LEAN Manufacturing Quiz I

1. Value Stream Mapping looks at:

- a. The people, material, and information flow in a value stream
- b. The material and information flows in a value stream
- c. The steps people take in designing and producing a product
- d. The detailed operation steps within cells

2. A product family matrix is used in value stream mapping to:

- a. Create a listing of all your products and the steps that are taken to produce them
- b. Decide which products are most important to your customers
- c. Identify and group products into families based on whether they pass through similar steps in your downstream processes
- d. Divide the mapping teams up into groups with groups with individual mapping assignments

3. The recommended level for beginning to map a value stream for a product family is:

- a. Corporate wide
- b. Door –to-door in an individual facility or plant
- c. Across multiple facilities

- d. At the process level, for example in a single work-cell

4. Calculate the Takt Time based on the following information: Customer demand is 34,400 parts per month. The company works 5 days per week and on average 20 days per month. There are two, eight hour shifts. Lunch is 30 minutes per shift. Two, ten minute breaks are taken per shift. The calculated Takt Time is:

- a. 0.5 minutes per part or 30 seconds per part
- b. 1 part per minute or 1 part every 60 sec
- c. 0.5 parts per minute
- d. 1 minute per part

5. Data boxes on a value stream map should contain information based on:

- a. Engineering standards
- b. The average measurements over the last year
- c. The measurements on an ideal or typical day
- d. What you observe on the day you draw your map

6. One of the biggest mistakes in implementing Lean Manufacturing is:

- a. Sub optimizing by conducting Kaizen events in areas without first taking a big picture view of the organization
- b. Not implementing improvements in line with organizational strategy
- c. Skipping the value stream mapping step

☐ d. All of the above

7. A supermarket is used where:

☐ a. Processes are close together but have different cycle times

☐ b. A customer requires specialized products from the finished goods warehouse

☐ c. Continuous flow is not possible due to distance, unreliability, or where process serves multiple product families

☐ d. Pull can be implemented throughout the door-to-door value stream

8. Creating value stream loops after future state mapping helps you to:

☐ a. Break your total value stream plan into manageable pieces and prioritize them

☐ b. Communicate your plan to senior management

☐ c. Assign kaizen teams to be responsible for each loop

☐ d. Develop measures for each loop based on improving lead times

9. 5S (choose best answer below)

☐ a. Is about standardizing the way we do things

☐ b. Forms a foundation for all other improvement activities

☐ c. Is a key to reducing inventory to improve lead time?

☐ d. Cannot be used in an office or administrative area

10. 5S efforts often fail to be sustained because:

- a. Everyone is involved
- b. Managers don't allow or make time for 5S activities and organizations fail to adequately implement the sustain step
- c. 5S isn't really value-added
- d. Managers implement 5S but employees don't do the work to keep it up

11. A major barrier to inventory reduction and batch size reduction is:

- a. Long set-up changeover times
- b. 5S activities
- c. Lead time reduction
- d. Material handlers

12. Set-up Time is typically classified in two categories as:

- a. Internal or external
- b. Value-added or non value added
- c. Motion and transport waste
- d. High cost and low cost

13. Please circle the incorrect statement:

a. Policy deployment is Management By Objectives (MBO)

b. Policy deployment develops a one year plan reflecting the long-term vision and 3-5 year strategic planning objectives

c. Policy deployment is a planning-implementation process that focuses on a few major long-term customer-focused breakthrough objectives

d. Policy deployment ensures individuals are aligned and understands what improvements are important to work on

14. Select the non-value added activity:

a. Assembling two parts together

b. Extrusion machine making parts

c. Packing parts for shipment

d. Picking up a part, putting it down and picking it up again

15. Making something earlier or faster than required by the next process "just-in-case" is an example of which type of waste?

a. Defect

b. Motion

c. Over production

d. Over processing

16. What is the goal of TPM?

- a. To fix equipment only when it breaks down
- b. To give an operator one more thing to do
- c. To utilize worker and machine effectiveness
- d. To reduce the involvement of other people

17. Start pulling work through the system, look at the production scheduling and move towards daily orders with _____ cards.

- a. Kanban
- b. Manufacturing resource planning
- c. Material requirements planning
- d. Lean manufacturing

18. The following are all examples of waste in business, except which one?

- a. Over production
- b. Unhappy suppliers
- c. Defective output
- d. Production waiting time

19. A key feature of Kaizen is that improvements are achieved by making

- a. Close contact with consultants

- b. Many small change
- c. Less complicated products
- d. Large scale investment

20. JIT aims to ensure that inputs into the production process only arrive

- a. When customers are ready to buy
- b. When they are needed by production
- c. When they are paid for
- d. When the supplier is ready