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**Question Paper Code: R1709**

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

First Semester

Computer Science and Engineering

R21UME109–ENGINEERING GRAPHICS

(Common to EEE, ECE, MECH,IT, AGRI, CSE(SC) & CSE

(IoT) branches)

(Regulations R2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) A cylinder of base diameter 50mm and axis height 65mm is resting on HP on its base with its axis inclined at  $50^\circ$  to HP and parallel to VP. Draw its projections. CO2-App (20)  
Or  
(b) A hexagonal pyramid of base side 40 mm and axis length 70 mm is resting on HP on one of its base corner with its axis parallel to VP and inclined  $50^\circ$  to HP. Draw its projections. CO2-App (20)
2. (a) A hexagonal prism of base side 30mm and axis 55mm rests on HP on its base with two base edges parallel to VP. It is cut by a plane inclined at  $30^\circ$  to HP and cutting the axis of the prism at 25mm from top. Draw the sectional top view, front view and true shape of the section. CO2-App (20)  
Or  
(b) A triangular pyramid of side 40mm and axis 60mm long resting on HP with one of the edges is perpendicular to VP. It is cut by a sectional plane perpendicular to VP and inclined at  $45^\circ$  to HP and passing through the axis 30 mm from the vertex. Draw the sectional Top view, Front view and true shape of the section. CO2-App (20)
3. (a) Draw the Development of the lateral surface of the lower portion of a cylinder of diameter 50 mm and height 60 mm when sectioned by a plane inclined at  $40^\circ$  to HP and Perpendicular to VP and passing through the axis at 35 mm from the base. CO3-App (20)

Or

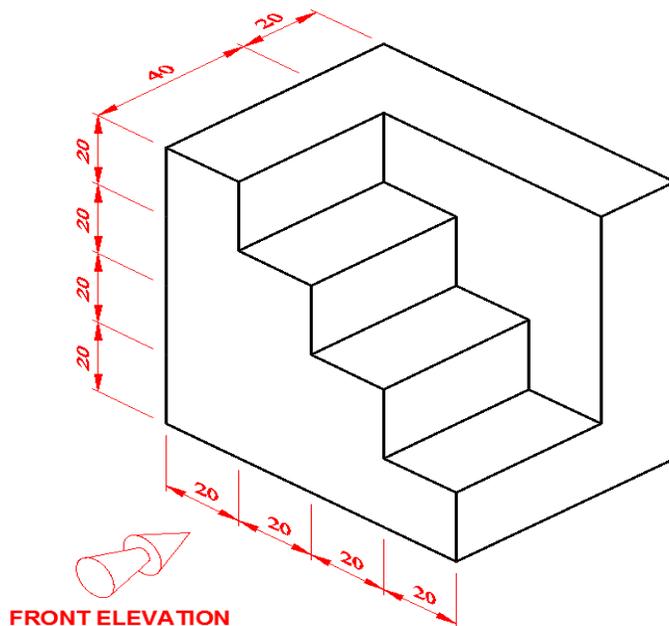
- (b) A Pentagonal Pyramid of base 25 mm and height 65 mm stands with its base on HP such that one of the base edges is parallel to VP. It is cut by a sectional plane perpendicular to the VP, inclined at  $30^\circ$  to HP and bisecting the axis. Draw the development of the surface of the cut solid. CO3-App (20)

4. (a) Draw the isometric projection of a Square prism of base side 30 mm and axis 70mm. The prism rests on its base on the HP with an edge of the base parallel to the VP. It is cut by a cutting plane, perpendicular to VP and inclined to HP at  $30^\circ$  and meeting the axis at 30 mm from the top end. Draw the isometric view of the truncated solid. CO4-App (20)

Or

- (b) A Hexagonal pyramid of base side 35mm and height 70mm rests on its base on HP with two of its base edges perpendicular to VP. It is cut by a plane perpendicular to VP and inclined at  $40^\circ$  to HP, meeting the axis at a point 35 mm above the base of the pyramid. CO4-App (20)

5. (a) Draw the front view, top view and right side view for the following figure. CO5-App (20)



Or

- (b) Draw the three principal views of the component shown in the Figure CO5-App (20)

