Problem I

(1)

Determine amount of heat rejected

50: Q-W

but DU = 0 - 150thermal

Win = Qout

(10)

 $V_1 = \frac{mRT_1}{P_1} = 1.189 \, \text{m}^3$, $V_2 = \frac{mRT_2}{P_2} = 0.297$

Wik = P.V. In V2 = - 288.6 RJ.

Qoor = Win = -288. 6 &]

(o)

Problem I

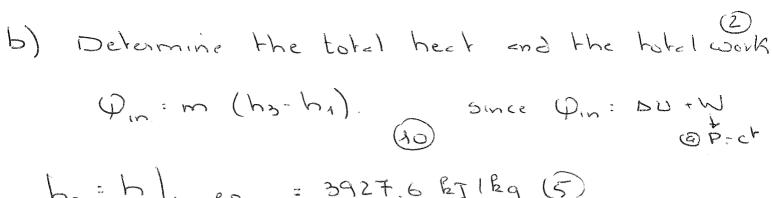
U1: U9+ 20 U9g. - 0,5952 m3/kg.

V1=m01 = 0.2976 m3. 5

a) The mess of the piston

mpg + Palm Ap = P_Ap , Ap : TH2 = 0.0314m

 $m_{P} = \frac{P_2 A_P - P_{elm} A_P}{9} = 0.958 \text{ kg}. (10)$



Problem I

- i) PR << 1 or PR <10 and TR>2 (5)
- 2) for isochoric processes. (5)
- 3) the vanishion in enthelpy (5)
- 4) Bose-Einstein condensate. (5)