IENG301 LABORATORY 2

Exercise: Process Analysis –Application of Charts and Diagrams for Method Study

Objectives: 1. To study an existing process or a job: recording all the tasks or events that occur during their performance with the help of Flow Process Chart, Assembly Process Chart, and Flow Diagram.

2. To analyse the process: suggestions for the improved method.

3. To suggest the proposed method of doing the job or process: recording the tasks or events of the method with the help of Flow Process Chart, Assembly Process Chart, and Flow Diagram.

4. To compare between the existing and the proposed methods: productivity improvement.

Preliminary Information:

Process Chart is a device for recording a process in a compact manner, as a means of better understanding and improving it.

Assembly Process Chart is simply a special type if process chart. It is useful when several parts are processed separately and are then assembled and processed together. Symbols for an assembly process chart are same as the ones for process chart.

Example: Commutator-Rotor Body

Construct an ***Assembly Process Chart*** for a "Commutator-rotor body". The main parts of this equipment are: 1. The shaft,
2. The plastic cast part
3. The switch

Shaft:

1. The cutting, finishing and turning operation in ½ revolver turning machine.
2. The processing of the other end in the same machine. The part is then sent to the inspection department.
3. The full inspection of the parts. Then they are sent to the milling machines.
4. The finishing of the shaft's ends in the horizontal milling machine.
5. The precise surface finishing is made. The part is again sent to the inspection department.
6. The final inspection of the machined parts is made. The inspected parts are sent to plating.
7. The grease over the surface is cleaned.
8. The parts are cadmium plated.
9. The final inspection is made.

Plastic Cast Part:

10. The surfaces are smoothed, the bed of the cast part is drilled and then reamed in a vertical milling machine.

Switch:

11. The switch hole is drilled and the chips are removed on a double spindle drilling machine.
12. The part drilled is sent to the inspection department.
13. The final inspection of dimensional tolerances is made. The parts are then sent to the finished parts storage and wait assembly.

Definition	***Operation***	***Inspection***	***Delay***	***Transportation***	***Storage***
Symbol					

Homework:

Binding process begins with carrying the printed sheets, from printing office to binding shop, a distance of 80 meters. There, they are placed on a table-1 and stored for a while. Then, they are carried to table-3 a distance of 24 meters, where a folding machine is placed. After that, they are folded and carried, 12 meters, to table-2 where they are stored for a while before stitching. Next, they are carried a distance of 16 meters to the stitching machine where they are stitched and returned to table-2. Finally, the stitched booklets are counted and carried a distance of 90 meters to the central storage.

Draw the process chart of the above mentioned binding process.