## **ASSIGNMENT-3**

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## **ADMISSION NUMBER:19JE0411**

## **STEPS TO MAKE FIGURE 5.35 (2)**

## **1) Open AutoCAD and click on start drawing.**

## **2) In the bottom right corner we can see a setting option, by clicking the drop down menu present beside it we can enable 3D modelling.**

## **3)Then click on "unsaved view " present in the VIEW of HOME tab .**

## **4)Then click on "SE ISOMETRIC " from the options available.**

## **5)Then type "UCSICON" command and then click on no origin.**

## **6)To make the bottom surface, click on circle diameter and make a circle of diameter 42.**

## **7)Then click on line command select direction and then activate orthogonal command and give a distance of 100.**

## **8)Then create one more circle of diameter 64, such that other end of the line is center of this circle.**

## **9)Then create tangent lines to the both the circles.**

## **10)Then erase the line joining the centers of the circle.**

## **11) Draw a concentric circle of diameter 24 to the circle of diameter 42.**

## **12)Draw a concentric circle of diameter 36 to the circle of diameter 64.**

## **13)Click on presspull and give a thickness of 12 to the center portion.**

## **14)The presspull command is still active so click on the middle portion between concentric circle of diameter 24 and 42 and give a height of 24.**

## **15)The presspull command is still active so click on the middle portion between concentric circle of diameter 36 and 64 and give a height of 36.**

## **16)Then click on 2D wireframe in VIEW present in HOME tab.**

## **17)Change that to shaded with edges.**

## **18)By calculating we can get the length of middle portion is 47 and height of shorter portion will be 12 and of taller one will be 24.**

## **19)So, first we need to change the plane to vertical so click on world present in coordinates and change it to right.**

## **20)Then take line command and draw a line of 12 vertically down and then of length 47 in the plane and length of 24 vertically up and then join initial and final points.**

## **21) Then presspull by length 12 in the direction.**

## **22) And then insert it in middle of our drawing using quadrants.**

## **23) Then by pressing shift and scroll and by dragging the mouse we can observe there are some gaps between both the figures.**

## **24) Presspull the areas having gap to cover them.**

## **25)Then click on "Solid union " present in the SOLID EDITING of the HOME tab.**

## **26)Now only the dip present at the concentric circles of diameter 36 and 64 is left.**

## **27) So for that we need to change the plane, click on unnamed present at**

## **COORDINATES of HOME tab, change it to top.**

## **28)Then take the line command of some length from the centre of the circle.**

## **29)Then type offset of length 6 and draw lines at both the sides.**

## **30)On the line from smaller circle draw a line of length 4 and then join the other line perpendicularly and trim out the unwanted lines.**

## **31)Then presspull that area downwards at a depth of 36.**

**STEPS TO ADD COLOUR TO THE FIGURE**

***Double click on the figure and select the colour you want.***

## STEPS TO MENTION DIMENSIONS OF THE FIGURE 5.35(2)

## 1)First let the dimensions of the concentric circles 24 and 36 .For that we have to switch the surface,so click on face from coordinates. And click on the surface.

## 2) Then click on ANNOTATE and then click on LINEAR from DIMENSIONS.

## 3)Using quadrants measure the diameter of the concentric circles.

## 4) Similarly follow the same steps to other pair of concentric circles.

## 5)To measure the dimensions of the slope and switch the plane to it, for that click on face option and click on the surface.

## 6) Then click on UCSICON and by placing cursor on the X ,click on rotate around Z axis.

## 7)And then Again cluck on face option and select the face and rotate the UCSICON.

## 8)Then click on ANNOTATE and click on linear from DIMENSIONS. And measure the length 12.

## 9)Then move the UCSICON to the center of concentric circles of diameter 64 and 36.

## 10) Then again click on UCSICON and place the cursor over the X and align it towards the quadrant of circle and for making the Y on the upper side rotate the UCSICON.

## 11)And then click on ANNOTATE and click on LINEAR from DIMENSIONS and measure the lengths 12 and 4.

## 12) Rotate the UCSICON in such a way that X lies below and then click on ANNOTATE and then click on LINEAR from DIMENSIONS and measure the length of 100 between the two centers of concentric circles.

## 13)Now to measure the thickness 12 at the middle of the figure ,click on face and select the surface .

## 14)And then click on ANNOTATE and then click on LINEAR from DIMENSIONS and measure the length 12.

## 15)To measure thickness 36,align the origin to quadrant of circle of diameter 64.

## 16)Then click on HOME and click on unnamed from COORDINATES and change it to RIGHT.

## 17)And then move the origin on the quadrant of circle of diameter 64 and then click on ANNOTATE and click on LINEAR from DIMENSIONS and measure the thickness 36.

## 18) Move the origin to quadrant of circle of diameter 42.Then click on ANNOTATE and then click on LINEAR from DIMENSIONS and measure the thickness of 24.