Roster Number: _____

EML2322L Quiz 8 (10/15/19)

Name: _____

Answer the following questions based on the information presented in class. You can use **your** notes but do not speak with others.

Lab Period: **T5-6 / T7-8 / T9-10**
(circle one) **W2-3 / W4-5 / W7-8 / W9-10**
R2-3 / R4-5 / R7-8 / R9-10

Define the electric arc welding process:
using a(n) _____ arc to heat separate pieces of _____ material to be joined to a temp high enough to cause _____ and coalescing

List the formal acronym and common name for the three most common types of electric arc welding (in order of increasing quality):
1. _____
2. _____
3. _____

Dissimilar metals can be joined using the arc welding process if the proper filler metal is used:
TRUE / FALSE

The electrode (electrical conductor) used when MIG welding is consumed as the weld is made:
TRUE / FALSE

What is the purpose of flux or shielding gas?
to prevent rapid _____ by preventing _____ from coming into contact with the molten metal pool

List 3 advantages of MIG welding:
1. _____
2. _____
3. _____

List 3 advantages of TIG welding:
1. it produces the strongest welds possible
2. it requires no post-weld cleanup
3. it can weld virtually any metal that is conductive

What's the primary difference between MIG and TIG welding?
MIG welding automatically feeds the filler wire into the weld pool; whereas TIG welding uses a tungsten electrode to conduct the electricity and provide the heat source, and the actual filler wire is fed manually into the molten pool

Most lab motor fasteners are metric and should be obtained by telling the TAs what size you need:
TRUE / TRUE / I'M STILL NOT SURE ☺!

If any fasteners do not freely thread together BY HAND, you should STOP and ask a TA BEFORE damaging expensive components:
TRUE / TRUE / OH THE PRESSURE ☺!

When connecting the control box to the motors for the first time you must ask a TA for help:
TRUE / TRUE / CAN I GOOGLE IT ☺?!

When wiring the control box each subsequent time you must TURN OFF the main power before changing ANY wiring to prevent electrical damage:
TRUE / TRUE / QUIT CONFUSING ME ☺!

Before changing tools in the lathe the spindle must first be raised to and locked in its upper-most position:
TRUE / FALSE

The lathe chuck key should be removed from the chuck after clamping the tool securely:
TRUE / FALSE

Before changing the lathe between HI and LOW range you must ask for TA help:
TRUE / FALSE

Lathe, mill and drill press spindle speeds must be adjusted while the machines are OFF:
TRUE / FALSE

Safety glasses must be worn ANY TIME you are in the shop, including during TA hours:
TRUE / FALSE

EML2322L Example Tapped Hole Quiz

Based on the information presented in the lab and lecture, ***explain the exact tools and sequence used to tap a 3/8" thread into an aluminum workpiece on a manual milling machine.***

THREAD SPECIFICATION: _____

SEQUENCE & TOOLS (be explicit with regard to tool names and sizes):

1. Find part zeros using a(n) _____ and the DRO to locate the sides of the part and set datums
2. Use a(n) _____ to accurately locate and begin drilling the hole
3. Use a(n) _____ to drill the initial (or pilot) hole through the part
4. Use a(n) _____ (of size _____) to finish drill the hole to final size for threading
5. Load a(n) _____ into the spindle to ensure the hole is tapped normal to the part's surface
6. Thread the hole using a(n) _____ , tap handle and cutting oil