International Management Research
and Technology Consortium – LLC - USA

AI – CLSSGB

AI POWERED

CERTIFED LEAN

SIX SIGMA

GREEN BELT

www.imrtc.org
consortium@imrtc.org

Bridging The Gap Between
Academia and The Industry
Worldwide!

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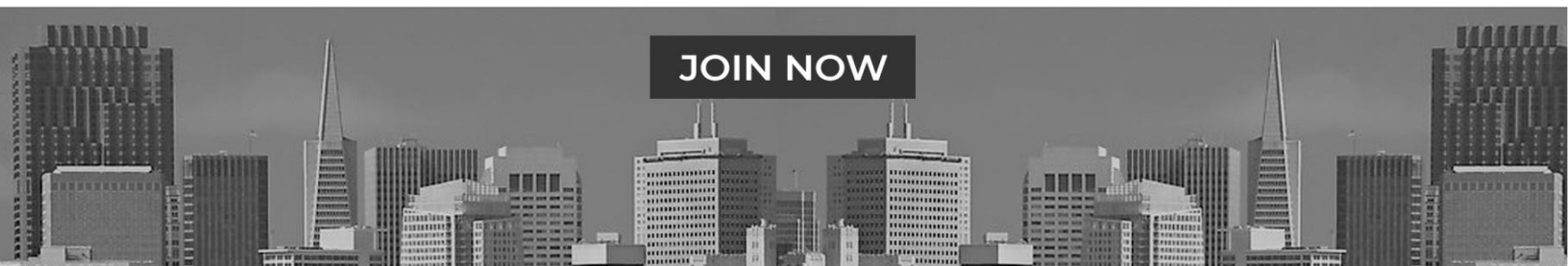

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IMRTC

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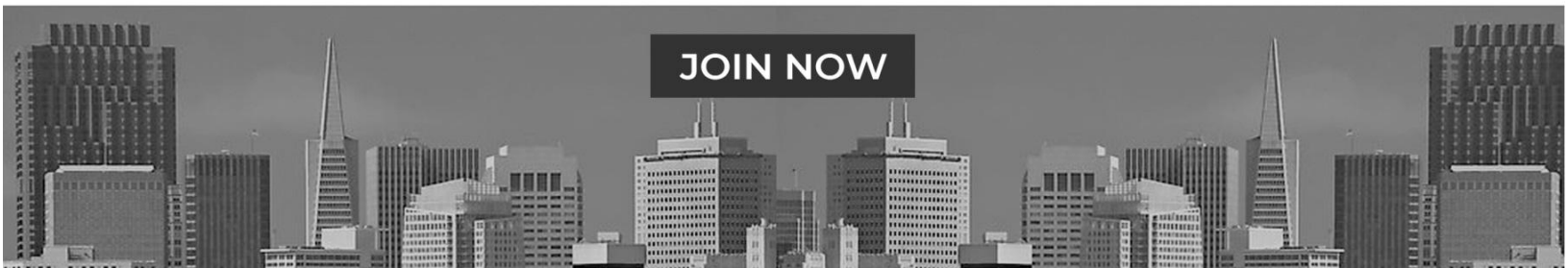

AI CERTIFIED LEAN SIX SIGMA GREEN BELT (AI - CLSSGB)

INTRODUCTION

There is a growing global demand for skilled professionals who are certified in **Lean Six Sigma Green Belt** methodologies and possess the expertise to optimize business processes using business process re-engineering techniques**.**

Recognizing this need, IMRTC, as a leading and reputable consortium, has developed a comprehensive curriculum that integrates Lean Six Sigma Green Belt principles with **emerging Artificial Intelligence (AI) technologies**. Through extensive consultation with senior members, industry executives, and expert consultants, IMRTC has introduced the advanced certification program: AI-CERTIFIED LEAN SIX SIGMA GREEN BELT (AI-CLSSGB). This program equips professionals with the tools, techniques, and AI-driven methodologies required to drive process efficiency, quality improvement, and operational excellence in modern organizations.

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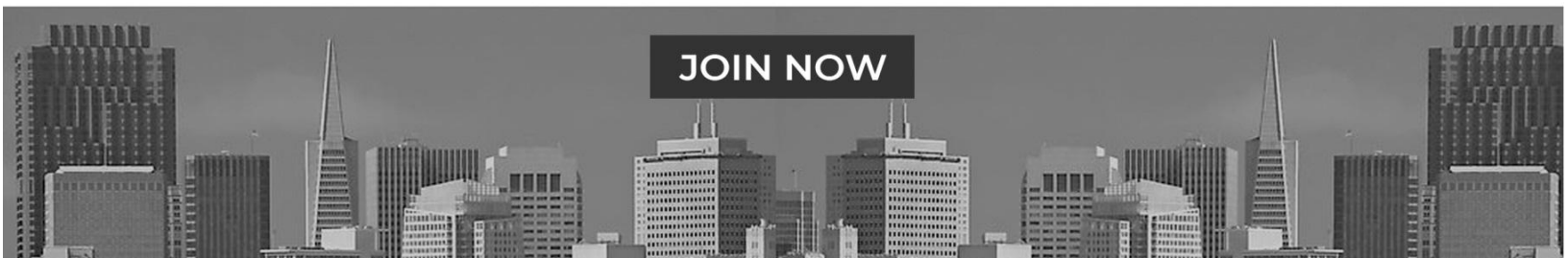
ABOUT AI – CLSSGB

The **AI Lean Six Sigma Green Belt (AI-CLSSGB)** certification is designed to develop essential expertise and practical skills for professionals in **Quality, Production, Operations, and Service** domains.

The primary objective of this program is to enable management and teams to increase organizational productivity, reduce costs, and optimize processes by combining Lean methodologies with **advanced Artificial Intelligence (AI) technologies** for more effective and efficient operations.



