

GANPAT UNIVERSITY**B. Tech. Semester: Ist (CBCS) Regular Examination Dec-2014****Subject:-2ME102 ENGINEERING GRAPHICS****Time: 3 Hours****Total Marks: 60**

Instruction: (1) This Question paper has two sections. Attempt each section in separate answer book.

(2) Figures on right indicate marks.

(3) Be precise and to the point in answering the descriptive questions.

(4) Make suitable assumption if required.

Section - I

Que. – 1 O_1ABO_2 is a four bar chain with the link O_1O_2 as the fixed link. Driving crank O_1A is 40 mm long. Driven crank O_2B is also 40 mm long. Connecting link AB is 100 mm long. Distance between O_1 and O_2 is 100 mm. Two cranks are in opposite directions. Draw the loci of points P and R for one complete revolution of the driving crank. The point P is the mid-point of the connecting link AB and the Point R is 35 mm from A on BA extended. 10

OR

Que. – 1 (a) Draw an ellipse when the distance of the focus from the directrix is equal to 65 mm and eccentricity is 0.7. 6

(b) Draw a pentagon of side 40 mm using three circle method. 4

Que. – 2 The Top View and Front View of line XY 100 mm long measures 85 mm and 75 mm respectively. The Point X is 10 mm above H.P. and 15 mm in front of V.P. Draw the projection of Line XY and determine its inclination with H.P. and V.P. 10

OR

Que. – 2 Draw the projection of a circle of 70 mm diameter resting on H.P. on a point A of the circumference. Plane is inclined to the H.P. such that the plan of it is an ellipse of minor axis 40 mm. The plan of the diameter through the plane is making an angle of 45° with the V.P. Measure the angle with the H.P. 10

Que. – 3 Draw (i) Elevation, (ii) R.H.S.V. and (iii) Top Plan of the object given in **Fig (1)** by considering object in 3rd angle system. 10

Section – II

Que. – 4 A pentagonal pyramid, edge of base 50 mm and height 80 mm, resting on a corner of its base on H.P. in such a way that the slant edge containing that corner makes an angle of 55° with H.P. and 45° with V.P. Draw the projection by keeping apex near to the observer 10

OR

Que. – 4 Vertical and horizontal cylinder of 80 mm (equal) diameter and 70 mm height, intersect at right angle. Draw the projections, in 1st angle system, of two cylinders showing line of intersection when axes of both the cylinders are parallel to V.P. 10

Que. - 5 A hexagonal prism is resting on H.P. on its base with two edges, sides of base parallel to V.P. It is cut by A.I.P. perpendicular to V.P. and inclined to H.P. by 45° passing through a point of axis 40 mm above the base. Draw three principal projections and find the true shape of section. Take side of base 40 mm and height 60 mm. 10

OR

Que. - 5 Plan and elevation of a cylinder with section is given in the Fig-2. Draw the development of the cut cylinder. 10

