CAD 2

LEC 1

Drawing hip joint by using soildworks

Steps to Drawing hip joint

Creating the Femoral Head (Ball of the Hip Joint)

• Step 1: Start a New Part

• Create a new Part file for the femoral head. To do this, go to File > New > Part.

• Save it as "FemoralHead".

• Step 2: Sketch the Femoral Head

• Select the Front Plane and start a new Circle sketch.

• Draw a circle with the appropriate diameter (e.g., 40mm, depending on the scale you're using).

• Step 3: Extrude the Femoral Head

• Extrude the circle to create a sphere-like shape. Choose an extrusion depth that gives it the correct thickness

(e.g., 40mm).

• Make sure the shape is symmetric by using Extrude Boss/Base.

• Step 4: Add Fillets (Optional)

• Add fillets to the edges of the femoral head to make the shape more realistic, using the Fillet Tool if

Necessary

Creating the Acetabulum (Socket of the Hip Joint)

• Step 1: Start a New Part for the Acetabulum

• Create another new part for the acetabulum (the socket where the femoral head will fit). Go to

File > New > Part and save it as "Acetabulum".

• Step 2: Sketch the Acetabulum

• On the Front Plane, sketch a circle with the appropriate diameter (slightly larger than the femoral

head).

• Use Extruded Boss/Base to extrude the circle into a hollow cylinder, leaving the outer side as a

thicker ring (e.g., 50mm outer diameter and 40mm inner diameter).

• Step 3: Hollow the Socket

• Use Extruded Cut to create a hollow feature in the middle of the acetabulum, leaving a cavity for

the femoral head to fit into.

• Step 4: Add Detailing

• Optionally, you can add features like Fillets to smooth the socket’s edges.