

QUESTIONS:

1. **Fill in the blank: _____ is defined as any activity that consumes resources but creates no value for the customer.**
 - Muda
 - Muri
 - Mura
 - Takt

2. **You're observing a production line and you notice a separate area where material get re-processed when they don't pass a visual inspection. What is the primary form of waste occurring here?**
 - Defects
 - Motion
 - Inventory
 - Extra-Processing

3. **You're observing a production line and you know that the customer demand is 1000 units a day. The current operation is building 2000 units per day. What is the primary form of waste occurring here?**
 - Over-production
 - Inventory
 - Motion
 - Extra-Processing

4. **Which form of waste is the 8th and newest form of waste?**
 - Over-production
 - Extra-processing
 - Defects
 - Non-Utilized Talent

5. **Which form of waste occurs when a process lacks capability and a rework loop is required to yield good parts?**
 - Over-production
 - Extra-processing
 - Defects
 - Non-Utilized Talent

- 6. Which form of waste is often considered to be the worst form of waste because it leads to other forms of waste?**
- Over-production
 - Inventory
 - Extra-processing
 - Non-Utilized Talent
- 7. Which form of waste is defined as the production of material before it is needed?**
- Over-production
 - Motion
 - Extra-processing
 - Non-Utilized Talent
- 8. Which form of waste occurs when production assets go idle due to poor flow or other issues within the value stream?**
- Motion
 - Inventory
 - Waiting
 - Defects
- 9. Which form of waste is addressed through the training, coaching and engagement of employees in the ownership of lean thinking?**
- Motion
 - Inventory
 - Defects
 - Non-Utilized Talent
- 10. You're analyzing your production process and you notice that employees are constantly walking between stations to change tools. This represents which form of waste?**
- Motion
 - Transportation
 - Extra-processing
 - Non-Utilized Talent

11. You've been tasked with improving a process, and you've identified that each individual who executes your process does it slightly different, and this person to person variation is resulting in poor yield downstream. You're in the process of creating standard work to reduce the person-to-person variation. Which phase of the DMAIC process are you in?
- Measure
 - Analyze
 - Improve
 - Control
12. Fill in the blank: A _____ is any resource whose capacity is equal to or less than the demand placed on it.
- Constraint
 - Kanban
 - QFD Matrix
 - Kaizen Blitz
13. Fill in the blank: _____ is defined as the on-going efforts within an organization to improve the quality and value of its products, processes or services.
- Quality Assurance
 - Process Validation
 - Continuous Improvement
 - Risk Management
14. You're leading a team of engineers have been tasked to increase the capacity of a process. You've measured the cycle time of each step in the process to identify the bottleneck. You've attempted to use kaizen activities to increase the output of the bottleneck, and now you're considering adding equipment to increase output. Which continuous improvement technique is being used?
- Kaizen Blitz
 - Theory of Constraints
 - PDCA
 - Six Sigma
15. Fill in the blank: The Kaizen tool of _____ is used to represent the current state of a process.
- SMED
 - 5S
 - Kanban
 - Standard Work

SOLUTIONS:

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Building product before the customer demands it (1000 units per day) is a form of **over-production**.

Over-production is often the worst form of waste because it results in other forms of waste like Inventory & Motion. Thus, the primary form of waste here is over-production.

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- Analyze
- **Improve**
- Control

Creating **standard work** is an example of activity that would occur in the **IMPROVE phase** of the DMAIC Process.

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- QFD Matrix
- Kaizen Blitz

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- Process Validation
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- Risk Management

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- **Theory of Constraints**
- PDCA
- Six Sigma

The **Theory of Constraints**, or **ToC**, is based on the assumption that **every process has a constraint that limits it from achieving its goal**.

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- Kanban
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