The AI-CLSSGB curriculum covers key areas, including:

- ✓ Quality Cycle Management
- ✓ Lean Management Principles
- ✓ Qualitative and Quantitative Assessment of Processes
- ✓ Strategic Operational Management using ERP, CRM, and AI systems
- ✓ The program adopts a systematic, hands-on learning approach, featuring:
- ✓ Practical exercises and practice sessions
- ✓ Quizzes and assessments
- ✓ Audio-visual learning aids
- ✓ Real-world case studies and project development

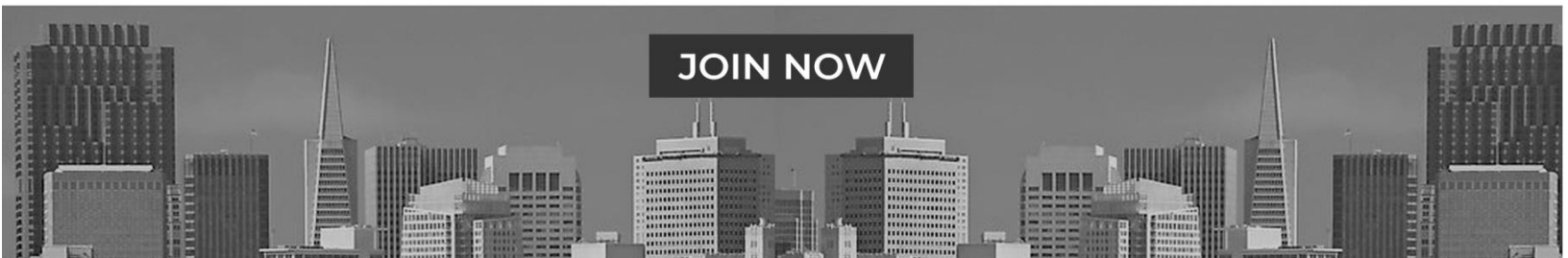
This comprehensive approach ensures that participants gain practical skills, applicable knowledge, and experience in implementing Lean Six Sigma methodologies enhanced by AI in real organizational contexts.

AUDIENCE

The **AI-Certified Lean Six Sigma Green Belt (AI-CLSSGB)** program is ideal for professionals from **Quality, Production, Manufacturing, and Service** industries who wish to enhance their skills in process optimization and operational excellence.
It is particularly suitable for:

- Managers
- Supervisors
- Executive Assistants
- Team Leads

Professionals involved directly or indirectly in quality, operations, or process improvement initiatives
This certification is designed to equip participants with the knowledge and practical skills needed to drive efficiency, reduce waste, and contribute meaningfully to organizational performance**.**



AI – CERTIFIED LEAN SIX SIGMA GREEN BELT (CLSSGB)

THE CREDENTIALS

The Candidates who are looking to have this certification need a proper training of 36 Professional Training Hours (PTH) from any recognized institute and approved professional trainers of IMRTC. After passing the certification examination, the candidates can use the credentials AI CERTIFIED LEAN SIX SIGMA GREEN – AI CLSSGB with their names.

PRE-REQUISITE:

To enroll in the AI-CLSSGB program, candidates must have:

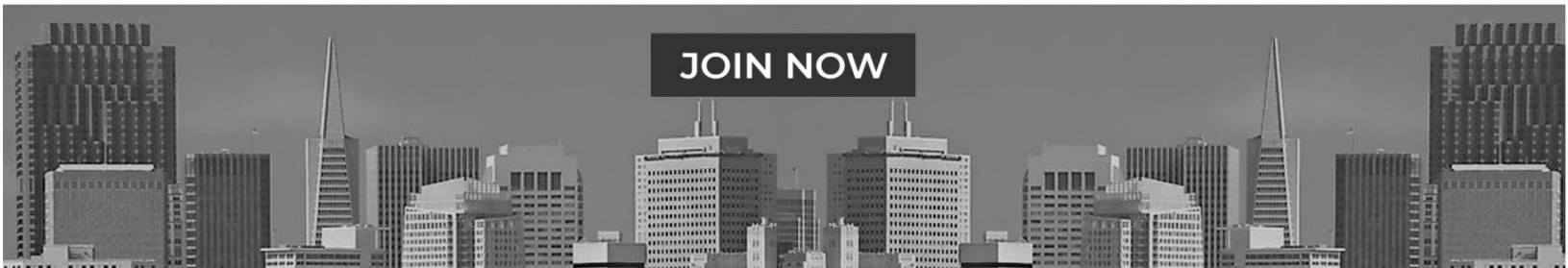
- A Bachelor's degree, high school professional diploma, associate degree, or global equivalent
- At least one year of professional experience in Quality, Manufacturing, or any Service Industry

AI CERTIFIED LEAN SIX SIGMA GREEN BELT (AI CLSSGB)

PROFESSIONAL BENEFITS OF PROGRAM

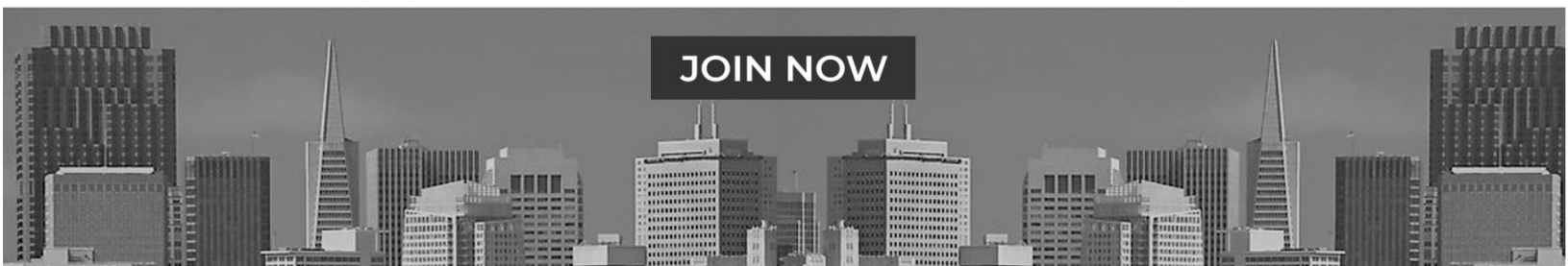
An **AI Certified Lean Six Sigma Green Belt (AI CLSSGB)** is a valuable credential that demonstrates expertise in improving problem solving and analytical skills, ability to lead process improvement project, increases cross industry applicability, reducing waste, and driving quality improvements and improved organizational impacts. Here are the key benefits of earning this certification:

