IME 408 Industrial Robotics -- Edwards

Test I

June 12, 2020

Answer the Following Questions to the Best of Your Ability – GOOD LUCK!!

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SAFETY FIRST!!!

1) If there were an incident in the Robotics Lab which required Emergency attention, what telephone number should you call if you were to use your cell phone?

   810-762-9501

   b) Why THIS number??

   This is Campus Safety, they are the ones that know where the lab is rather than calling 911.

2) If we wish to get into a control panel on a Robot and it is unplugged, then we safe.

True	False

3) If you need to go into a robotic work cell, Turning the Teach Pendant "On" and taking it into a robotic work cell is a layer of safety.

<mark>True</mark>   False

Why??

The Teaching Pendant overrides any other inputs and acts as the only way to control the robot.

4) Name at least 3 industry applications where Robots can be used.

Medical field such as surgery robots.

Process uses such as stacking boxes/pallets.

Repetitious tasks like part assembly for vehicles.

4) Do some of the Classic 7 forms of Wastes apply to robots/robotic systems as well?

5) Name 3 different **_Robotic_** Coordinate Systems on a Robot Teach Pendant.

    1. Cartesian

    2. Joint

    3. Tool

6) In a Cartesian coordinate system, How many data points are in need to determine position and orientation of an object?

    What are they?

    1. X

    2. Y

    3. Z

    4. Roll

    5. Pitch

    6. Yaw

7) An Advantage of Robots is that they are precise and repeatable.

<mark>True</mark>   False

8) Name a Robotic simulation software package.

ROS, Robot Operating System

9) Ideally, a Body Shop wishes to Build in Large Batch Sizes.

<mark>True</mark>   False

10) Robots and automation are always the solution to a manufacturing issue.

True   <mark>False</mark>

Extra Credit

I) Who is the Manufacturer of our "4 Beetles" robots??

Fanuc

II) What is a Unimate and its significance?

The first industrial robot that was used at GM

III) Who wrote the Book "The Goal?"

What was the Overweight Boy Scout's Name?