# MAR-APR-2024 SUMMER EXAMINATION

## B.Tech. CBCS
### Sub. Name: Engineering Graphics
### Sub. Code: 71014/03202

Day and Date: MAY ,27-05-2024      Total Marks: 70

Time: 10:30 AM To 02:00 PM

Instructions: 1. All questions are compulsory
    2. Assume suitable data wherever necessary and mention it boldly
    3. Drawings must be drawn to the given scale

Special Inst.: 1) All Dimensions are in mm,
    2) Use both side of drawing paper.

Q1) a) An isosceles triangular plate of 50 mm base and 75 mm altitude appears as an [15] equilateral triangle of 50 mm in TV, Draw the projections of a plate if its 50 mm long edge is on the HP and inclined 45 degree angle to the VP,(10)
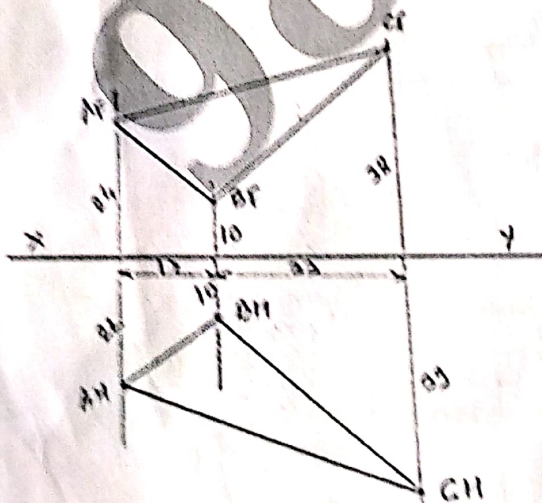
<div align="center">OR</div>

a) A regular pentagon of 30 mm sides is resting on HP on one of its sides with its surface 45 degree angle inclined to HP. Draw it's projections when the side in HP makes 30 degree angle angle with VP (10)

b) Solve any One

i) Complete the projections of line AB if Grade is 75%, bearing is S45E and true length is 80mm, Assume point A is 15mm above HRP & 15mm in front of FRP,(5)

ii) Find the angle made by plane ABC with HP and its perimeter.(5)



Q2) A regular cone of 40 mm base diameter and 65 mm axis height is resting on HP on [10] its apex, it is tilted to have its slant edge perpendicular to HP and it is further tilted to have its top view of the axis 45 degree angle to VP. Complete the projections.
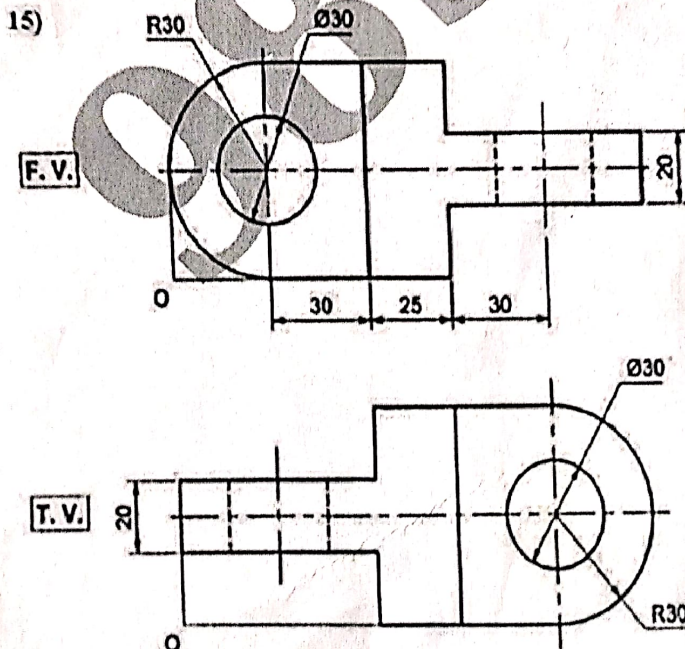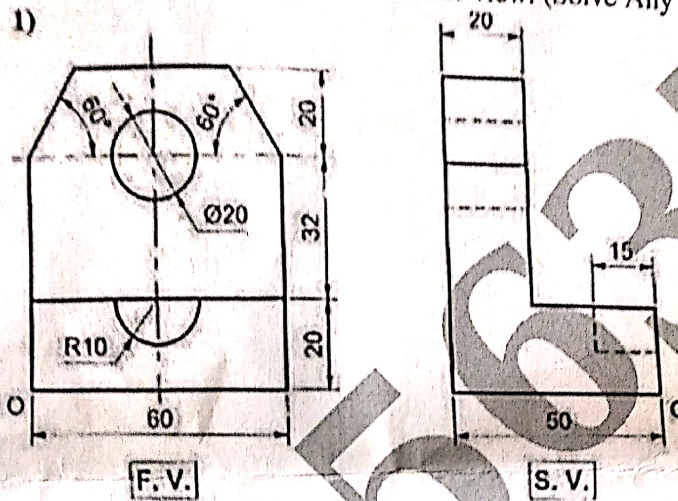
**Q3) Solve any two** [10]

