

Code: 23ES1203

I B.Tech - II Semester – Regular Examinations - JULY 2024

**ENGINEERING GRAPHICS  
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

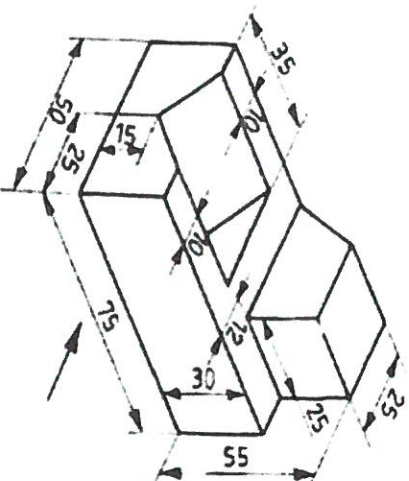
CO – Course Outcome

10 Draw three views of the blocks shown pictorially in figure according to first angle projection.

	BL	CO	Max. Marks
<b>UNIT-I</b>			
1		L2 CO1	14 M
Construct a parabola, with the distance of the focus from the directrix as 50 mm, also draw a normal and tangent to the curve at a point 40 from the directrix.			
<b>OR</b>			
2		L2 CO1	14 M
Draw a diagonal scale of R.F= 3/100, showing meters, decimeters & centimeters and measure upto 5 meters. Show the length of 3.69 meters on it.			
<b>UNIT-II</b>			
3		L3 CO2	14 M
A line measuring 80 mm long has one of its ends 60 mm above H.P and other end is 20 mm in front of V.P. and the other end is 15 mm above H.P. and in front of V.P. The front view of the line is 60 mm long. Draw the top view.			
<b>OR</b>			

4	A line AB of 70 mm long has its end A 20 mm above H.P and 15 in front of V.P. The line is inclined $30^\circ$ to H.P and $60^\circ$ to V.P. Draw its projections.	L3	CO2	14 M
<b>UNIT-III</b>				
5	An equilateral triangle ABC of side 40 mm has its plane parallel to V.P and 20 mm away from it. Draw the projections of the plane when one of its sides is (i) perpendicular to H.P. (ii) parallel to H.P and (iii) inclined at $45^\circ$ to H.P.	L3	CO3	14 M
<b>OR</b>				
6	Draw the projections of a cone of diameter of base 40 mm and axis 60mm long when it is lying on a point of the base on HP with its axis is inclined at $45^\circ$ to HP and perpendicular to VP.	L3	CO3	14 M
<b>UNIT-IV</b>				
7	A pentagonal prism of base side 30mm and axis length 60mm is resting on HP on one of its rectangular faces, with its axis perpendicular to VP. Axis is inclined at $40^\circ$ to VP. It is cut by a plane perpendicular to HP and passing through the point 25mm from front of base of the prism. Draw the top view and sectional front view	L3	CO4	14 M
<b>OR</b>				

8	A pentagonal pyramid, side of base 30 mm and height 60 mm, stands with its base on HP and an edge of the base is parallel to VP and nearer to it. It is cut by a plane perpendicular to VP, inclined at $40^\circ$ to HP and passing through a point on the axis, 32 mm above the base. Draw the sectional top view. Develop the lateral surfaces of the truncated pyramid.	L3	CO4	14 M
<b>UNIT-V</b>				
9	Draw three views of the blocks shown pictorially in figure according to first angle projection.	L6	CO5	14 M
<b>OR</b>				



Code : 23ES1203 ( PVP 23)

IB.TechII Semester Regular Examinations July 2024

## ENGINEERING GRAPHICS

( Common for CSE)

