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Programme: M.A.HUMAN RESOURCE MANAGEMENT

Course Title :Total Quality Management
Course Code :22HRM4CC17

UNIT - IV
Statistical Process Control Tools and Techniques

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Statistical Process Control Tools and Techniques

Agenda

- Problem Solving: Stages, Approaches, Methodologies
- Kaizen: Features, Practice, Problem Solving 5's, 4 M's
- Flow Chart
- Cause and Effect Diagram
- Check Sheet
- Scatter Diagram
- Pareto Chart
- Histogram
- Control Chart
- Quality Circles
- Six Sigma
- Benchmarking
- Brainstorming
- Business Process Reengineering
- Parasuraman Service Quality Model

Problem Solving - Stages

- Stages:
- - Problem Identification
- - Root Cause Analysis
- - Solution Development
- - Implementation
- - Monitoring and Feedback

Problem Solving - Approaches

- Approaches:
- - Reactive vs. Proactive
- - Systematic vs. Ad-Hoc
- - Collaborative Problem Solving

Problem Solving - Methodologies

- Methodologies:
- - PDCA Cycle
- - DMAIC Process
- - A3 Problem-Solving

Kaizen - Features

- Key Features:
- - Continuous Improvement
- - Incremental Changes
- - Employee Involvement

Kaizen - Practices

- Practices:
- - Gemba Walks
- - Standardization
- - Visual Management

Kaizen - Problem Solving Tools

- 5’s:
- - Sort, Set in Order, Shine, Standardize, Sustain
- 4 M’s:
- - Man, Machine, Material, Method

Flow Chart

- Definition:
- - Visual representation of a process
- Use:
- - Identify bottlenecks and inefficiencies

Cause and Effect Diagram

- Purpose:
- - Identify root causes of a problem
- Structure:
- - Fishbone diagram categorizing potential causes

Check Sheet

- Purpose:
- - Collect and organize data
- Application:
- - Identify patterns and trends

Scatter Diagram

- Definition:
- - Graphical representation of two variables
- Use:
- - Determine correlation between variables

Pareto Chart

- Principle:
- - 80/20 Rule
- Application:
- - Prioritize problems or causes

Histogram

- Definition:
- - Graphical representation of data distribution
- Use:
- - Identify patterns and variations

Control Chart

- Purpose:
- - Monitor process stability
- Components:
- - Upper and Lower Control Limits

Quality Circles

- Definition:
- - Small groups for problem-solving
- Objective:
- - Improve quality and efficiency

Six Sigma

- Objective:
- - Reduce defects and variability
- Methodology:
- - DMAIC (Define, Measure, Analyze, Improve, Control)

Benchmarking

- Purpose:
- - Compare performance with best practices
- Types:
- - Internal, Competitive, Functional, Generic

Additional Tools

- Brainstorming:
- - Generate creative solutions
- Business Process Reengineering:
- - Redesign core processes for improvements
- Parasuraman Service Quality Model:
- - Framework for assessing service quality

Conclusion

- Summary:
- - Overview of SPC Tools and Techniques
- - Role in Continuous Improvement and TQM
- - Practical Applications
- Thank you! Questions?