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# ICBB

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**IASSC Certified Lean Six Sigma Black Belt**  
Exam Summary – Syllabus – Questions



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# Introduction to ICBB Exam on IASSC Certified Lean Six Sigma Black Belt

To achieve the professional designation of IASSC Certified Lean Six Sigma Black Belt from the IASSC, candidates must clear the ICBB Exam with the minimum cut-off score. For those who wish to pass the IASSC ICBB certification exam with good percentage, please take a look at the following reference document detailing what should be included in IASSC Lean Six Sigma Black Belt Exam preparation.

The IASSC ICBB Exam Summary, Body of Knowledge (BOK), Sample Question Bank and Practice Exam provide the basis for the real IASSC Certified Lean Six Sigma Black Belt exam. We have designed these resources to help you get ready to take IASSC Certified Lean Six Sigma Black Belt (ICBB) exam. If you have made the decision to become a certified professional, we suggest you take authorized training and prepare with our online premium [IASSC Lean Six Sigma Black Belt Practice Exam](#) to achieve the best result.

## IASSC ICBB Certification Details:

Exam Name	IASSC Certified Lean Six Sigma Black Belt
Exam Code	ICBB
Exam Fee	USD \$395
Exam Duration	240 Minutes
Number of Questions	150
Passing Score	580/750
Format	Multiple Choice
Schedule Exam	<a href="#">Book Your Exam</a>
Sample Questions	<a href="#">IASSC ICBB Exam Sample Questions and Answers</a>
Practice Exam	<a href="#">IASSC Certified Lean Six Sigma Black Belt Practice Test</a>

## IASSC ICBB Exam Syllabus:

<b>Define Phase</b>	
<b>The Basics of Six Sigma</b>	<ul style="list-style-type: none"> <li>- Meanings of Six Sigma</li> <li>- General History of Six Sigma &amp; Continuous Improvement</li> <li>- Deliverables of a Lean Six Sigma Project</li> <li>- The Problem Solving Strategy <math>Y = f(x)</math></li> <li>- Voice of the Customer, Business and Employee</li> <li>- Six Sigma Roles &amp; Responsibilities</li> </ul>
<b>The Fundamentals of Six Sigma</b>	<ul style="list-style-type: none"> <li>- Defining a Process</li> <li>- Critical to Quality Characteristics (CTQ's)</li> <li>- Cost of Poor Quality (COPQ)</li> <li>- Pareto Analysis (80:20 rule)</li> <li>- Basic Six Sigma Metrics               <ul style="list-style-type: none"> <li>a. including DPU, DPMO, FTY, RTY Cycle Time, deriving these metrics and these metrics</li> </ul> </li> </ul>
<b>Selecting Lean Six Sigma Projects</b>	<ul style="list-style-type: none"> <li>- Building a Business Case &amp; Project Charter</li> <li>- Developing Project Metrics</li> <li>- Financial Evaluation &amp; Benefits Capture</li> </ul>
<b>The Lean Enterprise</b>	<ul style="list-style-type: none"> <li>- Understanding Lean</li> <li>- The History of Lean</li> <li>- Lean &amp; Six Sigma</li> <li>- The Seven Elements of Waste               <ul style="list-style-type: none"> <li>a. Overproduction, Correction, Inventory, Motion, Overprocessing, Conveyance, Waiting.</li> </ul> </li> <li>- 5S               <ul style="list-style-type: none"> <li>a. Straighten, Shine, Standardize, Self-Discipline, Sort</li> </ul> </li> </ul>
<b>Measure Phase</b>	
<b>Process Definition</b>	<ul style="list-style-type: none"> <li>- Cause &amp; Effect / Fishbone Diagrams</li> <li>- Process Mapping, SIPOC, Value Stream Map</li> <li>- X-Y Diagram</li> <li>- Failure Modes &amp; Effects Analysis (FMEA)</li> </ul>
<b>Six Sigma Statistics</b>	<ul style="list-style-type: none"> <li>- Basic Statistics</li> <li>- Descriptive Statistics</li> <li>- Normal Distributions &amp; Normality</li> <li>- Graphical Analysis</li> </ul>
<b>Measurement System Analysis</b>	<ul style="list-style-type: none"> <li>- Precision &amp; Accuracy</li> <li>- Bias, Linearity &amp; Stability</li> <li>- Gage Repeatability &amp; Reproducibility</li> <li>- Variable &amp; Attribute MSA</li> </ul>

<b>Process Capability</b>	<ul style="list-style-type: none"> <li>- Capability Analysis</li> <li>- Concept of Stability</li> <li>- Attribute &amp; Discrete Capability</li> <li>- Monitoring Techniques</li> </ul>
<b>Analyze Phase</b>	
<b>Patterns of Variation</b>	<ul style="list-style-type: none"> <li>- Multi-Vari Analysis</li> <li>- Classes of Distributions</li> </ul>
<b>Inferential Statistics</b>	<ul style="list-style-type: none"> <li>- Understanding Inference</li> <li>- Sampling Techniques &amp; Uses</li> <li>- Central Limit Theorem</li> </ul>
<b>Hypothesis Testing</b>	<ul style="list-style-type: none"> <li>- General Concepts &amp; Goals of Hypothesis Testing</li> <li>- Significance; Practical vs. Statistical</li> <li>- Risk; Alpha &amp; Beta</li> <li>- Types of Hypothesis Test</li> </ul>
<b>Hypothesis Testing with Normal Data</b>	<ul style="list-style-type: none"> <li>- 1 &amp; 2 sample t-tests</li> <li>- 1 sample variance</li> <li>- One Way ANOVA</li> <li>a. Including Tests of Equal Variance, Normality Testing and Sample Size calculation, performing tests and interpreting results.</li> </ul>
<b>Hypothesis Testing with Non-Normal Data</b>	<ul style="list-style-type: none"> <li>- Mann-Whitney</li> <li>- Kruskal-Wallis</li> <li>- Mood's Median</li> <li>- Friedman</li> <li>- 1 Sample Sign</li> <li>- 1 Sample Wilcoxon</li> <li>- One and Two Sample Proportion</li> <li>- Chi-Squared (Contingency Tables)</li> <li>a. Including Tests of Equal Variance, Normality Testing and Sample Size calculation, performing tests and interpreting results.</li> </ul>
<b>Improve Phase</b>	
<b>Simple Linear Regression</b>	<ul style="list-style-type: none"> <li>- Correlation</li> <li>- Regression Equations</li> <li>- Residuals Analysis</li> </ul>

