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**Question Paper Code:R1709**

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

First Semester

Computer Science and Design

R21UME110 – ENGINEERING DRAWING AND DESIGN

(Regulations R2021)

Duration: Three hours

Maximum:100Marks

PART A- (5x20 =100 Marks)

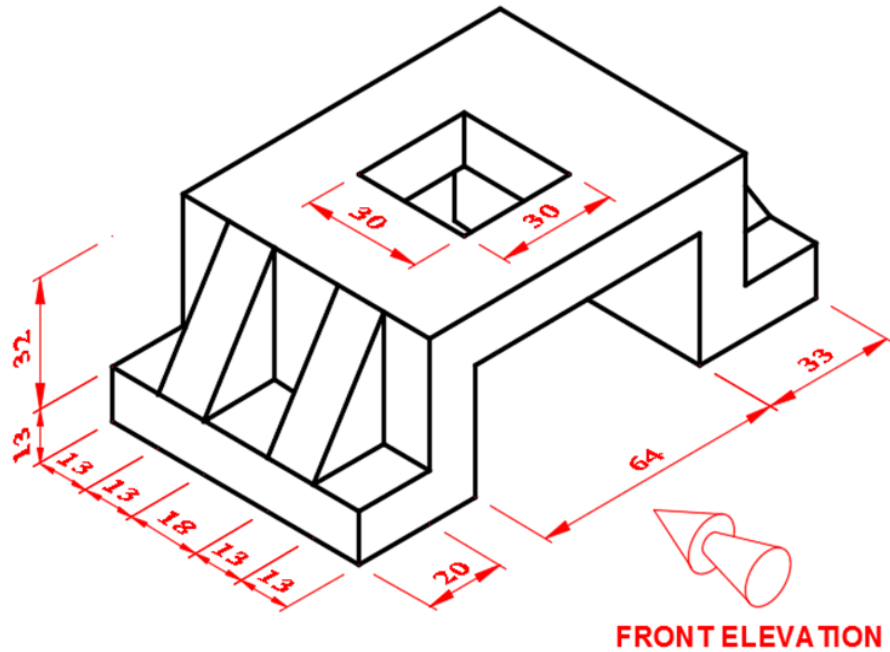
Answer All Questions

1. (a) Construct a parabola when the distance of focus from the directrix is equal to 40 mm. CO1-App (20)  
Or  
(b) A circle of 50 mm diameter rolls along a line. A point on the circumference of the circle is in contact with the line in the beginning and after one complete revolution. Draw the cycloidal path of point. Draw a tangent and normal at any point on the curve. CO1-App (20)
2. (a) A Pentagonal Prism of base 30 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 and inclined at  $45^\circ$  to HP and bisecting the axis. Draw the development of the surface of the cut solid. CO2-App (20)  
Or  
(b) A hexagonal pyramid of base side 30mm, altitude 70mm is resting on HP on one of its base corners with its axis inclined at  $55^\circ$  to HP and parallel to VP. Draw the projections of the prism. CO2-App (20)
3. (a) A hexagonal prism of base side 30mm and axis 60mm is resting on HP on one of its bases with two of the vertical faces perpendicular to VP. It is cut by a plane inclined at  $30^\circ$  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. CO3-App (20)

Or

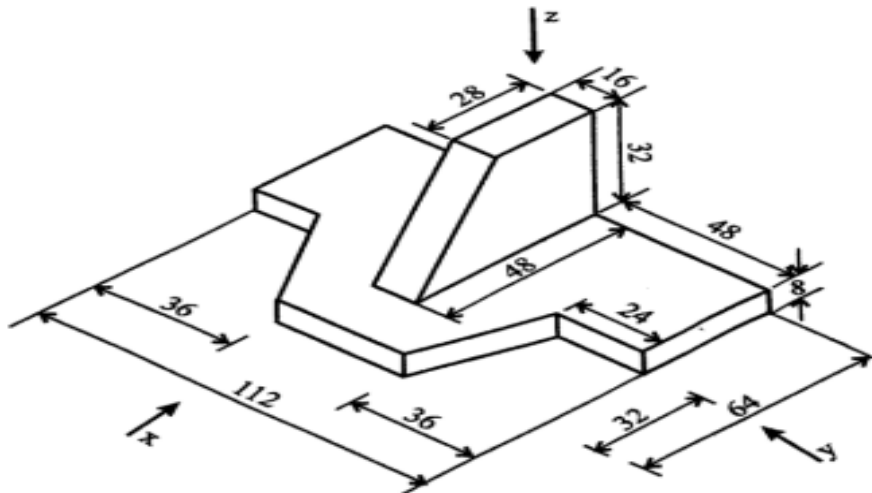
- (b) A square prism of side of base 30 mm and axis height 50 mm is lying on the ground on its base with parallel to and 15 mm behind PP. The station point is 40 mm in front of PP and 60 mm above the GP and lies in a central plane passing through a point 25 mm to the right end of the prism. Draw the perspective projection of the prism. CO3-App (20)

4. (a) Draw three views of the blocks shown pictorially in figure according to first angle projection. CO4-App (20)



Or

- (b) Draw three views of the blocks shown pictorially in figure according to first angle projection. CO4-App (20)



5. (a) Draw the perspective view of a square pyramid of base side 30 mm, height of apex 45 mm rest on GP. The nearest edge of base is parallel to VP and 20 mm behind the picture plane. The station point is situated at a distance of 60 mm in front of the PP and 40 mm to the right of the apex of the pyramid and 55 mm above the ground. CO3-App (20)

Or

- (b) Draw three views of the blocks shown pictorially in figure CO4-App (20) according to first angle projection.