### KEY AND SCHEME OF EVALUATION

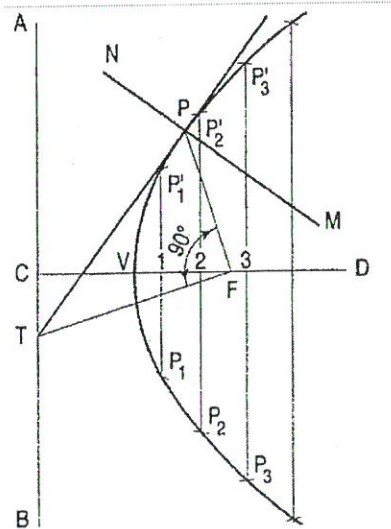
#### SCHEME:

1. For Directrix & Focus (4M) + Curve (8M) + Tang. & Norm (2M)	....	14 Marks
2. For calculation (4M) + Scale (8M) + Length (2M)	....	14 Marks
3. For locating axis, a', b' (6M) + TL & FV (6M) + TV (2M)	....	14 Marks
4. For Axis & One end proj. (6M) + TV & FV (8M)	....	14 Marks
5. For each view (4+5+5M)	....	14 Marks
6. For first position (6M) + Axis inclination (4M) + Final TV (4M)	....	14 Marks
7. For first position (8M) + Sec. FV & TV (6M)	....	14 Marks
8. For first position (6M) + Sec. Plane (4M) + Development (4M)	....	14 Marks
9. For FV (5M) + Top View (5M) + SV (4M)	....	14 Marks
10. For FV (5M) + Top View (5M) + SV (4M)	....	14 Marks

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**KEY**

**1) Construction of Parabola:**

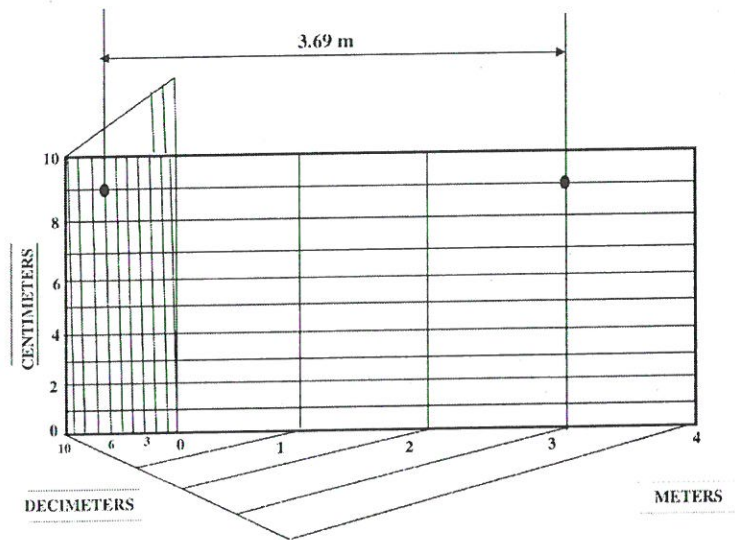


(OR)

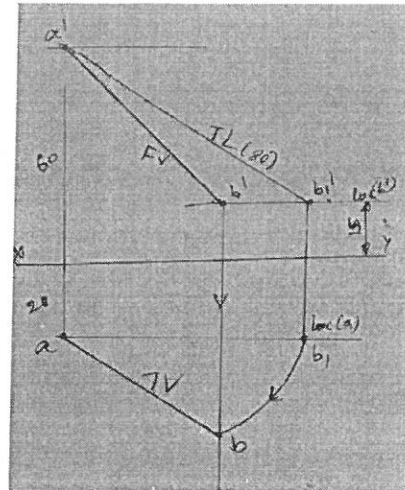
**2) Diagonal scale:**

$$\begin{aligned}
 \text{RF} &= 3/100 \\
 \text{Max Length (ML)} &= 5 \text{ m; (no. of parts of scale (n) = 5 parts)} \\
 \text{Length of scale (LOS)} &= \text{RF} \times \text{ML} \\
 &= (3/100) \times 5 \times 100 \text{ cm (1 m=100 cm)} \\
 &= 15 \text{ cm.}
 \end{aligned}$$

