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**COMMISSIONING CERTIFIED TECHNICIAN**

**CXCT OVERVIEW**

**ONLINE TRAINING BY KRISHNAJI PAWAR**

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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# Professional Certification in Building Commissioning

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# COMMISSIONING CERTIFIED TECHNICIAN - CXCT OVERVIEW

The National Environmental Balancing Bureau (NEBB) is a recognized organization that standardizes environmental systems in the built environment. NEBB certification serves as a benchmark for firms, professionals, and technicians involved in testing, adjusting, and balancing (TAB) of HVAC systems, building systems commissioning, indoor environmental quality, and performance verification.

# Learning Objectives

- **Course Overview and Introduction**
- **Definition & History of Commissioning**
- **Why is building commissioning needed?**
- **Basics of field TAB verification, HVAC systems, and controls**
- **CP roles, responsibilities, and professional qualifications**
- **Cost and benefits of System Commissioning**
- **Working knowledge of procedural standards**
- **Summary and Resources**
- **CxCT Exam Sample Question**



# INTRODUCTION

- The National Environmental Balancing Bureau (NEBB) is a recognized organization that standardizes environmental systems in the built environment.
- NEBB certification serves as a benchmark for firms, professionals, and technicians involved in testing, adjusting, and balancing (TAB) of HVAC systems, building systems commissioning, indoor environmental quality, and performance verification.
- NEBB certification signifies a commitment to excellence and adherence to industry standards, ensuring firms and practitioners possess the necessary knowledge, skills, and experience to manage and improve environmental system performance.
- A NEBB Certified Firm meets specific standards set by NEBB in TAB, commissioning, and related services.
- To achieve certification, firms must demonstrate compliance with NEBB's rigorous quality assurance program, including technical expertise, quality control, and adherence to standards.
- For instance, a hypothetical firm, "Optimal Balance Co.", must employ at least one NEBB Certified Professional and several NEBB Certified Technicians, establish a quality management system, and document compliance with NEBB standards during all operational processes.

# NEBB CERTIFICATION OVERVIEW

- NEBB Certified Professionals have undergone extensive training and assessment in the principles and practices related to environmental system performance.
- For certification, professionals must have a relevant degree or equivalent educational experience in engineering, architecture, or a related field, a minimum number of years of verifiable work experience in the field of environmental systems, and successfully pass a rigorous examination.
- NEBB Certified Technicians perform the hands-on work associated with testing, adjusting, and balancing environmental systems.
- The NEBB certification process establishes a framework for quality, accountability, and professionalism within the environmental systems industry, enhancing operational effectiveness, customer satisfaction, and contributing to the overall performance of building systems.



# COMMISSIONING PROVIDER SKILLS REQUIREMENT

- Maintains unbiased problem-solving and conflict resolution approach.
- Knowledge of HVAC systems, including design, control strategies, installation, operations, and maintenance.
- Experience in HVAC controls, including current technology.
- Practical background in field construction.
- Ability to organize specific activities into a coherent commissioning plan.
- Good communication skills, documentation proficiency.
- Experience in working with multidisciplinary teams.
- Familiarity with testing and balancing.



# NEBB'S CXCP CERTIFICATION PROGRAM

- Certification programs recognize a practitioner's expertise and commitment to the field.
- Certifications enhance credibility, promote industry best practices, and contribute to the quality of building commissioning processes.
- The National Environmental Balancing Bureau (NEBB) is a prominent certifying body offering the Commissioning Process Management Certification (CXCP).



# PURPOSE AND SCOPE OF NEBB'S CXCP

- The certification aims to establish a benchmark for professionals involved in the commissioning process.
- Eligibility criteria include experience, education, and training in engineering, architecture, or related fields.
- The certification involves passing a rigorous examination that assesses knowledge in various areas.



