



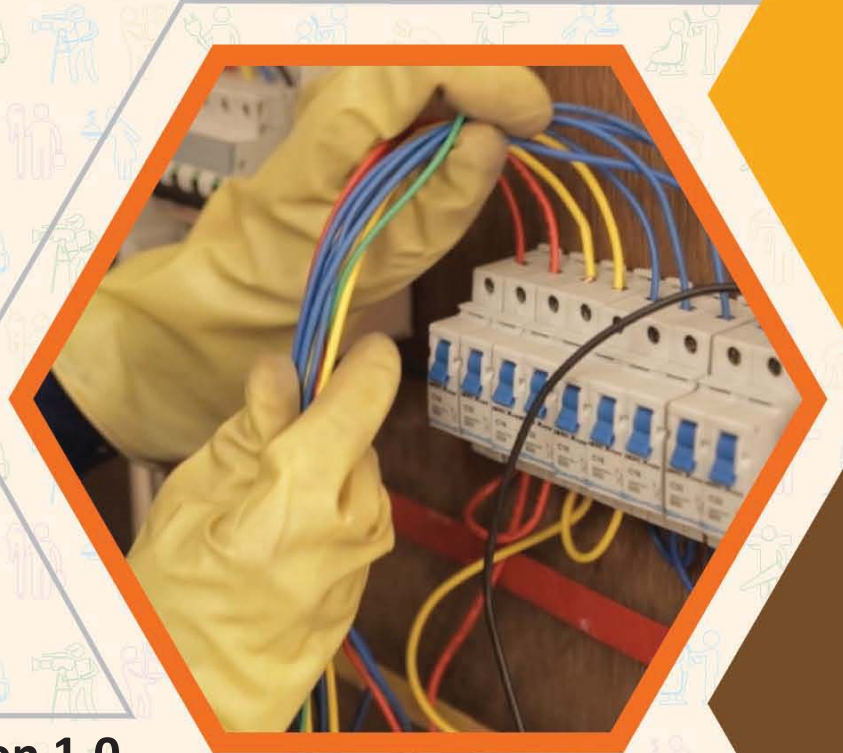
Participant Handbook

Sector
Construction

Sub-Sector
**Real Estate and Infrastructure
Construction**

Occupation
Construction Electrical Works

Reference ID: **CON/Q0602, Version 1.0**
NSQF Level 3



Assistant Electrician

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CEO

March 2016

CSDCI

About this Book

Construction industry is the second largest employer in India. As one of the leading avenues for employment in the country, the role played by this industry in the economic development of India is pivotal. However despite its vast potential, the construction industry faces a key challenge of shortage of skilled manpower. This hampers the progress of the industry, as the quality of constructed structure is poor and most projects fail to get completed within timelines.

There is a vast difference between the required skill and available skills of workers in the industry today. To reduce the skill gap, appropriate skilling of workforce needs to be carried out. This will not only empower the worker but also benefit the construction industry in terms of quality and productivity.

This Participant book is developed to impart training for the skill and knowledge required to work as an Assistant Electrician in construction industry. It is designed based on Assistant Electrician Qualification Pack under the National skill qualification framework. It comprises of the following NOS/ topics.

- Select and use hand, power tools and electrical devices relevant to construction electrical works
- Install temporary lighting arrangement at construction sites
- Install LV electrical wiring at permanent structures
- Assemble, install and maintain temporary LV electrical panels (distribution boards) at construction site
- Work effectively in team to deliver desired results at the workplace
- Plan and organize to meet expected outcomes
- Work according to personal health, safety, and environmental protocol at construction site.

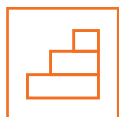
This book is designed considering the lower educational background of the construction worker. Therefore special efforts have been made to explain the concept required for the job mostly through photos and illustrations.

Units and symbols used in the book have been listed below.

Symbol Used



Key Learning
Outcomes



Steps



Exercise



Tips



Notes



Objectives

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UNIT 1.1: Introduction to the Training Programme

Unit Objectives

At the end of this unit, you will be able to:

1. Explain the purpose of training.
2. Describe about National Occupation Standards and Qualification Pack.

1.1.1 Purpose and Benefits of the Training Programme

This training program is developed to impart specific skills to individuals who wish to perform as an Assistant Electrician. The training program is based upon National occupation standards for construction electrical works. The National occupation standards have been described in the following subsection of this chapter.

The training program will enable an individual to:

- select and use hand, power tools and electrical devices relevant to construction electrical works;
- install temporary lighting arrangement at construction sites;
- install LV electrical wiring at permanent structures;
- assemble, install and maintain temporary LV electrical panels (distribution boards) at construction site;
- work effectively in team to deliver desired results at the workplace;
- plan and organize to meet expected outcomes;
- work according to personal health, safety, and environmental protocol at construction site.

After successful completion of training and passing the assessment you will be issued a certificate. This will get you an employment as an Assistant Electrician in construction companies or independently. This certificate will help you to get job and earn better wages than an untrained person.



Fig. 1.1.1. Skill cards



Fig. 1.1.2. Certificate

1.1.2 Introduction to QP and NOS

This training programme is intended for imparting basic skill and knowledge relevant to construction electrical works occupation required to perform at a construction site. This programme is based on qualification pack called Assistant Electrician. The Qualification Pack Code for Assistant Electrician is CON/Q0602. This is also called a QP.

A QP consists of a set of National Occupational Standards (NOS). NOS specify the standard competency a worker must achieve when carrying out a function in the workplace.

Under Assistant Electrician QP, there are seven NOSs which detail the functions to be performed at work site by as Assistant Electrician.