The length of the line that is drawn on the drawing sheet is 15 cm

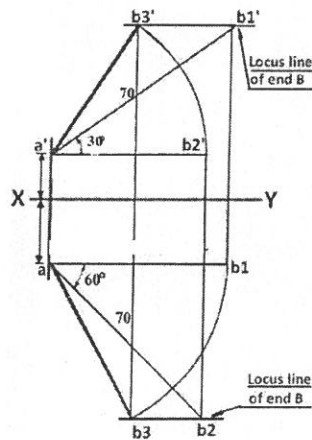


### 3) Projections of St. Lines:

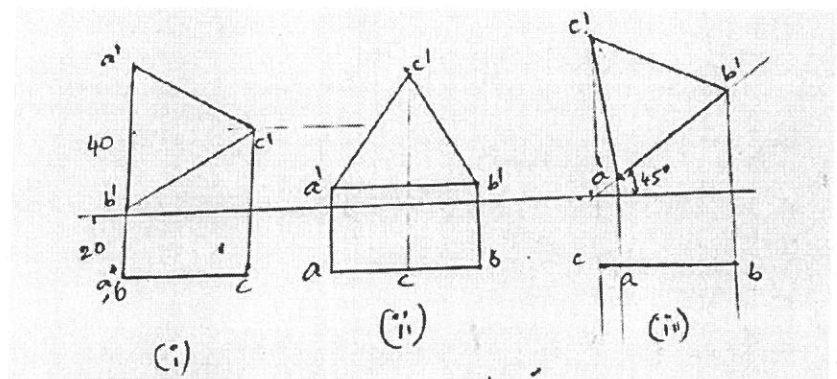


(OR)

### 4) Projections of St. Lines:



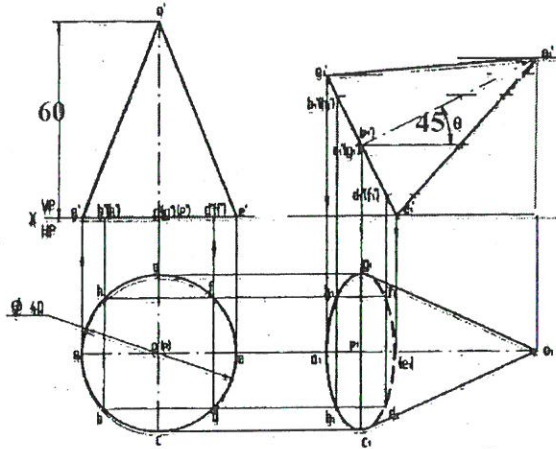
### 5) Projections of Planes:



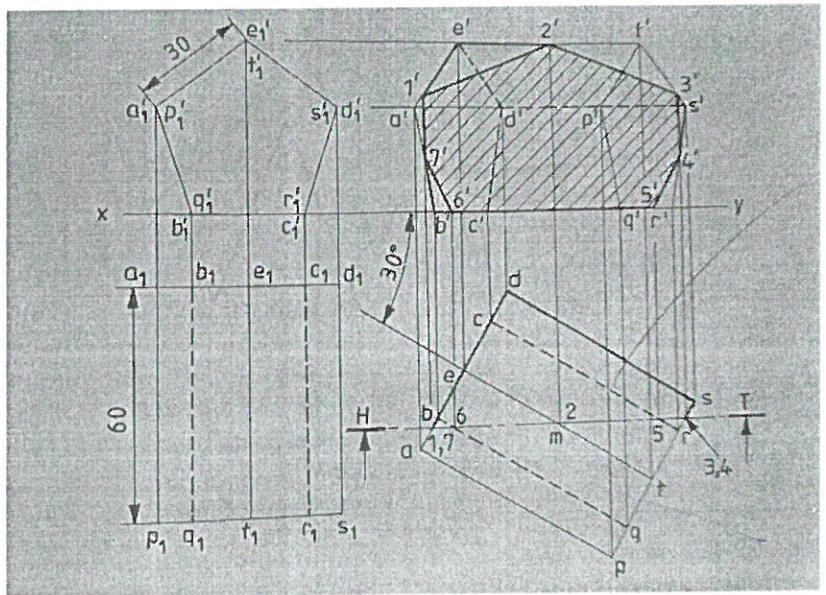


(OR)

