CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I–B.TECH–II–Semester End Examinations (Supply) -January- 2025
ENGINEERING GRAPHICS
(Common for CSE, IT, CSC, CSD)

[Time: 3 Hours]   [Max. Marks: 70]

Note: It consists of 5 units. Answer any one full question from each unit. Each question carries 14 marks and may have a, b, c as sub questions.

5*14=70 M

1. Construct an Ellipse, with distance of the focus from the directrix is 50 mm and eccentricity is 2/3. Draw the normal and tangent to the curve at a point 40 mm from the directrix. [14M]

OR

2. Draw a hypo-cycloid of a circle of 40 mm diameter, which rolls inside another circle of 160 mm diameter, for one revolution counter clockwise. Draw a tangent and normal to it at a point 65 mm from the center of the directing circle. [14M]

3. Draw the projections of the following points, keeping the distance between the projectors as 25 mm on the same reference line: [14M]
   Point P is 25 mm above H.P and 45 mm in front of V.P
   Point Q is 35 mm above H.P and 50 mm behind V.P
   Point R is 30 mm below H.P and 40 mm in front of V.P
   Point S is 55 mm below H.P and 40 mm behind V.P
   Point T is 50 mm above H.P and on V.P
   Point U is on H.P and 35 mm in front of V.P.

OR

4. A circular lamina of diameter 60 mm has the end A of the diameter AB in the HP and the end B on the VP. Draw its projections when the surface inclined at 40^0 to the HP and 50^0 to VP. [14M]

5. A Hexagonal prism of base side 30 mm, axis length 60 mm is resting on HP on one of its base sides with its axis inclined at 40° to HP and parallel to VP. Draw its projections. [14M]

OR

6. A pentagonal pyramid of side of base 35 mm and axis 50 mm long, stands with its base on H.P such that, one of the base edges is perpendicular to V.P. A section plane parallel to V.P cuts the solid at a distance of 15 mm from the corner of the base which is nearer to the observer. Draw the top and sectional front views of the cut solid [14M]

7. A square prism of side of 40 mm and axis 80 mm long, is resting on its base on H.P., such that, a rectangular face of it is parallel to V.P. Draw the development of the prism. [14M]

OR

8. A vertical cylinder with a 60 mm base diameter rests on its base on the H.P. It is penetrated by a horizontal cylinder of same diameter such that their axes bisect each other at right angles. Draw their three views and show the curves of intersection. [14M]

9. Draw the front view, top view and left side view of the object shown below. All [14M] dimensions are in mm.
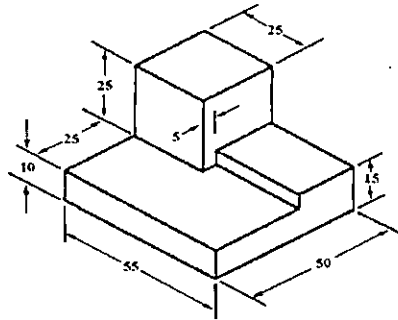
OR

10. Two views of a casting are shown below. Draw the isometric view of the casting [14M] (dimensions are in mm).

****