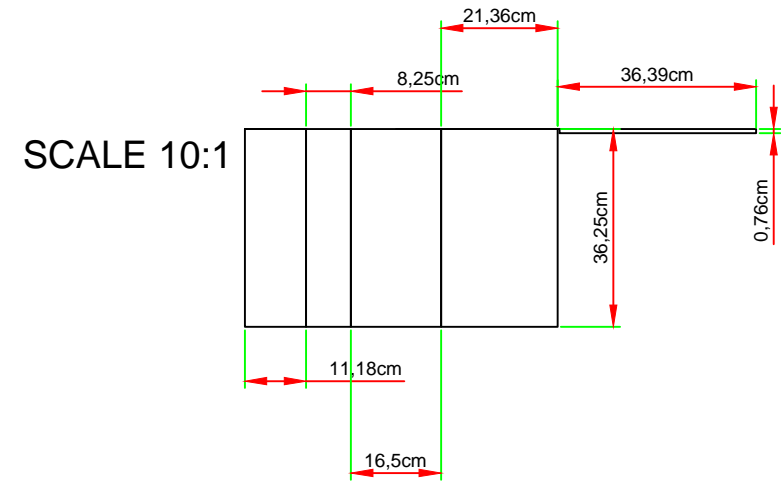
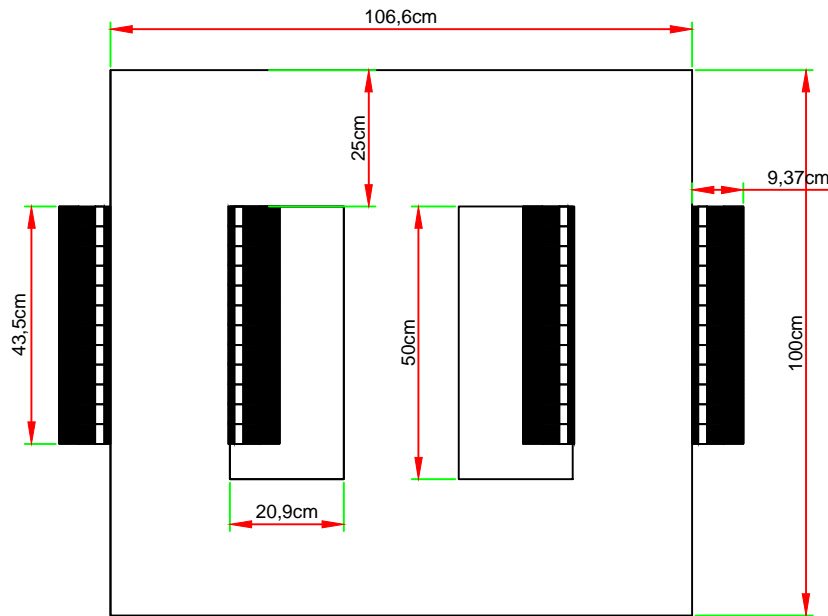
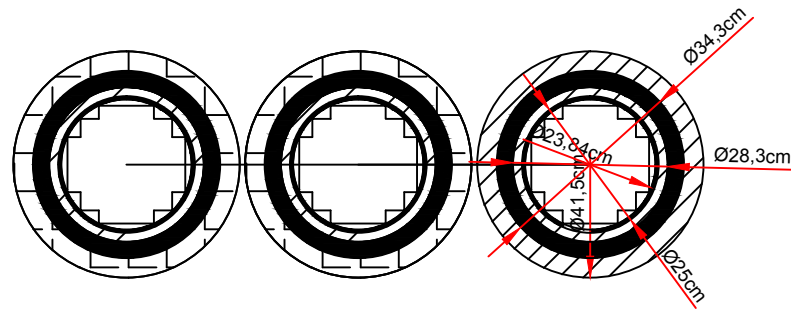


Internal Assessment Test – 3

Sub: Computer Aided Electrical Drawing (Professional Elective)				Sub Code: 18EE643		
Date: 12/07/2022	Duration: 90 mins	Max Marks: 50	Sem: 6	Section: A		
Answer <b>ANY ONE QUESTION</b> . Explain your notations explicitly and clearly. Make appropriate assumptions wherever necessary. Use <b>AutoCAD Software</b> for drawing. Good luck!						
				Marks		
				OBE		
				CO		
				RBT		
<p>Q1. Draw the following views of a 3<math>\Phi</math>, core type, 250 KVA, 11KV / 400 V transformer: Front elevation full in section and Plan in full section.  <b>Magnetic Circuit:</b> Cross section of the core = 3 stepped core; Diameter of the circumscribing circle = 24 cm; and Distance between adjacent core centers = 42.5 cm.  <b>Yoke:</b> Height of the yoke 25 cm.  <b>Details of LV Winding:</b> Outer diameter of LV Coil = 28.3 cm; Inner diameter of LV coil = 25 cm; Height of LV winding = 43.5 cm; and Number of turns per phase = 12.  <b>Details of HV Winding:</b> Outer diameter of HV Coil = 41.5 cm; Inner Diameter of HV coil = 34.3 cm; Height of HV winding = 43.5 cm; and Number of turns / phase = 572.                      Total Height of the transformer = 100 cm.</p>				[50]	CO3	L3
OR						
<p>Q2. Draw to a suitable scale sectional end view of the yoke and pole assembly of a 200 kW, 250 V, 1000 rpm, dc generator. The design details are as follows:  <b>Yoke:</b> External diameter = 64 cm; Internal diameter = 58.5 cm  <b>Main Pole:</b> Height of pole with shoe = 13 cm; Width of pole = 8 cm; Pole arc = 65°; and No. of poles = 4.  <b>Shunt Winding:</b> Height of winding including insulation = 7 cm; and Thickness of winding including insulation = 3 cm.  <b>Series Winding:</b> Height of winding including insulation = 2.5 cm; and Thickness of winding including insulation = 3.8 cm.  <b>Interpole:</b> Height of pole = 11 cm; No. of poles = 4; Width of the pole = 2.5 cm; Width of the pole shoe = 3.2 cm; and Height of pole shoe = 2 cm.  <b>Interpole Winding:</b> Height of winding including insulation = 8 cm; and Thickness of winding including insulation = 6 cm.  <b>Footing:</b> Thickness of legs = 3.5 cm; Thickness of bed plates to which legs are cast = 3.5 cm; and Height of the machine from base to the top of the yoke = 68 cm.                      Main pole laminations are assembled between two end plates of the same shape and are being secured by rivets. Main pole carries both shunt and series field windings. The main pole and inter pole cores are fixed on the yoke by a set of screws of suitable diameter. Also, show a circular recess rod in both the main pole and the interpole of suitable diameter.</p>				[50]	CO4	L3
OR						
<p>Q3. Draw the armature core and housing assembly of an alternator having the following data:                      Stamping OD = 410 cm; Stamping ID = 240 cm; Housing OD = 460 cm; Core length = 160 cm; No of slots = 48;  <b>Dimension of slots:</b> Shape = Trapezoidal; Total height = 43.3 cm; Lip Height = 4 cm; Slot opening = 3 cm; Slot width at the top = 16 cm; and Slot width at bottom (above lips) = 10.76 cm. Show the fixing of the armature to the housing in both views.</p>					CO5	L3