6) Projections of Solids:

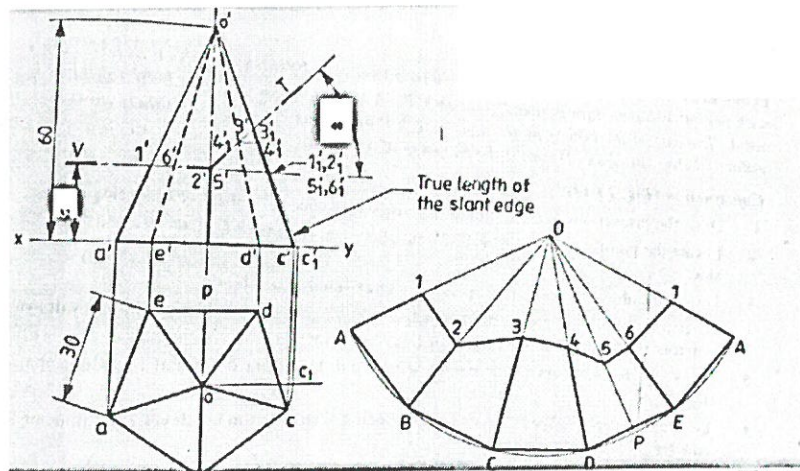


7) Sections of Solids:

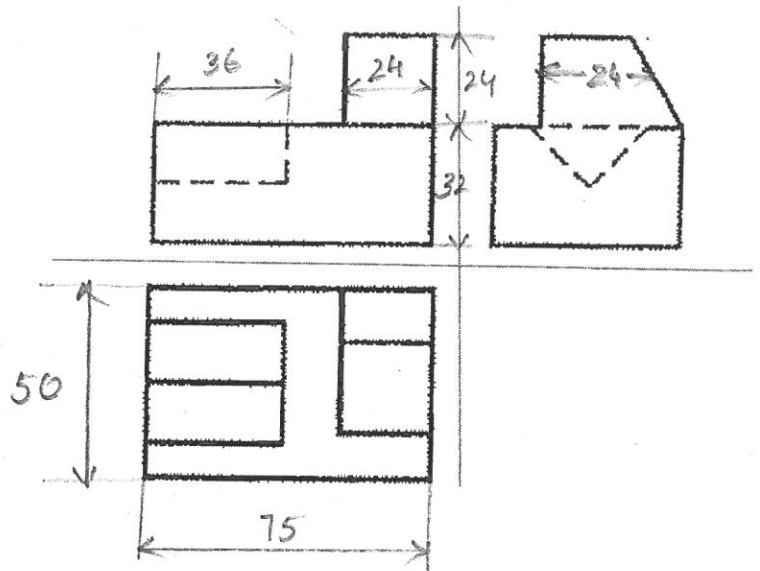
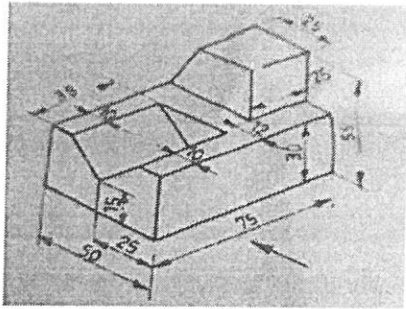


(OR)

8) Development of surfaces:



9) ORTHOGRAPHIC PROJECTIONS:



(OR)  
10) ORTHOGRAPHIC PROJECTIONS:

