

R16

Code No: 132AE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year II Semester Examinations, August - 2018

ENGINEERING GRAPHICS
(Common to EEE, ECE, EIE)

Max. Marks: 75

Time: 3 hours

Answer all five questions
All questions carry equal marks

- 1.a) Construct a scale of R.F. = 2.5 to show decimeters and centimeters and by a vernier to read millimeters, to measure up to 4 decimeters.
- b) 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 center of the circle. [8+7]

OR

- 2.a) Draw a diagonal scale of R.F. = (3/100), showing meters, decimeters and centimeters, and to measure up to 5 meters. Show the length of 3.69 meters on it.
- b) Construct a hypocycloid, rolling circle 50 mm diameter and directing circle 175 mm diameter. Draw a tangent to it at a point 50 mm from the center of the directing circle. [8+7]
3. ABC is an equilateral triangle of altitude 50 mm with AB in xy and C below it. ABC' is an isosceles triangle of altitude 75 mm and C' is above xy. Determine the true shape of the triangle ABC, of which ABC is the top view and ABC' is the front view. [15]

OR

4. Draw the projections of a line AB, 90 mm long, its mid-point M being 50 mm above the H.P. and 40 mm in front of the V.P. The end A is 20 mm above the H.P. and 10 mm in front of the V.P. Show the traces and the inclinations of the line with the H.P. and the V.P. [15]
5. A square pyramid, base 40 mm side and axis 90 mm long, has a triangular face on the ground and the vertical plane containing the axis makes an angle of 45° with the V.P. Draw its projections. [15]

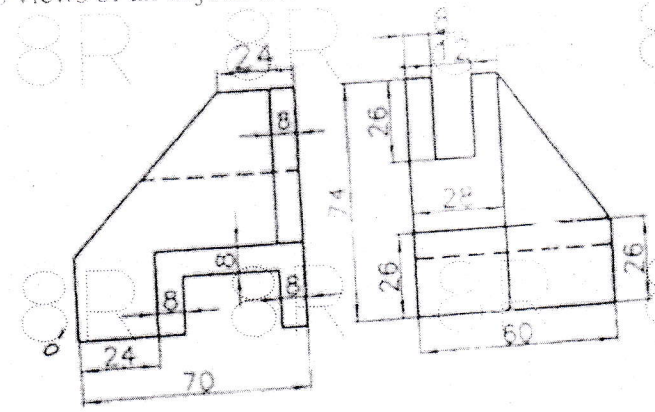
OR

6. A tetrahedron of 75 mm long edges has one edge parallel to the H.P. and inclined at 45° to the V.P. while a face containing that edge is vertical. Draw its projections. [15]
7. A square pyramid of base side 25 mm and altitude 50 mm rests on its base on the HP with two sides of the base parallel to VP. It is cut by a plane bisecting the axis and inclined at 30° to the base. Draw front view, sectional top view and true shape of the section. [15]

OR

8. A cone of 90 mm diameter of base and 90 mm height stands on its base on the ground. A semi-circular hole of 50 mm diameter is cut through the cone. The axis of the hole is horizontal and intersects the axis of the cone. It is 30 mm above the base of the cone. The flat surface of the hole contains the axis of the cone and is perpendicular to the V.P. Draw the development of the surface of the cone. [15]

9. Fig.1 shows two views of an object. Draw isometric view of the object. [15]



All dimensions are in mm

Fig.1
OR

10. Fig. 2 shows pictorial view of an object. Draw (a) Sectional Front View along A-A, (b) Sectional Left hand side view along B-B, and (c) Top View. Dimension the views. [15]
(All dimensions are in mm)

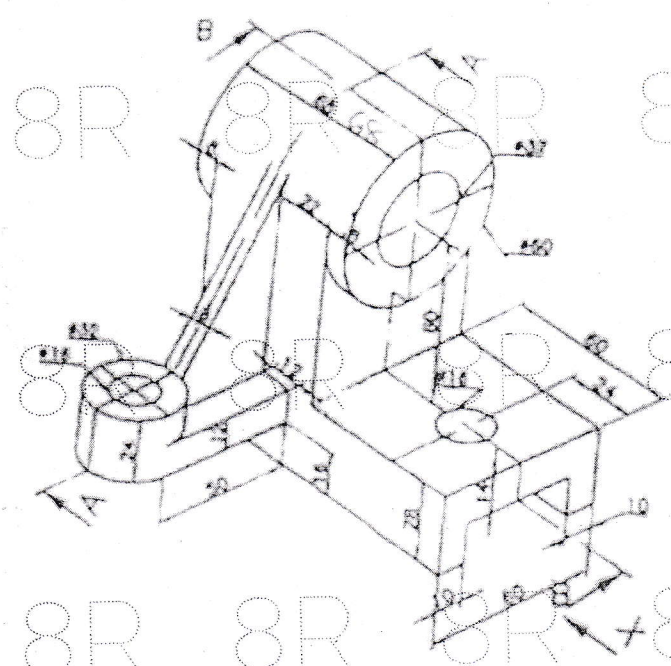


Fig.2

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