

**MFET 670 Final Exam Extra Question - [15 Points]**

The original Packaging Conveyor design will not meet system throughput requirements. To meet throughput, conveyor speeds and accelerations must be increased and the Pop-up Stop eliminated. This will require position based motion control and servo motors. Describe what devices and changes would be required to implement this. Describe what motion control instructions could be used. You do not need to show actual program logic.

A risk assessment has determined hard guarding with a personnel entry gate, and safety control system must be implemented to meet safety requirements. Describe the types of safety devices required and how they would be implemented to provide a safety control system.