Reg. No. :

Question Paper Code :U1709

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

First Semester

Civil Engineering

21UME109 – ENGINEERING GRAPHICS

(Common to EEE, Mechanical, IT & Agricultural Engineering branches)
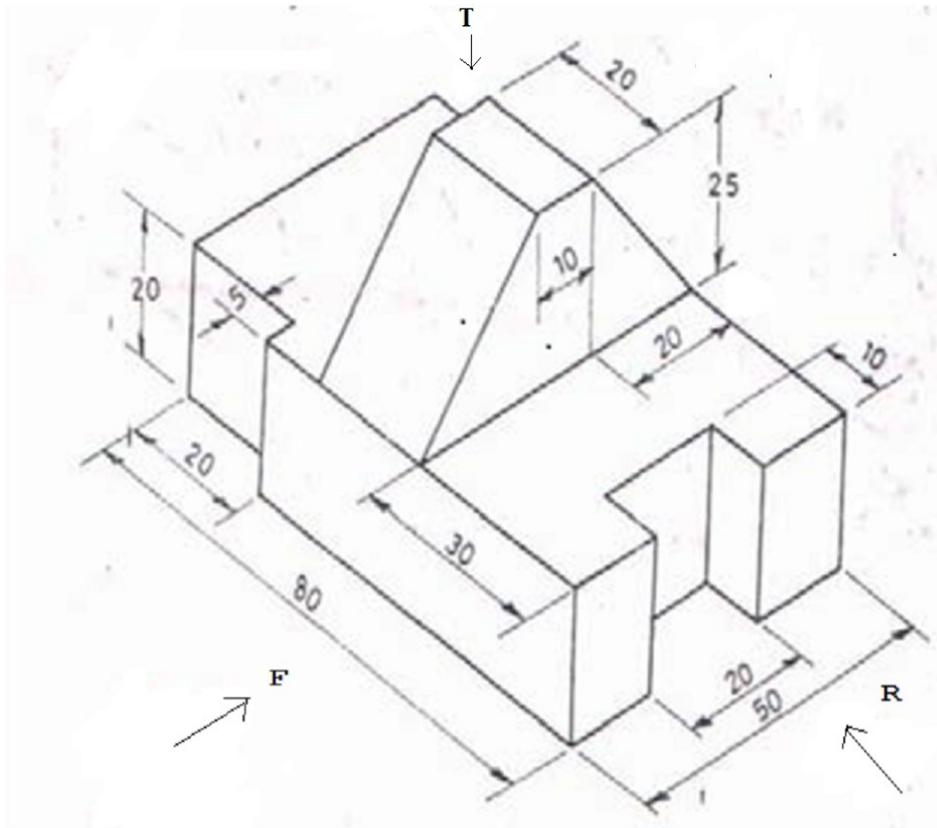
(Regulations 2021)

Duration: Three hours   Maximum: 100 Marks

PART A - (5 x 20 = 100Marks)

1. (a) A square prism edge of base 35mm and axis 70mm has one of its   CO2-App   (20)
         base edges on HPwith its axis inclined at 40 degrees to the HP and
         Parallel to VP. Draw its projections.

                                         Or

    (b) A pentagonal pyramid of base side 30mm, axis height 60mm is   CO2-App   (20)
         resting on HP on one of its base edges with its axis inclined at 50˚to
         HP and parallel to VP. Draw the projections of the pyramid.

2. (a) A Cube of side 35 mm placed and cut by a plane in such a way that   CO2- App (20)
         the true shape of section is a regular hexagon. Draw the front view,
         top View of the cube and determine the inclination of the plane with
         the HP.

                                         Or

    (b) A cone of 50 mm diameter and axis 70 mm long. Its base is on HP.   CO2- App (20)
         It is cut by a sectional plane perpendicular to VP and inclined to HP
         at 45° from apex 32mm. Draw its front view, sectional top View
         and true shape of section.

3. (a) Draw the development of a hexagonal prism of base edge 30mm and   CO3-App   (20)
         axis 60mm is resting on HP with its base such that two of its base
         edges parallel to VP. It is cut by a plane inclined at 35˚ to HP and
         passing through the axis at 15mm from the top.

                                         Or

(b) A square pyramid, with side of base 30 mm and axis 50 mm long, is CO3-App (20)
resting on its base on HP with an edge of the base parallel to VP. It
is cut by a section plane, perpendicular to VP and inclined at 30° to
HP. The section plane is passing through the mid-point of the axis.
Draw the development of the surface of the cut pyramid.

4. (a) A hexagonal prism of base side 30mm and axis 60mm is resting on CO4-Ana (20)
HP on one of its bases with two of the vertical faces perpendicular to
VP. It is cut by a plane inclined at 30° to HP and perpendicular to
VP passing the axis at a distance of 20mm from the top surface.
Draw the isometric view of the truncated prism.

Or

(b) Draw the isometric projection of a pentagonal pyramid of base side CO4-Ana (20)
35 mm and axis 60mm. The prism rests on its base on the HP with
an edge of the base parallel to the VP.

5. (a) Draw the three principal views of the component as shown in the CO5-U (20)
figure

Or

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(b) Draw the three orthographic views for the following figure.   CO5-U   (20)

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