Que. - 6 Draw the isometric projection of Fig (3). 10

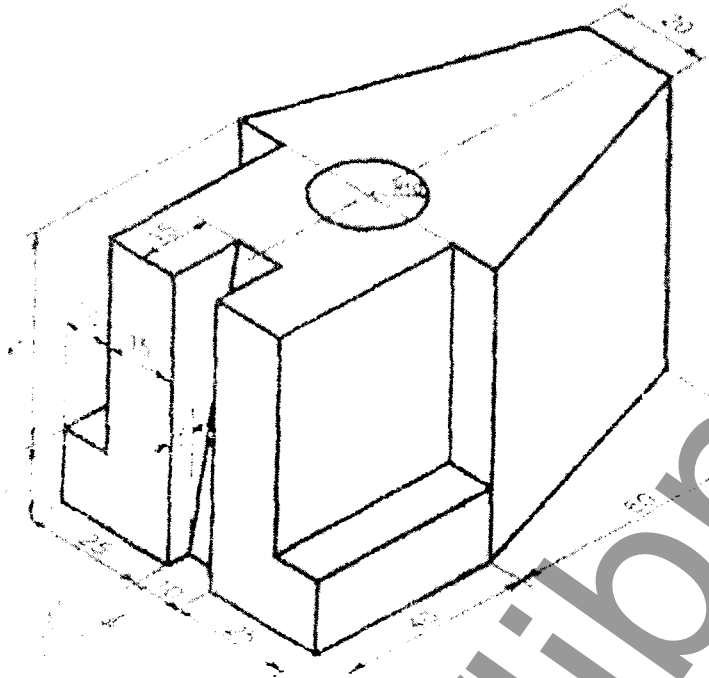


Fig (1)

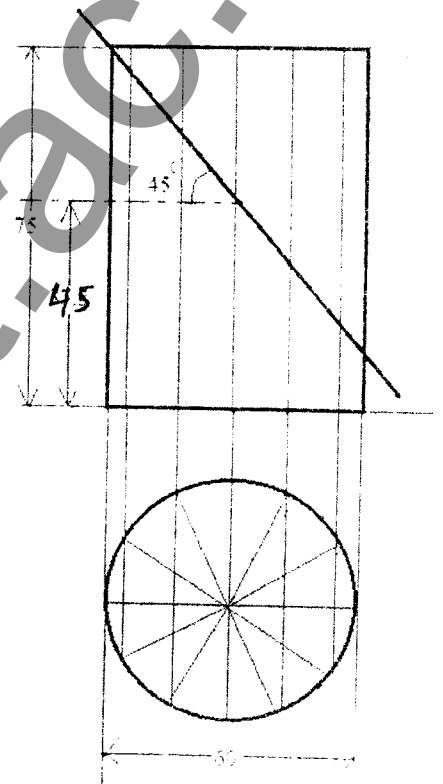
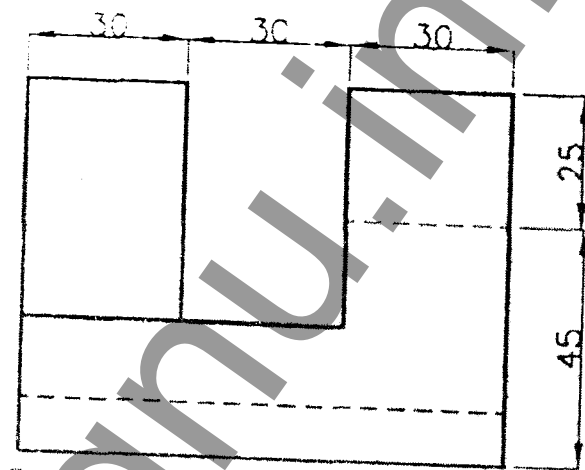
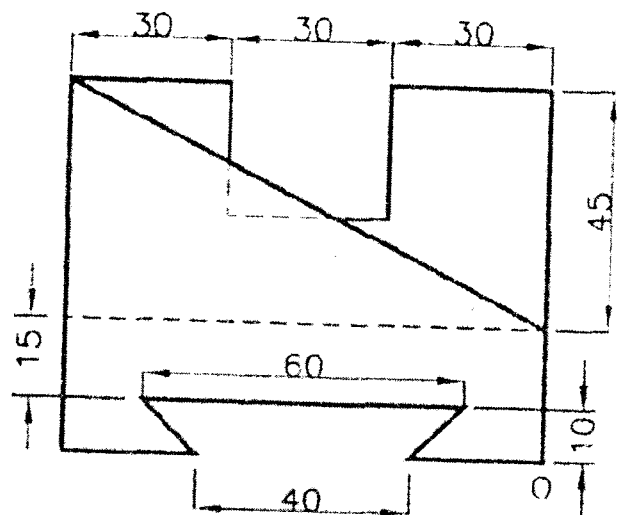


Fig (2)



SIDE VIEW



FRONT VIEW

Fig (3)

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