1. **Career Advancement**
   - An AI-CLSSGB certification enhances your resume and makes you a strong candidate for leadership and managerial roles in various industries.
   - Employers value professionals who can drive process improvements and manage cross-functional teams effectively.
2. **Increased Earning Potential**
   - Certified professionals often earn higher salaries due to their specialized skills and ability to deliver measurable business results.
   - A AI-Six Sigma Green Belt certification is often associated with premium roles in organizations.
3. **Expanded Career Opportunities**
   - Industries such as manufacturing, healthcare, IT, finance, logistics, and consulting frequently seek Lean Six Sigma Green Belts.
   - The certification demonstrates versatility and relevance across sectors.
4. **Leadership Skills**
   - Green Belts are trained to lead and mentor teams, fostering leadership qualities essential for project and change management.
5. **Improved problem solving and analytical skills**
   - Green Belt professionals learn to apply statistical tools and problem-solving methodologies to identify inefficiencies, improve processes, and reduce variability. This training helps develop strong analytical skills that can be applied to various business scenarios.



PROGRAM STRUCTURE

Total Domains	8
Lectures	Lectures can be delivered through partners and trainers
Accredited Trainers	Can Deliver the lectures
One Credit Hour	10 Learning Hours
Total Credits Required	3.6 Credit Hours
Registration Process	Register through our partners / Trainer
Assessment	Online / Paper based
Passing Criteria	70 percent

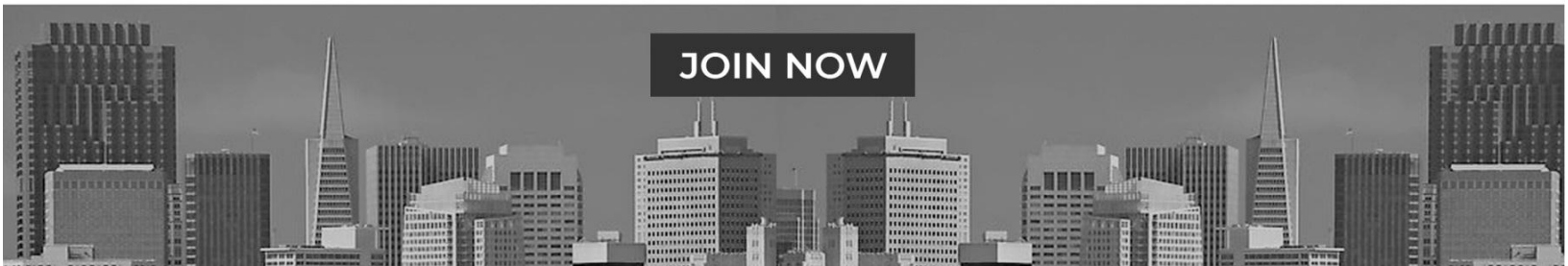


PROGRESSION OF THE PROGRAM

Total Credentials	=	3.6 Credit Hours
One Credit Hour	=	10 Learning hours
Final Assessment	=	Online or physical assessment shall be taken by IMRTC Examination Department

AWARDING OF AI - CLSSGB CERTIFICATION

After getting 70 percent marks from the examination, the candidate will be awarded the AI-CLSSGB Certification from IMRTC USA.



COURSE CONTENTS

AI powered Certified Lean Six Sigma Green Belt Covers theory, process and practices of Lean and Six sigma skills

DOMAIN 1: Define Phase

DOMAIN 2: Measure Phase

DOMAIN 3: Analyze Phase

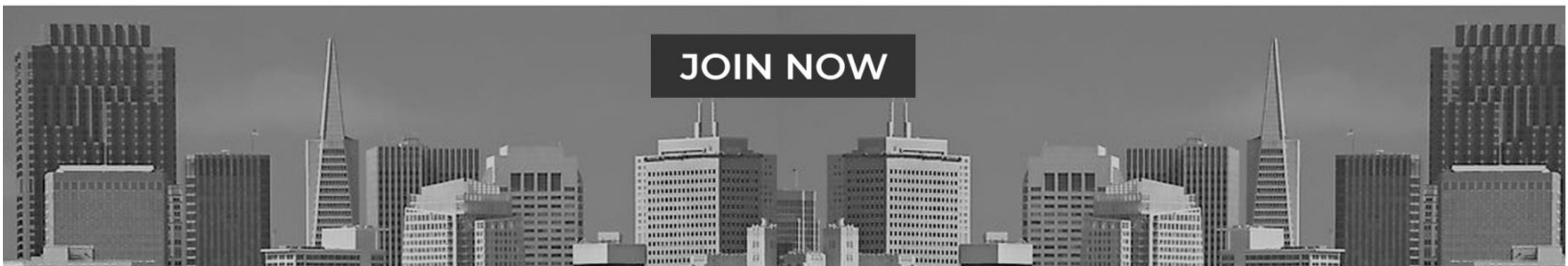
DOMAIN 4: Improve Phase

DOMAIN 5: Control Phase

DOMAIN 6: Lean Tools

DOMAIN 7: Statistical Tools and Techniques

DOMAIN 8: Project Management and Teamwork



DOMAINS AND TASKS

This document presents the updated structure for the **IMRTC Standard Examination Content**. Based on insights from experienced consultants and key stakeholders, the format has been streamlined to ensure that the IMRTC Examination System is clear, organized, and easy to interpret.

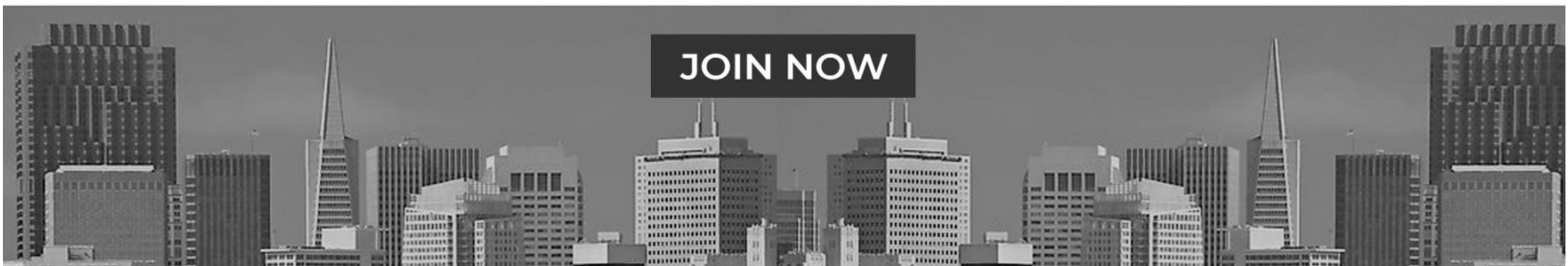
Domain

A *domain* represents a high-level knowledge area essential for the practice of **AI-CLSSGB**.