<b>Multiple Regression Analysis</b>	<ul style="list-style-type: none"> <li>- Non- Linear Regression</li> <li>- Multiple Linear Regression</li> <li>- Confidence &amp; Prediction Intervals</li> <li>- Residuals Analysis</li> <li>- Data Transformation, Box Cox</li> </ul>
<b>Designed Experiments</b>	<ul style="list-style-type: none"> <li>- Experiment Objectives</li> <li>- Experimental Methods</li> <li>- Experiment Design Considerations</li> </ul>
<b>Full Factorial Experiments</b>	<ul style="list-style-type: none"> <li>- 2k Full Factorial Designs</li> <li>- Linear &amp; Quadratic Mathematical Models</li> <li>- Balanced &amp; Orthogonal Designs</li> <li>- Fit, Diagnose Model and Center Points</li> </ul>
<b>Fractional Factorial Experiments</b>	<ul style="list-style-type: none"> <li>- Designs</li> <li>- Confounding Effects</li> <li>- Experimental Resolution</li> </ul>
<b>Control Phase</b>	
<b>Lean Controls</b>	<ul style="list-style-type: none"> <li>- Control Methods for 5S</li> <li>- Kanban</li> <li>- Poka-Yoke (Mistake Proofing)</li> </ul>
<b>Statistical Process Control (SPC)</b>	<ul style="list-style-type: none"> <li>- Data Collection for SPC</li> <li>- I-MR Chart</li> <li>- Xbar-R Chart</li> <li>- U Chart</li> <li>- P Chart</li> <li>- NP Chart</li> <li>- X-S chart</li> <li>- CumSum Chart</li> <li>- EWMA Chart</li> <li>- Control Methods</li> <li>- Control Chart Anatomy</li> <li>- Subgroups, Impact of Variation, Frequency of Sampling</li> <li>- Center Line &amp; Control Limit Calculations</li> </ul>
<b>Six Sigma Control Plans</b>	<ul style="list-style-type: none"> <li>- Cost Benefit Analysis</li> <li>- Elements of the Control Plan</li> <li>- Elements of the Response Plan</li> </ul>

## ICBB Sample Questions:

**01. Much of the Six Sigma methodology is used to identify and remove causes for \_\_\_\_\_ .**

**a) Process Variation**

- b) Material Costs
- c) Excess Inventory
- d) Lost Sales

**02. Control charts and their limits are the?**

- a) Voice of the employee
- b) Voice of the process
- c) Voice of the customer
- d) Voice of the team

**03. A kurtosis of -1,2754 indicates?**

- a) Platykurtic (flat with a short tail)
- b) Leptokurtic (peaked with long tails)
- c) Multi-modal (more than one distribution)
- d) Kanban Model

**04. In a Fishbone Diagram the 6M's stand for Methods, \_\_\_\_\_, Machine, Man, Mother Nature and Materials.**

- a) Measurements
- b) Merger
- c) Management
- d) Medical

**05. For a process having an average throughput of 7,200 units per hour, what is the average Cycle Time per unit in seconds?**

- a) 2
- b) 0.32
- c) 0.34
- d) 0.42
- e) 0.5

**06. Appropriate measures means that measurements are \_\_\_\_\_.**

- a) Representative
- b) Sufficient
- c) Contextual
- d) Relevant
- e) All of these answers are correct

**07. Special Cause Variation falls into which two categories?**

- a) Natural & Unnatural
- b) Short Term & Long Term
- c) Assignable & Pattern
- d) Attribute & Discreet

**08. An operator is measuring the distance between two points. Which is most likely to be influenced by the operator?**

- a) Precision of the measurement
- b) Accuracy of the measurement
- c) Calibration of the instrument
- d) All of these answers are correct

**09. Cost of Poor Quality (COPQ) can be classified as Visible Costs and Hidden Costs. Which of these items is a Visible Cost?**

- a) Lost Customer Loyalty
- b) Time Value of Money
- c) Returns
- d) Late Delivery

**10. A two-sample T-test does which of the following?**

- a) Compares the medians to determine if sample 1 is statistically difference from sample 2
- b) Subtracts the mean of sample 1 from sample 2 and compares the difference to zero to determine if they are equal
- c) Compares the means to determine if sample 1 is statistically difference from sample 2
- d) test of the difference between two population medians

**Answers to ICBB Exam Questions:**

Question: 01 Answer: a	Question: 02 Answer: b	Question: 03 Answer: a	Question: 04 Answer: a	Question: 05 Answer: a
Question: 06 Answer: e	Question: 07 Answer: c	Question: 08 Answer: d	Question: 09 Answer: c	Question: 10 Answer: c

Note: If you find any typo or data entry error in these sample questions, we request you to update us by commenting on this page or write an email on [feedback@processexam.com](mailto:feedback@processexam.com)