



*wel come to*  
**BEYOND SMART CITIES**

**BEYOND**  
SMART CITIES

**COMMISSIONING CERTIFIED TECHNICIAN**

**CXCT REFRESHER**

**ONLINE TRAINING BY KRISHNAJI PAWAR**

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

**KNOWLEDGE IS POWER**

LEARN . BEYOND SMART CITIES . IN

**BEYOND**  
SMART CITIES

MODULE  
**9L3**

# Understand the Correct Order of Commissioning and Testing

KRISHNAJI PAWAR - CEO & FOUNDER

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

[WWW.BEYONDSMARTCITIES.IN](http://WWW.BEYONDSMARTCITIES.IN)





# COMMISSIONING CERTIFIED TECHNICIAN CXCT REFRESHER

Commissioning and testing are crucial in the lifecycle of any engineered system, especially in complex fields like construction, HVAC, and industrial control systems. These processes ensure that systems are designed, installed, tested, operated, and maintained according to project specifications. Understanding the correct order of commissioning and testing is essential for optimizing performance, ensuring safety, and avoiding costly rework.

# Learning Objectives

- Understand the correct order of Cx & testing
- Airside, water, and control system troubleshooting
- Required O&M paperwork and training Preventive maintenancetems
- Retro-commissioning
- Commissioning professional certification & its importance.
- Point-to-point calibrate MEP & sensor systems.
- Green building rating systems & commissioning
- Summary and Resources
- CxCT Practice Exam: Test Your Knowledge!



# INTRODUCTION

- Commissioning and testing are crucial in the lifecycle of any engineered system, especially in complex fields like construction, HVAC, and industrial control systems.
- The correct order of commissioning and testing is essential for optimizing performance, ensuring safety, and avoiding costly rework.

# COMMISSIONING PHASES



- Pre-Commissioning: Involves equipment installation, verification of documentation, and functional checks of individual components.
- Commissioning: Involves integrated testing, where systems are tested in their operational environment.
- Post-Commissioning: Focuses on fine-tuning the systems for optimal operation.

# WORKFLOW FOR KEY TESTS

- Functional Testing: Verifies each component of the system functions according to specifications.
- System Integration Testing: Assesses the performance of the system as a whole.
- Testing, Adjusting, and Balancing (TAB): Assesses and optimizes the performance of HVAC systems.
- Sequence Testing: Ensures systems operate in the correct order as defined by their operational protocols.
- Performance Testing: Evaluates the system's capacity to meet its operational demands under various conditions.



# CONCLUSION

- Establishing a proper workflow for commissioning and testing is essential for the successful deployment of any engineered system.
- A structured approach - beginning with functional testing, advancing through system integration, TAB, sequence testing, and culminating in performance testing - can ensure systems operate effectively, safely, and efficiently.





# CONTACT US



+91 6363032722



[info@beyondsmartcities.in](mailto:info@beyondsmartcities.in)



[learn.beyondsmartcities.in](http://learn.beyondsmartcities.in)



#55,HMR Layout ,Bengaluru ,India



# THANK YOU