Tasks

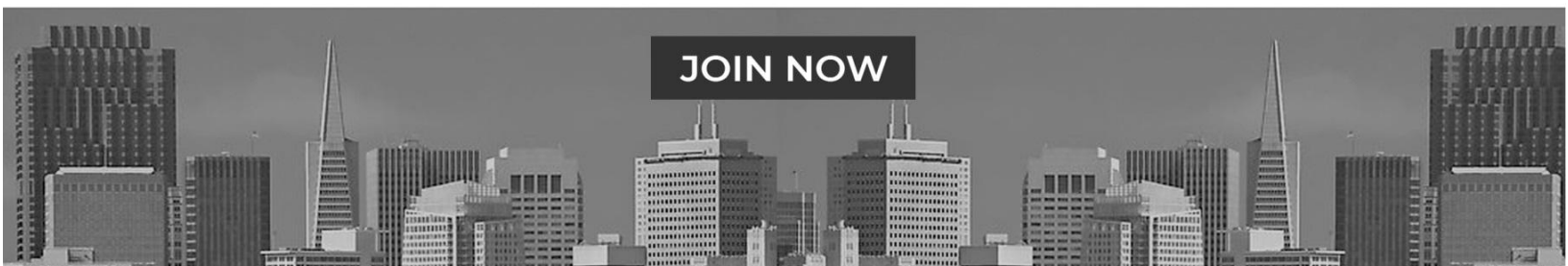
Tasks are the specific roles, functions, and responsibilities that a Quality Consultant is expected to perform within each domain.

The **AI-CLSSGB course examination** will cover *all tasks* within each domain and will follow the outlined percentage distribution for each domain, provided in the subsequent pages.



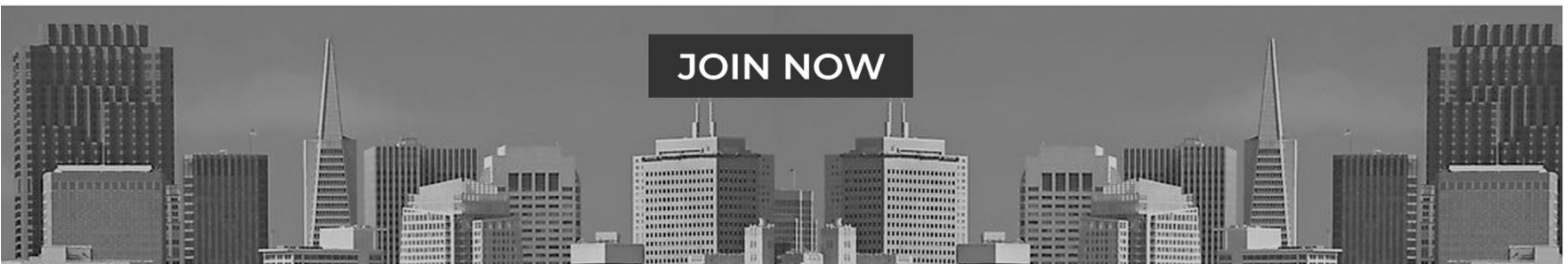
KNOWLEDGE AREAS

Domain 1: DEFINE PHASE	
Task 1	Project Identification and Selection Identifying improvement opportunities aligned with business objectives. Defining the scope and goals of the project.
Task 2	Voice of the Customer (VoC) Gathering and translating customer requirements into measurable objectives.
Task 3	Project Charter Development Documenting project objectives, scope, team members, and milestones. Stakeholder Analysis Identifying and managing stakeholders to ensure project success.
Task 4	Fundamentals of AI Understanding of NLP (Natural Language Processing) tools Learn how that customer feedbacks, surveys, emails and social media pain point can be encountered through AI techniques. Machine learning models can assess historical project data to predict potential ROI and select high-impact initiatives.



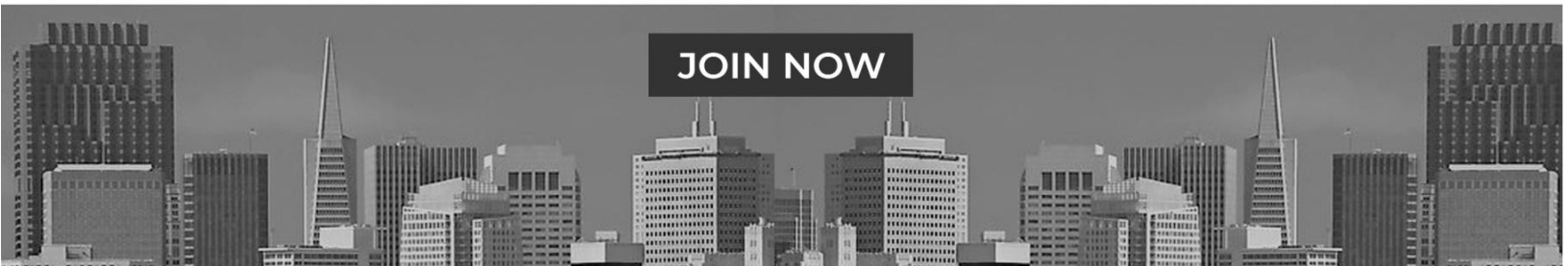
KNOWLEDGE AREAS

Domain 2: MEASURE PHASE	
Task 1	**Process Mapping and Documentation** Creating detailed process maps (e.g., SIPOC, value stream mapping).
Task 2	**Data Collection and Sampling** Designing data collection plans. Sampling techniques to ensure data reliability
Task 3	**Measurement System Analysis (MSA)** Evaluating the accuracy and precision of measurement systems.
Task 4	**Descriptive Statistics** Understanding central tendency, dispersion, and data distribution.
Task 5	**Baseline Performance Metrics** Calculating process capability indices (Cp, Cpk, Pp, Ppk).
Task 6	Learn and understand that how automated process mapping can be done through AI Computer Vision to read SOPs or workflows and covert into the digital process maps Learn and understand AI sampling and data collection techniques Learn predictive analytics to find the gaps and detect anomalies in available data Learn IoT (Internet of things) for understanding of latest trend of technology that integrates with other systems and provide real-time information