NOS Code	Major Function/Task
CON/N0602	Select and use hand, power tools and electrical devices relevant to construction electrical works
CON/N0603	Install temporary lighting arrangement at construction sites
CON/N0604	Install LV electrical wiring at permanent structures
CON/N0605	Assemble, install and maintain temporary LV electrical panels (distribution boards) at construction site
CON/N8001	Work effectively in team to deliver desired results at the workplace
CON/N8002	Plan and organize to meet expected outcomes
CON/N9001	Work according to personal health, safety, and environmental protocol at construction site

UNIT 1.3: Roles and Responsibilities of an Assistant Electrician

Unit Objectives

At the end of this unit, you will be able to:

1. State the roles and responsibilities of an assistant electrician.
2. Describe the personal attributes of an assistant electrician in the construction sector.
3. Explain the career progression path for an assistant electrician.

1.3.1 Introduction to Electrical Works in the Construction Sector

At a construction site, electrical work involves installation and maintenance of heavy machineries. It also includes installing, repairing and maintaining critical electrical connections/equipment. As part of electrical works, permanent wiring is also conducted in buildings adhering to standards practices. Additionally, it requires planning and utilisation of resources to meet electrical work requirement at construction sites or permanent structures.

1.3.2 Roles and Responsibilities of Assistant Electrician

Roles	Responsibilities
Use appropriate tools	<ul style="list-style-type: none"> • Select hand tools, power tools and electrical devices as per requirement • Use appropriate tools to complete to complete construction electrical works • Handle and maintain tools adhering to safety guidelines
Installing, repairing and maintaining lighting arrangement	<ul style="list-style-type: none"> • Install, repair and maintain temporary lighting arrangement at construction sites as per instructions
Installing, repairing and maintaining LV electrical wiring and panels	<ul style="list-style-type: none"> • Install, repair and maintain LV electrical wiring at permanent structures • Assemble, install and maintain temporary LV electrical panels (distribution boards)at construction site
Laying conduits for LV single phase wiring	<ul style="list-style-type: none"> • Lay conduits for LV single phase wiring as per instructions provided by superior in electrical work
Support the team to complete assigned tasks	<ul style="list-style-type: none"> • Work in the team to achieve the desired results
Plan and organise tasks allotted	<ul style="list-style-type: none"> • Plan and organize tasks in order to meet expected outcomes
Follow health and safety guidelines	<ul style="list-style-type: none"> • Follow and maintain personal health, safety, and environmental protocol

1.3.3 Personal Attributes of an Assistant Electrician

In addition to technical skills, an assistant electrician should also possess some soft skills and personal attributes. He/she should be able to:

- communicate clearly with superiors/ subordinates;
- support co-workers to execute project requirements;
- work effectively in a team;
- create and maintain a healthy and cooperative work environment among workers;
- maintain mental and physical fitness to perform at work;
- be reliable and honest;
- be courteous while interacting with coworkers;
- maintain personal hygiene at all times;
- plan, organize and complete assigned tasks.

1.3.4 Description of Course Content, Mode of Learning and Duration of the Course

This course aims to impart training to unskilled and semi-skilled trainees into skilled Assistant Electricians. The course has been designed to ensure participants are able to take up jobs at construction sites.

The course is a combination of theory-based modules and hands-on practice. It aims to provide a holistic learning experience wherein participants are able to develop domain skills as well as generic and soft skills.

The total duration of the course is approximately 400 hours, out of which 114 hours have been allotted to theory sessions. 286 hours of practical sessions would ensure participants are able to get hands-on experience in the field.

1.3.5 Career Progression Path

Growth chart signifies the professional growth of a workman who begins his career as a Helper Electrician. He further progresses towards the job role of an Assistant Electrician with some training and experience. He later specialises as a Construction Electrician - LV by obtaining skills, knowledge and five years of experience for the job role. The growth chart advances and denotes the progression in the career path to become a Foreman - Electrical Works (Construction) and later Supervisor Electrical Works.

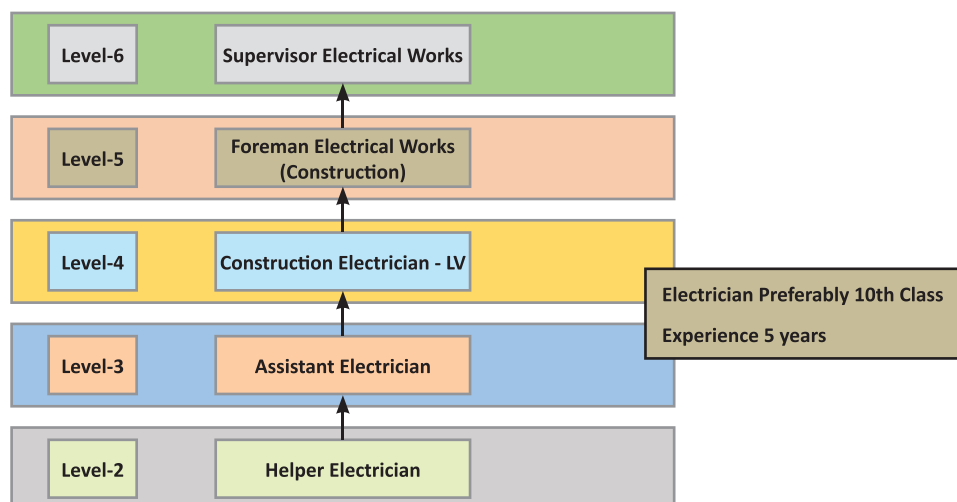


Fig.1.3.1. Carrer progression chart



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