Thermodynamics I – EGN 3343s2/701 Fall 2020

Name **Test Student**   Fill in Last 4 digits of U# →

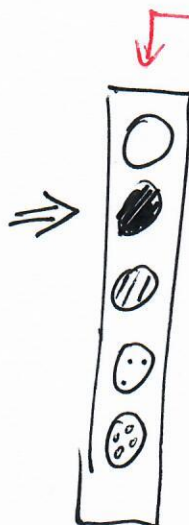**Last 4 Digits U#**

1 3 6 8

(A) The Millennium Falcon's computer was originally programmed by a Corellian engineer who knew that gas clouds above a certain density would be a problem for the Hyperdrive system. The local report describes a gas cloud density of 0.061908 grams/liter and the ship's computer needs this to be in units of firkin / furlong^3. Can you help calculate the correct number to enter into the system?

Key Info: 1 furlong = 201.168m and 1 firkin = 40.8233kg

BONUS: *(Only attempt when <u>completely done</u> and VERY bored) – The system also wants units of US Tons/femtoparsec^3. A parsec is a unit of distance, not time. 1 femtoparsec = 101.236 feet. 1 ton = 2000 lbs.)*

(Pro-tip: Watch the units of what is being asked and what you are given. Use the info given.)

varying degrees
of clarity &
darkness with
minor marks

should evaluate for
darkest mark in <u>each</u>
column!

The Weather report on the Tatooine suggested another hot day of 69° Jawa (°J). In this new temperature system, the Normal boiling point of water is 121.8°J and the normal freezing point of water is -40°J. (B) Is this a Relative of Absolute temperature scale? (C) What is the current temperature on Tatooine in °C?

(Pro-tip 2: draw a picture with the temperature scales to better illustrate the problem.)