a) Construct a hyperbola when the distance of focus from the directrix is 65mm and eccentricity is 1.5.

b) Construct an ellipse when the length of major axis is 100mm and length of minor axis is 70mm.

c) A ball is thrown from the top of the building 10 m in height crosses above the top of the pole 15 m tall and situated 5 m from the building or from the point of projection. Draw the path traced by the ball until it reaches the ground.

**Q4)** Figure shows the views. Draw its isometric view. (Solve Any One) [10]





**Q5)** A square prism base 45 mm and 90 mm long axis, has its base on the ground and [10] faces equally inclined to VP. It is cut by a plane inclined 60 degree angle to HP and passing through a point on axis 65 mm above the ground. Draw its F.V., sectional

T.V. and develop the remaining part of prism after taking the section.

**Q6)** **Solve any One**

a) From the following figure 1 Draw                                                    [15]

    i. Sectional front view along A-A in the direction X

    ii. Top view

    iii. Show important dimensions

b) From the following figure 2 draw,

    i. Sectional front view along A-A in the direction X

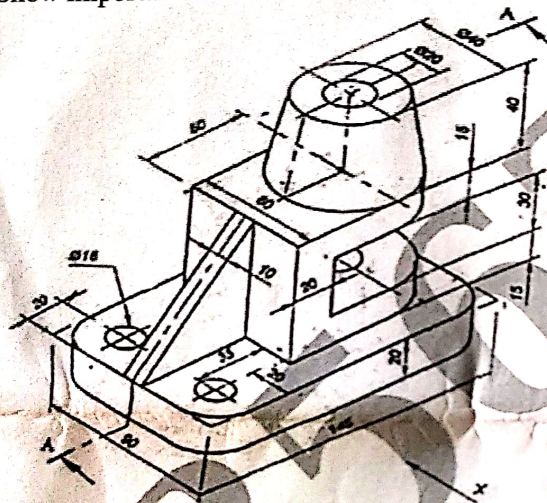    ii. Left hand side view

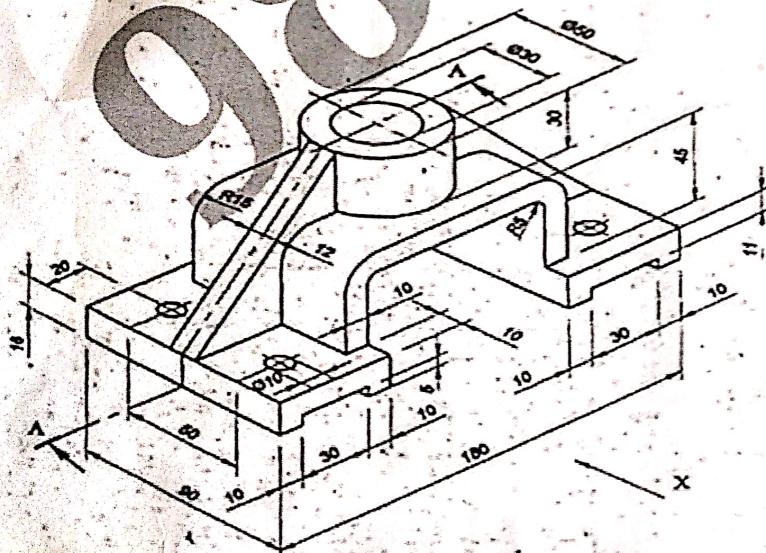    iii. Show important dimensions



**Figure 1**



**Figure 2**

*P.T.O.*