KNOWLEDGE AREAS

Domain 3: ANALYZE PHASE	
Task 1	**Data Analysis Tools** Hypothesis testing (e.g., t-tests, ANOVA, Chi-square tests). Correlation and regression analysis.
Task 2	**Root Cause Analysis (RCA)** Using tools like Fishbone diagrams, Pareto charts, and 5 Whys
Task 3	**Failure Mode and Effects Analysis (FMEA)** Identifying potential risks and their impact on the process.
Task 4	**Process Variability Analysis** Analyzing sources of variation in the process.
Task 5	**AI Modelling** Learn and Understand that how AI algorithms can provide Hypothesis testing on the available datasets by using different statistical modelling techniques Learn and Understand by using AI Predictive Analytics Provide the reports of Risks and root cause analysis by using Machine learning techniques to detect correlations and causes beyond what standard statistical tools find Learn and Understand about AI Driven anomaly detection to find the abnormal pattern in production or service delivery. Learn and Understand AI Natural Language with text-based complaints to classify issues automatically

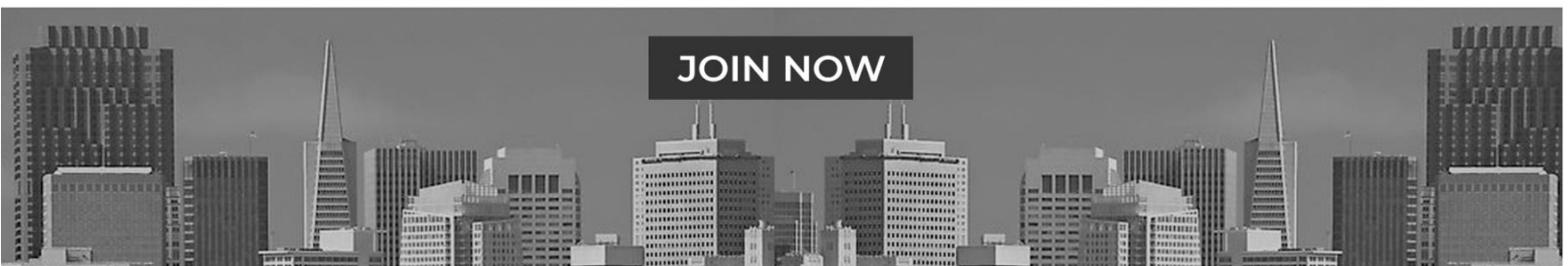


KNOWLEDGE AREAS

Domain 4: IMPROVE PHASE	
Task 1	**Brainstorming and Solution Development** Generating and prioritizing potential solutions.
Task 2	**Lean Tools and Techniques** Implementing tools like 5S, Kaizen, and Kanban.
Task 3	**Design of Experiments (DOE)** Conducting experiments to optimize process parameters.
Task 4	**Cost-Benefit Analysis** Evaluating the feasibility and impact of proposed solutions.
Task 5	**Learn and Understand AI-assisted brainstorming**: Generative AI tools to suggest process improvements based on global best practices. **Learn and Understand Digital twin simulations**: Test proposed changes in a virtual model before actual implementation. **Learn and Understand AI-driven optimization**: Use genetic algorithms or reinforcement learning to find optimal process parameters.

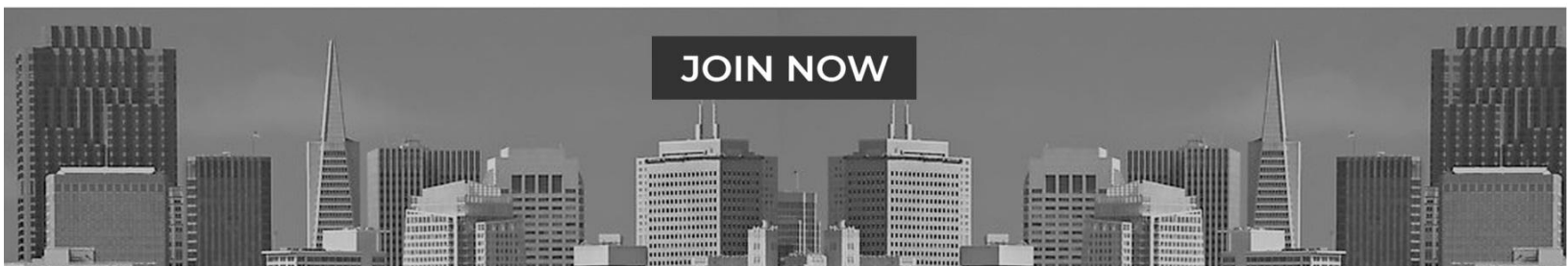
KNOWLEDGE AREAS

Domain 5: CONTROL PHASE	
Task 1	**Control Plan Development** Documenting steps to sustain improvements.
Task 2	**Statistical Process Control (SPC)** Using control charts to monitor process performance.
Task 3	**Mistake Proofing (Poka-Yoke)** Implementing error-proofing techniques.
Task 4	**Sustainability Measures** Ensuring long-term adoption of improvements.
Task 5	**Project Closure and Handover** Transitioning ownership to process owners and documenting lessons learned
Task 6	Learn and Understand that by Using Real-time AI monitoring dashboard connects with SPC charts to send automated alerts when performance drifts. Learn and Understand that by Using Predictive maintenance techniques of AI anticipate equipment failures and reduce downtime. Learn and Understand that by Using that how Chatbots helpful for standard operating procedures and provide guidance through AI assistants.



KNOWLEDGE AREAS

Domain 6: LEAN TOOLS	
Task 1	Waste identification and elimination (e.g., TIMWOOD: Transportation, Inventory, Motion, Waiting, Overproduction, Over processing, Defects).
Task 2	Value Stream Mapping (VSM) for process flow analysis
Task 3	Continuous Flow and Pull Systems
Task 4	Learn and understanding of AI Computer vision to find waste detection, motion, defects, or misplacement in production through AI cameras. Learn and understanding of AI-enhanced value stream mapping through Process mining software generating live value stream maps from ERP logs.

