University of Jordan – Dept. of Chemical Engineering

0915321 ChE Thermodynamics (I)

Problem Set # (1)

Instructor: Dr. Ahmad AbuYaghi 28-10-2023

These are suggested problems for you to work out. The problem numbers refer to those given at the end of Chapters in the Textbook (Cengel & Boles, Thermodynamics: An Engineering Approach, 8th edition). The final answer(s) is/are provided.

Problem #	Final Answers
2-12	1770 kW
2-30	686 kJ
2-35	Δt= 7.72 s
2-43	14.7 kW>> 2 kW; False
2-58	2.4 kW; No need
3-20	Solved and discussed in lecture 26/10/2023
3-26	See R134a Tables
3-28	P= 2320 kPa, x= 0.0269, ρ=287.8 kg/m3
3-40	0.793x10-3 kg/s
3-64	m= 49.61 kg, T= 120.21C, ΔH= 125950 kJ