

Code: 23ES1203

**I B.Tech - II Semester – Regular / Supplementary Examinations
JUNE 2026**

**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

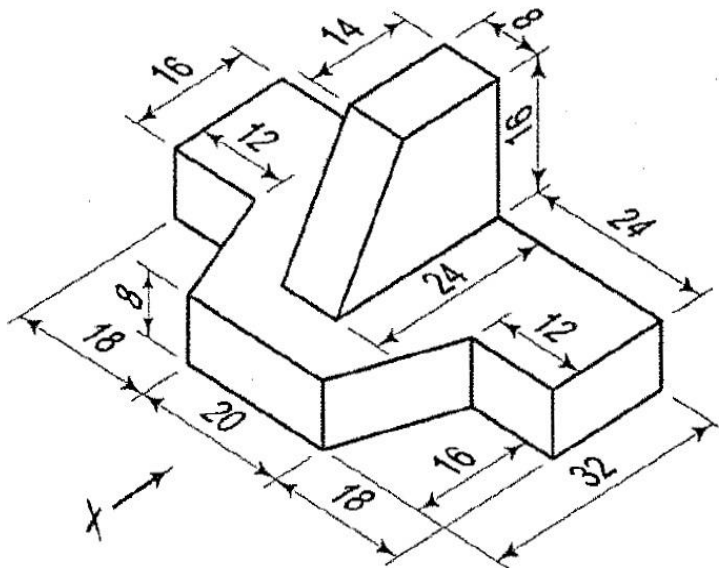
			BL	CO	Max. Marks
UNIT-I					
1	On a map, the distance between two points is 14 cm. The real distance between them is 20 km. Draw a diagonal scale of this map to read kilometers and hectameters and to measure upto 25 km. Show a distance of 17.6 km on its scale.		L3	CO1	14 M
OR					
2	Draw an involute of a circle of 40 mm diameter. Also, draw a normal and a tangent to it at a point 100 mm from the centre of the circle.		L3	CO1	14 M
UNIT-II					
3	a)	A point P is 15 mm above the H.P. and 20 mm in front of the V.P. Another point Q is 25 mm behind the V.P. and 40 mm below	L3	CO2	7 M

	the H.P. Draw projections of P and Q keeping the distance between their projectors equal to 90 mm. Draw straight lines joining (i) their top views and (ii) their front views.			
b)	Two points A and B are in the H.P. The point A is 30 mm in front of the V.P. while B is behind the V.P. The distance between their projectors is 75 mm and the line joining their top views makes an angle of 45° with XY. Find the distance of the point B from the V.P.	L3	CO2	7 M
OR				
4	A line AB, 65 mm long has its end A 20 mm above the H.P. and 25 mm in front of the V.P. The end B is 40 mm above the H.P. and 65 mm in front of the V.P. Draw the projections of AB and show its inclinations with the H.P. and the V.P.	L3	CO2	14 M
UNIT-III				
5	PQRS is a rhombus having diagonal PR = 60 mm and QS = 40 mm. Diagonals are perpendicular to each other. The plane of the rhombus is inclined with H.P. such that its top view appears to be square. The top view of PR makes 30° with the V.P. Draw its projections and determine inclination of the plane with the H.P.	L3	CO2	14 M

OR					
6	a)	A hexagonal pyramid base on H.P. and a side of the base parallel to and 25mm in front of the V.P. Taking side of base 40 mm & axis 65 mm long.	L3	CO2	7 M
	b)	A triangular prism, base 40 mm side and height 65 mm is resting on the H.P. on one of its rectangular faces with the axis parallel to the V.P. Draw its projections.	L3	CO2	7 M
UNIT-IV					
7	A cube of 50 mm long edges is resting on the H.P. with a vertical face inclined at 30° to the V.P. It is cut by a section plane, perpendicular to the V.P., inclined at 30° to the H.P. and passing through a point on the axis, 38 mm above the H.P. Draw the sectional top view and true shape of the section.		L3	CO2	14 M
OR					
8	Draw the development of a cone of base diameter 50 mm and height 70 mm using radial line method.		L3	CO3	14 M

UNIT-V

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| 9 | Draw the front view, top view and both side views of the given isometric view. | L3 | CO4 | 14 M |
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OR

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| 10 | Convert the given isometric view into orthographic views and draw the front view, top view and right-hand side view. | L3 | CO4 | 14 M |
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