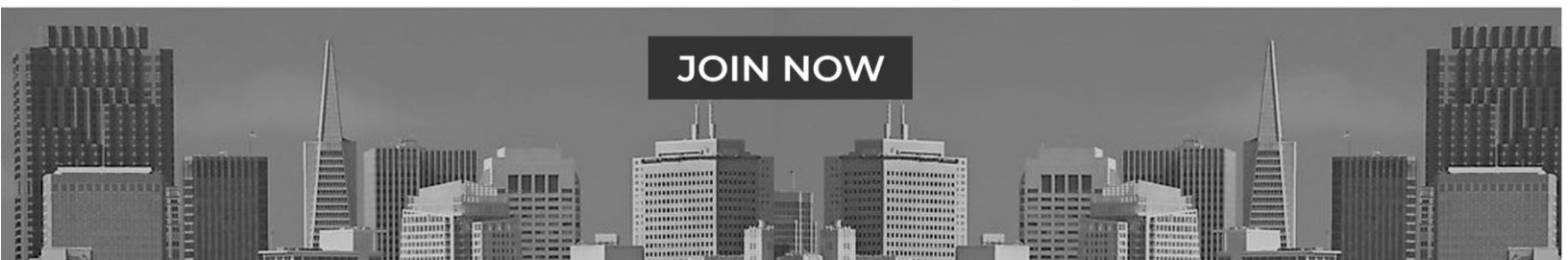


KNOWLEDGE AREAS

Domain 7: STATISTICAL TOOLS AND TECHNIQUES	
Task 1	**Data Analysis and Statistical Methods** Basic understanding of statistics (mean, median, mode, standard deviation) Applying statistical tools for analyzing data and making informed decisions Use of software tools like Minitab or Excel for analysis
Task 2	**Tools & Techniques:** • Descriptive Statistics • Hypothesis Testing • Confidence Intervals • Analysis of Variance (ANOVA) • Regression Analysis • Control Charts
Task 3	Learn Data Science with python Using different data models and generate the patterns by using AI algorithms Integrate Excel with AI and develop the data patterns accordingly

KNOWLEDGE AREAS

Domain 8: PROJECT MANAGEMENT AND TEAMWORK	
Task 1	**Managing Projects and Leading Teams** Understanding project management principles and frameworks (e.g., DMAIC) Leading project teams and effectively communicating project progress Time management, task allocation, and resource management Managing change and engaging stakeholders
Task 2	**Tools & Techniques:** Gantt Charts Work Breakdown Structure (WBS) Team Roles and Dynamics Communication Plans
Task 3	Learn and understand that AI Project Management AI Performance Evaluation, comparison, drifts and variance analysis



ASSESSMENT OF PROGRAM (ONLINE/PHYSICAL)

The examination may be taken online or physically, based on the candidate's preference; however, online examination is highly recommended.

The exam will cover all domains and topics outlined in the curriculum.
The passing score is 70%**.**

Internal assessment marks may be included in the final score through accredited trainers, subject to prior approval from the

IMRTC EXAMINATION DEPARTMENT

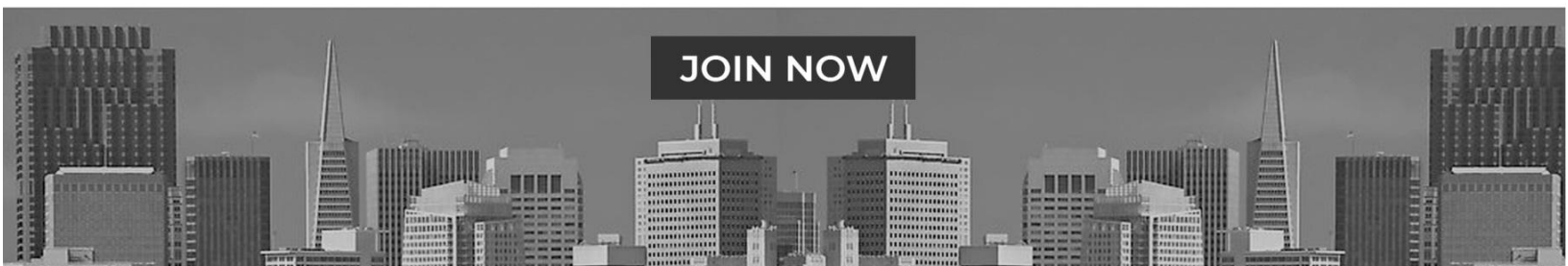
Candidates who do not have access to online facilities may take a paper-based examination**.** In all other cases, partners are required to arrange proper online examination centers in accordance with IMRTC's examination guidelines.

All assessments will be conducted according to the defined domains and tasks, utilizing IMRTC's standardized online assessment methodology.

EVALUATION AND GRADING

Candidates will be evaluated through examinations conducted by IMRTC LLC, USA**.**
The total marks for the Certification/Diploma are based on 100 points.

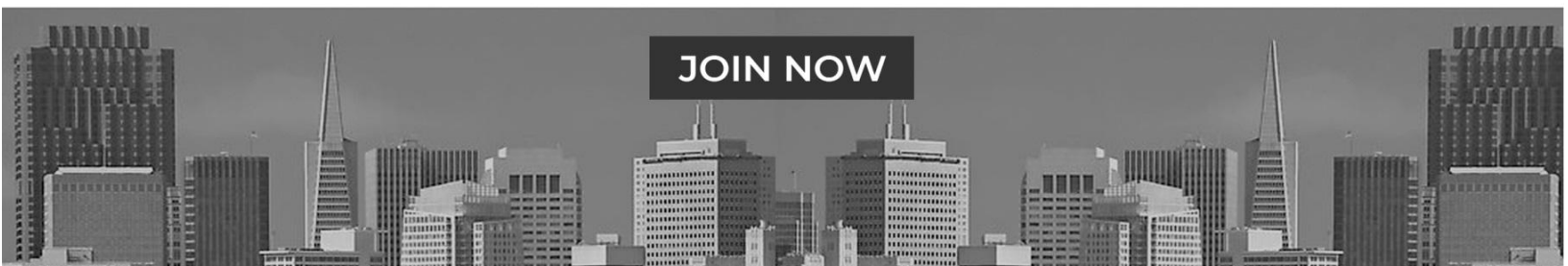
A minimum score of **70 out of 100** is required to successfully pass and qualify for certification.