# BENEFITS OF CXCP CERTIFICATION



- Professional Recognition: Achieving the CXCP certification signifies a commitment to excellence and professionalism in the field of building commissioning.
- Improved Project Outcomes: Professionals with CXCP certification can effectively manage commissioning projects, leading to improved project outcomes.
- Networking Opportunities: Certification opens doors to networking opportunities within the commissioning community.

# NEBB CXCT CERTIFICATION OVERVIEW

- The National Environmental Balancing Bureau (NEBB) is a key organization in ensuring the quality and performance of building systems.
- The Certified Commissioning Technician (CXCT) certification is a professional credential for individuals working in the commissioning of building systems.
- Commissioning refers to the systematic process of ensuring all components of a building function together as intended.
- The CXCT certification serves multiple objectives: standardization, professional recognition, quality assurance, efficiency, and sustainability.
- Eligibility and requirements include a minimum number of years of relevant work experience, completion of a NEBB-approved training program, and familiarity with building systems and commissioning processes.



# NEBB CXCT CERTIFICATION +



- The certification process includes training, examination, field experience, and periodic renewal.
- Key areas of knowledge include fundamentals of commissioning, building systems, testing and verification, and troubleshooting.
- Practical applications of CXCT certification include pre-functional testing, functional performance testing, documentation and reporting, and post-occupancy evaluation.
- The NEBB CXCT certification is a cornerstone of professional practice in the commissioning field, emphasizing the importance of skilled technicians in optimizing building performance and efficiency.

# NEBB CxCT PRE-REQS



## Candidacy Prerequisites

Applicants for the CxCT certification must meet the education and experience prerequisite requirements in one of the categories listed in the chart below.

Category A	Category B
Associate Degree from an accredited community college, trade school training, or equivalent military training	High School Diploma or equivalent
<b>AND THE FOLLOWING</b>	<b>AND (PICK ONE OF THE OPTIONS BELOW)</b>
<ul style="list-style-type: none"><li>→ Minimum one year field experience in applicable discipline</li><li>→ A completed alternative training course in applicable discipline</li></ul>	<p><b>Option 1</b></p> <ul style="list-style-type: none"><li>→ Minimum two years of field experience in applicable discipline</li><li>→ A completed alternative training course in applicable discipline</li></ul> <hr/> <p><b>Option 2</b></p> <ul style="list-style-type: none"><li>→ Hold NEBB TAB CT certification</li><li>→ A completed alternative training course in applicable discipline</li></ul>

**Alternative training course.** Alternative training courses must relate to the credential for which you are applying. Examples of alternative training courses include:

- Discipline-specific NEBB home study course
- NEBB hands-on training course
- Discipline-specific NEBB training seminar
- Trade school: Technical college or apprenticeship
- Other industry-related training seminars (must be submitted for approval)

# BENEFITS OF HIRING AN CXCP

- Reduced Maintenance Costs: CxCP identifies and addresses system issues early, preventing costly repairs and downtime.
- Increased Property Value: CxCP ensures optimal building operation, increasing property value, especially beneficial for future property sales or leases.



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## *CxCP Certification Benefits for Building Commissioning Professionals*

- Enhances building performance.
- Ensures cost efficiency.
- Improves indoor environmental quality.
- Ensures regulatory compliance.
- Fosters project coordination.
- Promotes sustainable practices.
- Crucial for high-performing buildings.
- Growing importance of commissioning and CxCP certification in construction.



## *Benefits of the Commissioning Certified Professional (CxCP) Exam Question Bank.*

- Assessment of knowledge before final exam.
- Access to over 900+ questions in 10 mock exams.
- Understanding reasoning behind each question and answer.
- Simulation exams cover CxCP Procedural Standards and CxCP Technical exam practice exam Knowledge Domains.
- Familiarization with building commissioning and terminology.
- High chances of passing exam on first attempt.
- Direct contact with course provider for further explanations.
- CxCP Exam Flash Cards: Over 188+ key terms.
- CxCP\_Engineering and HVAC design Equations.





NEBB'S CXCP EXAM QUESTION BANK



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# THANK YOU