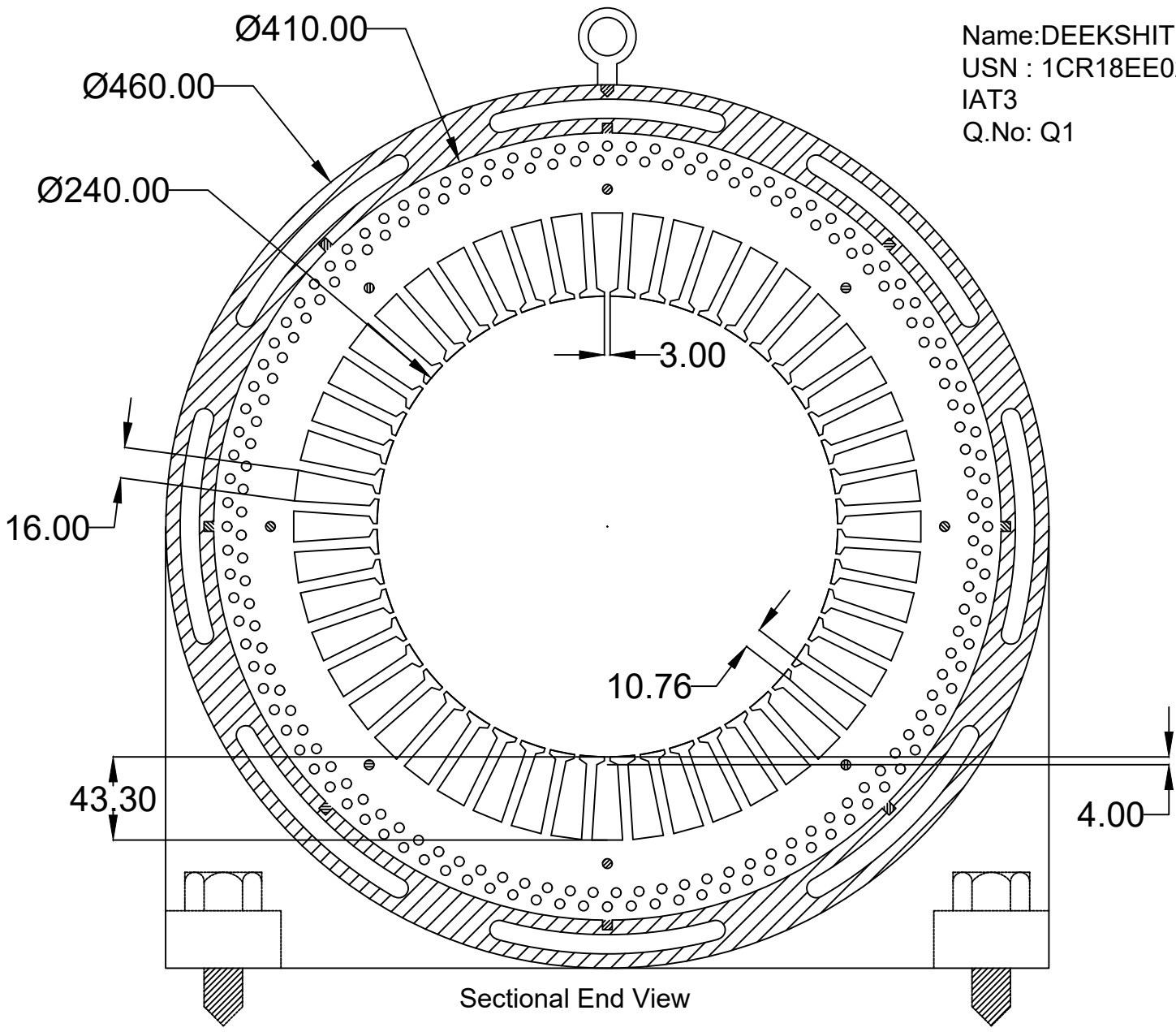


NAME= POOJA BP  
 USN = 1CR19EE060  
 DATE=12/07/2022  
 IAT=2  
 QUESTION NO =1  
 BATCH NO = A1

SCALE 10:1

3 PHASE, CORE TYPE  
 ,250KV,11KVV/400V TRANSFORMER  
 SCALE 10:1  
 LV WINDING 43.5,HV WINDING 43.5  
 FRONT ELEVATION FULL IN SECTION  
 AND PLAN IN FULL SECTION





Name: DEEKSHITHA N  
 USN : 1CR18EE027  
 IAT3  
 Q.No: Q1