AI CLSSBB ELIGIBILITY REQUIREMENTS

To be eligible for the AI-Certified Lean Six Sigma Green Belt for any level, the candidates must have a 2 years Bachelor degree pass or equivalent by having One-Year market experience. The candidate should have to submit the credentials

Educational Background	**Certification / Diploma**
Bachelor degree Passed or Equivalent	Must be earned from any partner institute about 4 Credit hours course training
Professional Experience	**Certification / Diploma**
One year Minimum Professional Experience Required	From any professional organization or company



REGISTRATION AND PAYMENT PROCESS

We encourage that registration of the program is to be completed through our registered partners/trainers, and if the partners are not available in your region city or country, then you can directly apply through professional membership and submit the fee in our bank account directly.

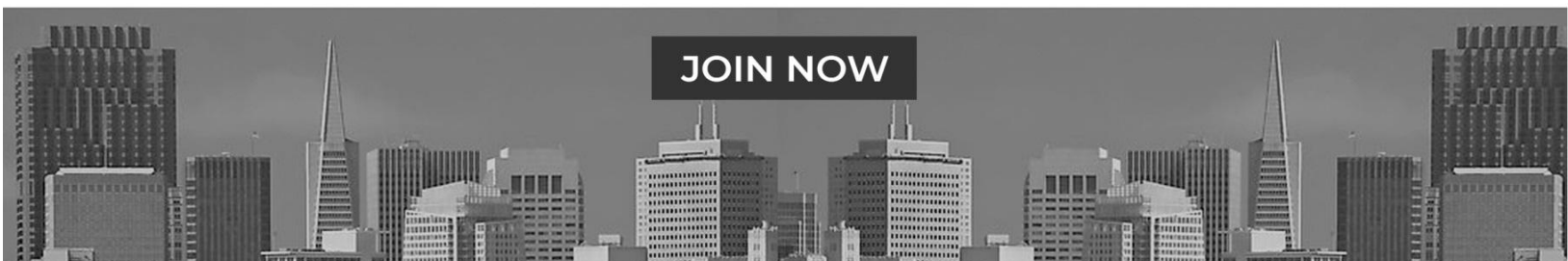
The Bank Details are given below:

- IMRTC, LLC
- LiLi Bank
- Sunrise Banks, N.A
- Member FDIC

Account Details

- Account Number: 692101479081
- Routing Number for ACH: 091017138
- Routing number for Wire Transfer: 121145307
- Swift number for International Wire Transfer: CLNOUS66

Once you have paid the amount in the above mentioned bank, so please share the detail with your professional Member ID and attached the slip at email registration@imrtc.org. Once the transaction has been verified, so you will get the receipt and your case will be forwarded to examination department for further actions. On the other hand, if you have further issue, so you may please contact to cell number or email at consortium@imrtc.org.



IMRTC EXAMINATION SYSTEM

AI CERTIFIED LEAN SIX SIGMA GREEN BELT CERTIFICATION

PARTNER/ INSTITUTE / TRAINER EXAMINATION SYSTEM

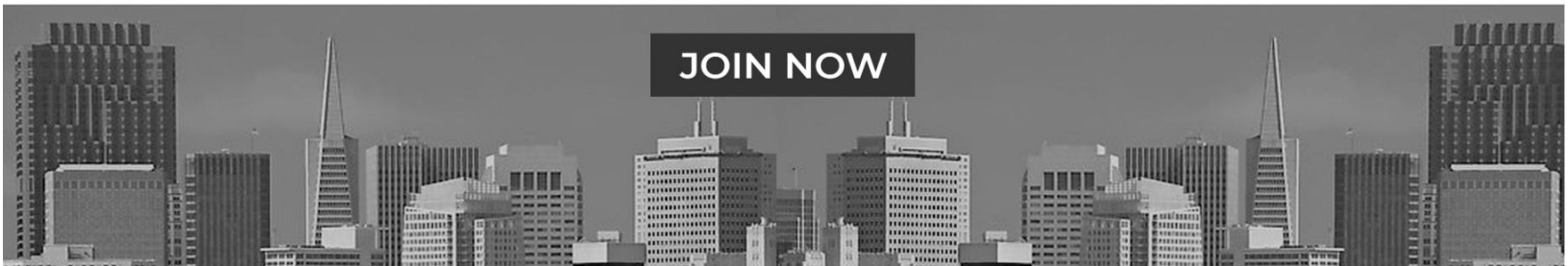
The concerned partner/institute/trainer will take exams through paper based or online and submit to the International Management Research and Technology Consortium - USA Examination Department.

IMRTC ONLINE EXAMINATION SYSTEM

IMRTC will provide access to all trainers/partners to schedule the exams of the particular courses of any individual candidates. Therefore, according to the availability, the partner institutes will schedule the exam of individual candidates' subjects or courses/certifications.

IMRTC PAPER BASED EXAMINATION SYSTEM

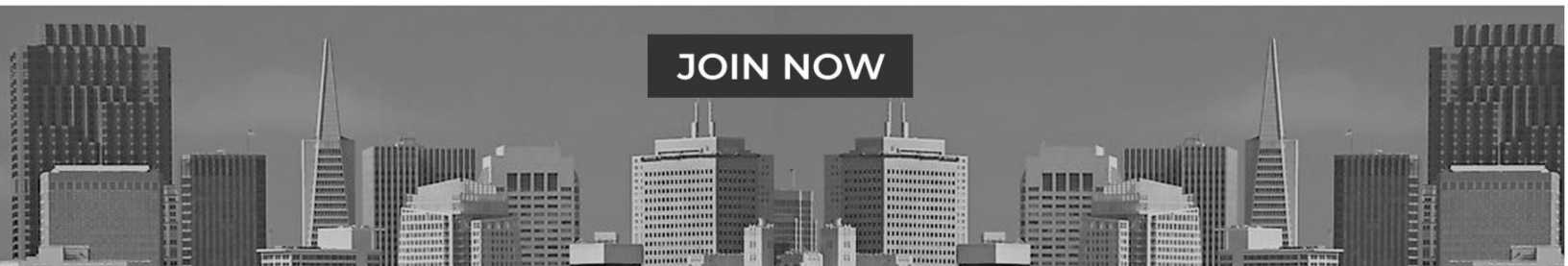
IMRTC offer the paper based physical attempt exam to registered institutes / partners / trainers. In this case, the registered partners/institutes/ trainers may schedule the exam on their provided portal and schedule the exam, The IMRTC examination department will send the paper to your registered invigilators as per schedule.



