1. What type of control chart pattern is characterized by consistent fluctuations around the centerline?

a) Natural
b) Level-shift
c) Cycle
d) Wild

Answer: a) Natural

Explanation: Natural control chart patterns exhibit consistent fluctuations around the centerline without any specific trends or shifts, indicating a stable process with random variations.

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2. Which type of disturbance occurs sporadically and does not follow a consistent pattern in a process?

a) Periodic
b) Persistent
c) Natural
d) Wild

Answer: d) Wild

Explanation: Wild disturbances occur sporadically and do not follow any consistent pattern in

a process. They are unpredictable and may require immediate attention to identify their cause and rectify them.

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3. In a control chart, if there is a sudden and sustained shift in the process mean, what pattern is being observed?

a) Natural
b) Level-shift
c) Cycle
d) Wild

Answer: b) Level-shift

Explanation: A level-shift pattern in a control chart indicates a sudden and sustained shift in the process mean, signaling a change in the process behavior that needs to be investigated and addressed.

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4. Which type of control chart pattern is characterized by repeated fluctuations at regular intervals?

a) Natural
b) Level-shift

c) Cycle
d) Wild

Answer: c) Cycle

Explanation: Cycle patterns in a control chart exhibit repeated fluctuations at regular intervals, suggesting the presence of periodic variations in the process that need to be understood and managed.

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5. What type of diagram is commonly used for brainstorming to identify potential causes of a problem?

a) Ishikawa
b) Interrelationship
c) Systematic
d) Matrix

Answer: a) Ishikawa

Explanation: Ishikawa diagrams, also known as fishbone diagrams, are commonly used for brainstorming sessions to identify potential causes of a problem by categorizing them into major contributing factors.

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6. Which diagram emphasizes the interdependencies between various factors influencing a process?

a) Ishikawa
b) Interrelationship
c) Systematic
d) Matrix

Answer: b) Interrelationship

Explanation: Interrelationship diagrams emphasize the interdependencies between various factors influencing a process, helping to understand the complex relationships among different variables.

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7. Which type of diagram is used to visually represent the step-by-step sequence of a process?

a) Ishikawa
b) Interrelationship
c) Systematic
d) Matrix

Answer: c) Systematic

Explanation: Systematic diagrams are used to visually represent the step-by-step sequence of a process, allowing for a clear understanding of the workflow and identifying areas for improvement or optimization.

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8. What concept focuses on making incremental changes to continuously improve a process?

a) Cause-effect
b) Change concepts
c) Waste elimination
d) Matrix diagrams

Answer: b) Change concepts

Explanation: Change concepts focus on making incremental changes to continuously improve a process, often through methods such as Kaizen or continuous improvement initiatives.

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9. In process improvement, what method aims to identify and eliminate non-value adding activities?

a) Cause-effect

b) Change concepts
c) Waste elimination
d) Matrix diagrams

Answer: c) Waste elimination

Explanation: Waste elimination aims to identify and eliminate non-value adding activities or processes within a system, thereby improving efficiency and reducing costs.

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10. Which type of chart pattern indicates the presence of multiple sources of variation affecting the process?

a) Multi-universe
b) Level-shift
c) Natural
d) Wild

Answer: a) Multi-universe

Explanation: A multi-universe pattern in a control chart indicates the presence of multiple sources of variation affecting the process, requiring careful analysis to identify and address each contributing factor.

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