



ACE
Engineering College
(with a Difference in Excellence)

An AUTONOMOUS Institution



Question Paper Code:

ME104ES

ACE-R20

Semester End Examination
I B. Tech- I Semester- JULY- 2021
Engineering Graphics
(Common to CIVIL & MECH)

Time: 3 Hours

Max. Marks: 70

H. T. No

Answer any five full questions from the following. All Questions carry equal marks.

M=Marks; CO=Course Outcomes; PO= Program Outcomes

Q.No	Question	M	CO	PO
1. a)	A ball thrown up in the air reaches a maximum height of 50 m. The horizontal distance traveled by the ball is 80 m. Trace the path of the ball and name it.	7	1&2	1,2, 3,10
b)	A vertex of a hyperbola is 50 mm from its focus. Draw the hyperbola; if the eccentricity is $3/2$	7	1&2	1,2, 3,10
2. a)	<ol style="list-style-type: none"> 1. Draw the front and top view of a point E, lying on H.P. and 50mm in front of the V.P. 2. Draw the front and top view of a point F, lying 70 mm above the H.P. and on V.P. 3. Draw the front and top view of a point G, lying on the H.P. and 50mm behind the V.P. 4. Draw the front and top view of a point H, lying 70 mm below the H.P. and on V.P. 	7	1&2	1,2, 3,10
b)	Construct a diagonal scale $1/50$, showing meters, decimeters and centimeters, to measure up to 5 meters. Mark a length 4. 75 m on it.	7	1&2	1,2, 3,10
3.	Draw a hypocycloid of a circle of 40 mm diameter which rolls inside another circle of 200 mm diameter for one revolution. Draw a tangent and normal at any point on it.	14	1&2	1,2, 3,10
4.	Draw the projections of a regular hexagon of 25 mm side, having one of its sides in the H.P. and inclined at 60° to the V.P., and its surface making an angle of 45° with the H.P.	14	1&2	1,2, 3,10
5.	A pentagonal pyramid 35mm sides of base and 60mm axis length rest on HP on one of its edges of the base which is inclined to V.P at 30° . Draw the projections of the pyramid when the axis is inclined to H.P at 45° .	14	1&2	1,2, 3,10
6.	A pentagonal pyramid, side of base 30 mm and height 60 mm, stands with its base on H.P and an edge of the base is parallel to V.P. It is cut by a plane perpendicular to V.P, inclined at 30° to H.P and passing through a point on the axis, 34 mm above the base. Draw the sectional top view and develop the lateral surface of the truncated pyramid.	14	1&2	1,2, 3,10
7.	A vertical cylinder of 70 mm diameter is penetrated by another cylinder of 40 mm diameter, the axis of which is parallel to both the HP and the VP. The axis of two cylinders are 9 mm apart. Draw projections showing curves of intersection	14	1&2	1,2, 3,10

8. Draw the orthographic views of the dovetail bracket shown Fig1

14

1&2,3

1,3,5

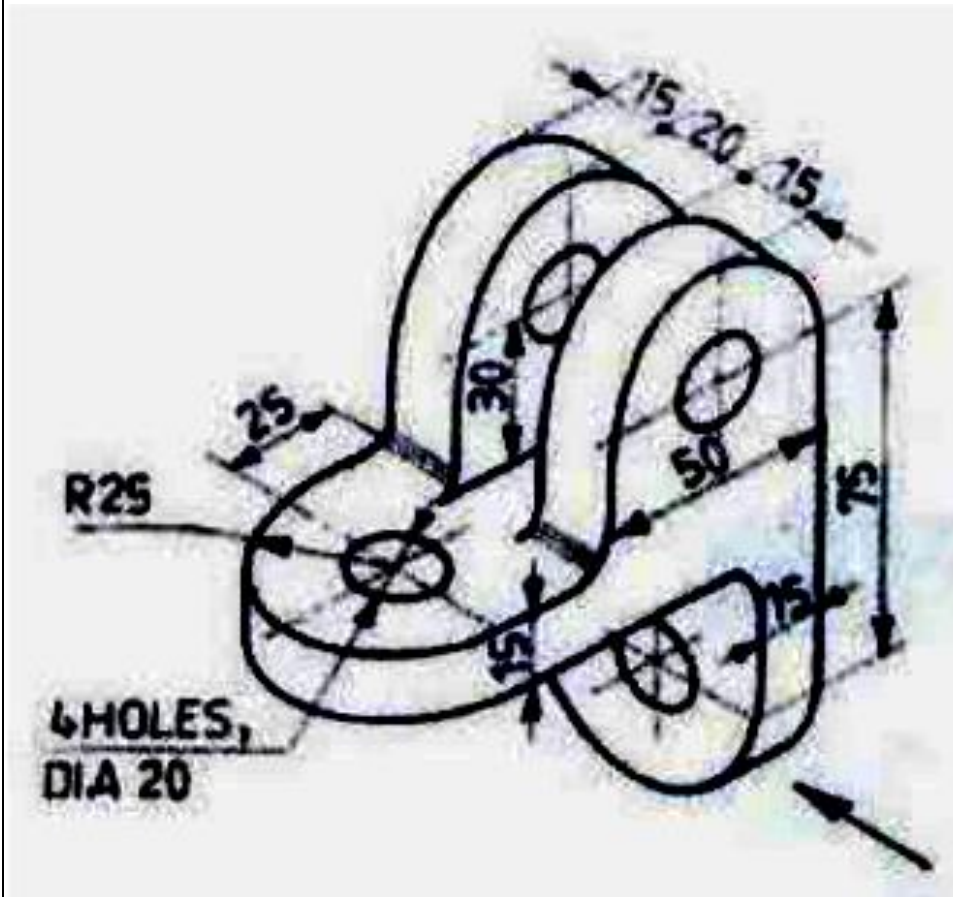


Fig 1