FEES STRUCTURE

CERTIFIED LEAN SIX SIGMA GREEN BELT

S. No	Description	Fees
1.	Membership Fee	USD 30
2.	Examination Fee For Non Members	USD 300
3.	Examination Fee For Non Members	USD 475



PROCESS OF CERTIFICATION

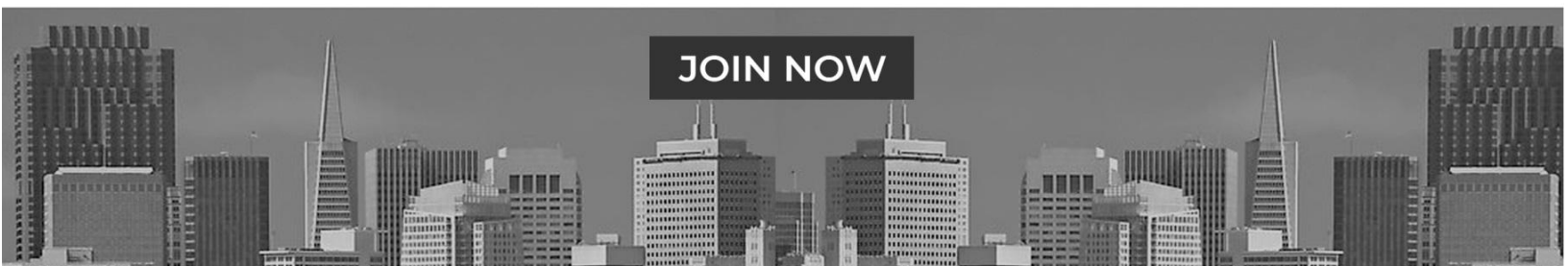
To qualify for the **AI–CLSSGB Certification**, candidates must complete **36 Professional Training Hours (PTH)** from an approved professional trainer or IMRTC partner. Candidates are required to submit proof of completed PTH along with the Examination Application Form, including all required academic and experience documents.

The certification exam consists of 100 multiple-choice questions (MCQs), and candidates must achieve a minimum score of 70% to pass. If a project component is included in the exam, marks will be distributed according to the respective course and certification requirements.

TERMS & CONDITIONS RELATED TO EXAMINATION AND CERTIFICATION

- ✓ **Validity of Training:** The 36 Professional Training Hours (PTH) are valid for one year from the date of completion.
- ✓ **Re-Attempt on Failure:** If a candidate fails the examination, they are allowed **one additional attempt within the same year**. If the candidate does not pass on the second attempt, they must pay the examination fee again to reappear.
- ✓ **Examination after One Year:** Candidates who wish to appear for the examination after one year from their training completion must resubmit the 36 PTH to be eligible.
- ✓ **Online Examination:** The examination is primarily online, and candidates can schedule it at their convenience.
- ✓ **Paper-Based Examination:** In countries or regions where online examination is not available and as per registered partner/trainer/institute will, candidates may take a **paper-based examination**, which should be submitted to the authorized partner, trainer, or examiner. The assessment period will be one month, after which results will be sent to the concerned partner.
- ✓ **Issuance of Certificate:** Candidates will receive their certificate within one month after successfully passing the examination, and the administration will send it to the concerned partner or training center.
- ✓

Annual Membership Renewal: To maintain the value, recognition, and eligibility of the certification in the market, candidates are required to renew their membership bi-annually.



EXAM CONTENT PERCENTAGE

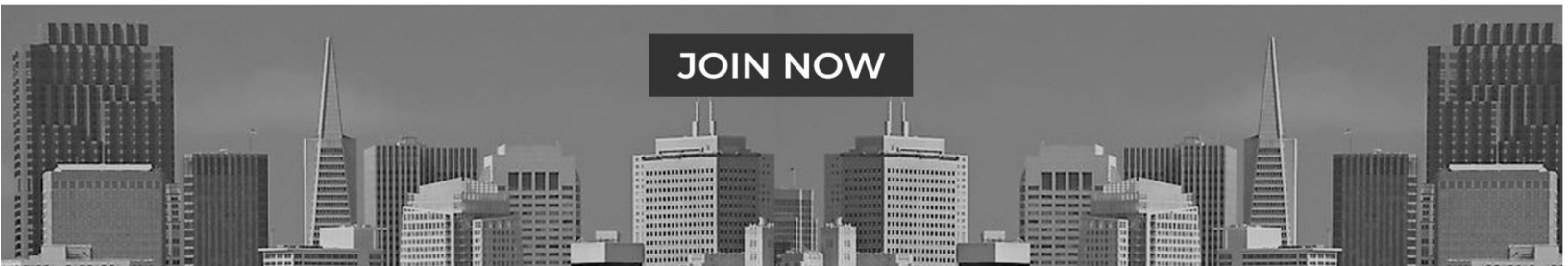
The table below specifies the proportion of examination questions drawn from each section or Knowledge Area outlined above.

The examination will include a variety of question formats, including:

- ✓ **Multiple Choice Questions (MCQs)**
- ✓ **Fill-in-the-Blank Questions**
- ✓ **Short Essay / Letter Writing Questions**

This structure ensures a comprehensive assessment of the candidate's knowledge and practical understanding of the AI-CLSSGB curriculum.

CONTENT	DOMAIN WISE PERCENTAGE
DOMAIN I	11%
DOMAIN II	11%
DOMAIN III	11%
DOMAIN IV	11%
DOMAIN V	11%
DOMAIN VI	15%
DOMAIN VII	15%
DOMAIN VIII	15%



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