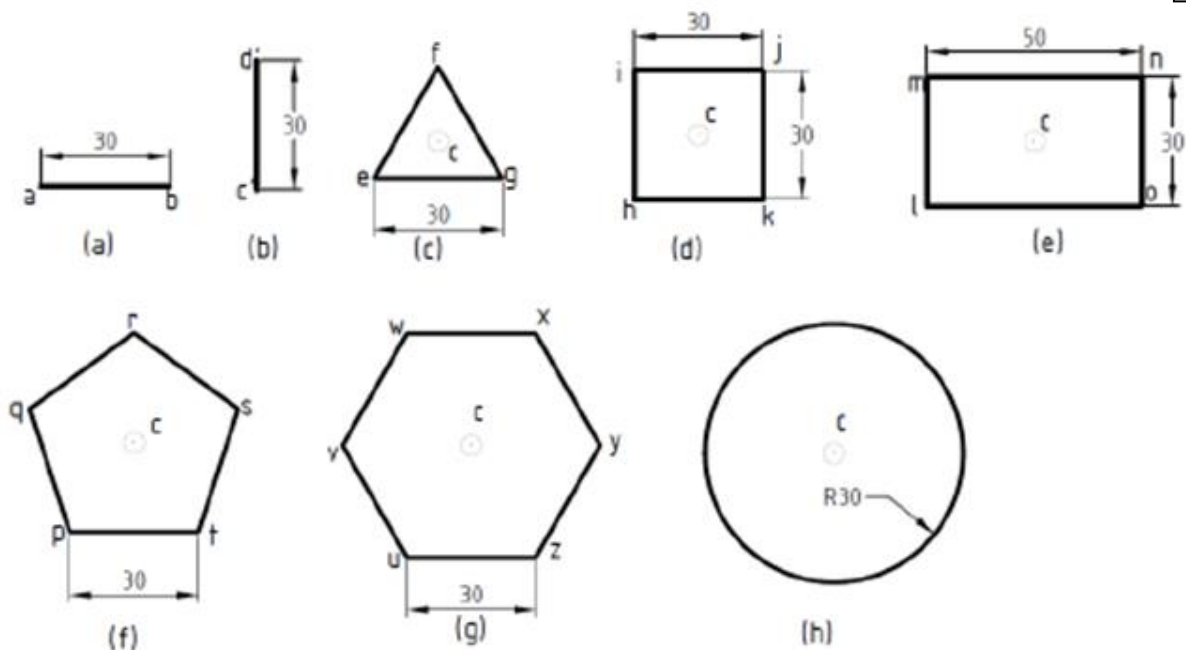
2. Draw Margins and Title block in drawing sheet. (Refer Figure 1) 45 min/ 05 marks/ level 1/



2 Marks

Figure 1 Tittle Block (All Dimensions are in mm)

3. Draw the basic 2D *geometric entities*, each of dimension or side or radius of 30mm (a vertical straight line, a horizontal straight line, an equilateral triangle, a square, a regular pentagon, a regular hexagon, and a circle). **With labels and dimensions.** (Students should learn drawing other regular polygonal shapes also) (Refer Figure 2) 70 min/ 35 marks/ level 1/ General



4 Marks

Figure 2 2D Geometric entities (All Dimensions are in mm)