

QUESTIONS:

- 1. A machine shop is planning to move a line of machining equipment across town and any delays in the project will result in lost business.**

Which tool can be used to ensure that potential pitfalls in the project plan are identified and mitigated?

 - Process Decision Program Chart
 - Flow Chart
 - Pareto Chart
 - Activity Network Diagram
 - Affinity Diagram

- 2. A team of subject matter experts have been assembled and brainstormed a large number of facts, data and ideas to determine the cause and effect relationships associated with a recent safety incident.**

What tool could be used to visualize and identify the primary causes of the safety incident?

 - Pareto Chart
 - Control Chart
 - Check Sheet
 - Affinity Diagram
 - Interrelationship Digraph
 - Matrix Diagram

- 3. You're working to implement a complex corrective action that will involve multiple interrelated activities across various departments and you've been asked to create a project plan and determine the critical path of the project.**

Which tool is most appropriate to accomplish this task?

 - Flow Chart
 - Tree Diagram
 - Interrelationship Digraph
 - Prioritization matrix
 - Activity Network Diagram

- 4. Quality Function Deployment (QFD) is an application of which of the 7 Quality Management and Planning Tools:**

 - Prioritization Matrix
 - Matrix Diagram
 - Affinity Diagram
 - Activity Network Diagram
 - Interrelationship Digraph

5. **Fill in the blank:** A _____ is a tool to define the relationship between the factors associated with a complex system.
- Matrix Diagram
 - Prioritization Matrix
 - Interrelationship Digraph
 - Tree Diagram
6. **Fill in the blank:** A _____ is a decision-making tool weighs various options against decision making criteria.
- Process Decision Program Chart
 - Prioritization Matrix
 - Matrix Diagram
 - Interrelationship Digraph
7. **Fill in the blank:** A _____ is a project planning too that facilitates the proactive identification of potential problems along with contingencies and countermeasures.
- Tree Diagram
 - Activity Network Diagram
 - Interrelationship Digraph
 - Process Decision Program Chart
8. **Fill in the blank:** A _____ is a Project Planning and Management tool that defines the sequential tasks requires to complete a complex project, including the critical path.
- Process Decision Program Chart
 - Tree Diagram
 - Activity Network Diagram
 - Interrelationship Digraph
9. **Fill in the blank:** A _____ is a type of Bar Chart that graphs the frequency of occurrence of continuous data and is a useful tool for displaying, summarizing and analyzing data.
- Pareto Chart
 - Scatter Plot
 - Histogram
 - Matrix Diagram
 - Control Chart

- 10. Fill in the blank: A _____ is a bar chart that allows for analysis of data in search of the critical few.**
- Pareto Chart
 - Histogram
 - Flow Chart
 - Scatter Plot
- 11. A team of Reliability Engineers is testing a purchased component for its MTBF. The vendor indicates that the failure distribution is exponentially distributed. Which tool can be used to confirm this assumption:**
- Pareto Chart
 - Control Chart
 - Scatter Plot
 - Histogram
- 12. You've formed a Kaizen team with your top vendor to reduce the number of material rejections during the incoming inspection process. You agree with the vendor to begin tracking the rejections using an agreed upon list of categories of reject types. Which tool can be used to collect this data:**
- Check Sheet
 - Scatter Plot
 - Pareto Chart
 - Affinity Diagram
- 13. A team of engineers is working to improve a process to reduce the variation over time. What tool can be used to measure the variation over time to determine if specific changes have been effective in reducing variation?**
- Histogram
 - Scatter Plot
 - Control Chart
 - Pareto Chart
- 14. A Light Bulb Manufacturer has just launched a brand-new bulb and complaints have been received for a short lifespan of the new bulb. A team of engineers have been assembled for root cause analysis. Which tool could be used to identify potential root causes that might be contributing to this event?**
- Check Sheet
 - Cause & Effect Diagram
 - Flow Chart
 - Scatter Plot

15. A team of engineers has been tasks with improving the cycle time of a production process. The team wants to start by analyzing the key steps in the process to identify any bottlenecks or wait periods. Which tool would be most appropriate to analyze the process?

- Flow Chart
- Affinity Diagram
- Control Chart
- PERT Chart

SOLUTIONS:

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- **Process Decision Program Chart**
- Activity Network Diagram
- Flow Chart
- Pareto Chart
- Affinity Diagram

The **Process Decision Program Chart** is meant to facilitate a review of a project plan to identify potential issues and develop contingencies and counter-measures to ensure project success.

2. **A team of subject matter experts have been assembled and brainstormed a large number of facts, data and ideas to determine the cause and effect relationships associated with a recent safety incident.**

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- Pareto Chart
- Control Chart
- Check Sheet
- Affinity Diagram
- **Interrelationship Digraph**
- Matrix Diagram

The **interrelationship digraph** is a tool you can use to analyze a complex problem to identify the cause and effect relationships that exist between disparate facts.

3. **You're working to implement a complex corrective action that will involve multiple interrelated activities across various departments and you've been asked to create a project plan and determine the critical path of the project.**

Which tool is most appropriate to accomplish this task?

- Flow Chart
- Tree Diagram
- Interrelationship Digraph
- Prioritization Matrix
- **Activity Network Diagram**

4. **Quality Function Deployment (QFD) is an application of which of the 7 Quality Management and Planning Tools:**
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- PERT Chart