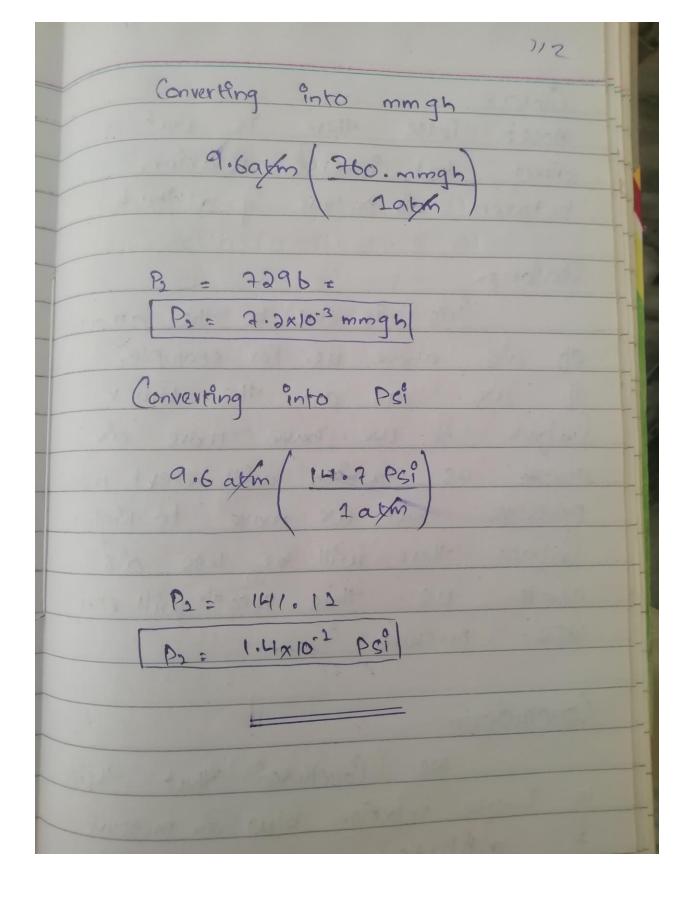
## **Department of Electrical Engineering Sessional Assignment**

Date: 06/05/2020

Course Title: Instructor:	_Thermodynamics sir mujtaba	Course Details	Module: _ Total Marks: _	02 20
Name:	<u>s</u> abdullah	Student Details	Student ID: _	16194

Q1.		Let the initial volume of the gas in a container be 06 liters and the initial pressure be 04	Marks
		atm. The piston is compressed at a constant temperature to a new final volume of 2.50	06
		L. <b>Evaluate</b> the final pressure in units of atm, mmHg and psi.	CLO 2
Q2.		<b>State</b> the following statement as <b>True</b> or <b>False</b> and also give the reason for your answer:	Marks
		"There is a direct relationship between air pressure and altitude".	03
			CLO 2
Q3.		A volume of 8 ft <sup>3</sup> of steam at a pressure of 100 lb-f/in <sup>2</sup> is expanded hyperbolically to a	Marks
		pressure of 18.3 lb-f/in <sup>2</sup>	06
		Calculate the work done by steam.	CLO 1
Q4.	i.	Outline the differences between work and heat.	Marks
	ii.	<b>Describe</b> the meaning of the term $\Delta Q = \Delta W$	03+02
			CLO 1

QNO1
ANS: Given datas
Y1 = 6 L
P1 = 4 atm
12 - 2.50 L
Regulard in
Anal pressure = P2 = ?
023 93 0
(alution en
According to boyle's Law
P1 V1 = P2 V2
$P_2 = \frac{P_2 V_1}{V_2}$
P2 = (6K)(4atm)
(2.5X)
P2 = 9.6 atm/



QNOS ANS: False there is not of direct but inverse relation between air pressure & altitude. Reasonga This is due to the atmount of all above us. For example 1) we are on the lower Surface So we have more an above us which will exert move pressure but we move to higher Surface there will be less aix above us thus jess air will exert 1055 pressure Conclusionn we Concluded that their is inverse relation blu air pressure & alltude

	(VMO3
	ANSn Givenn
	V1 = 8 ft3
	D2 = 100 lb.f[0,2
	Ps 12,3 (b.4/0,2
	Salutionn
	we know that
	P2 Y2 = P2 V2
	V2: PIV1
	By Charles By
	V2 = 100 x 8
- (3	(8.3
	V2 = 43.7158 ft3
	Morkdone = P.V
	as the process is hypersolie
	M= PINI
	= 8× (00
	w: 800 j
-	W 5 800 )

QNO 4 (A) ANS: Heat and energy are two different ways of transferring energy from one system to another. Following are difference 5/w heat & work Heat WOYK 1) Heat is the work is the transper of thermal transper of mechanical energy blw bystem energy dw two bystem. @ work to be Heat Cannot be transpormed fully into fully Converted into heat. WOOK (3) Heat 95 the energy NOSK is the accordated with the energy of ordered sendom mation at mation in one · Particles. direction. (4) Change in Heat Change in work is is represented by AH represented by DW.

755
Orio 4 (Part 6)
ANSI
The term DQ = DW implies
that the heat Supplied
by the Surrunding is equal
to the work done by
to the work done by the System on the Surrounding.
i.e sq= heat Supplied
DW= Mork done by System.