



# Participant Handbook

**Furniture and Fittings**

Sub-Sector  
**Modular Furniture**

Occupation  
**Production-Modular Furniture**

Reference ID: FFS/Q5103, Version 1.0  
**NSQF Level 4**



**Lead Assembler  
Modular Furniture**





**Shri Narendra Modi**  
Prime Minister of India

“ Skilling is building a better India.  
If we have to move India towards  
development then Skill Development  
should be our mission. ”



## Certificate

### COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

FURNITURE & FITTINGS SKILL COUNCIL

for

### SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of

Job Role / Qualification pack: **“Lead Assembler Modular Furniture - Lock Installer”**

QP No. **“FFS/Q5103, NSQF Level 4”**

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Authorised Signatory  
(Furniture & Fittings Skill Council)

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The preparation of this handbook would not have been possible without the Furniture & Fittings Industry's support. Industry feedback has been extremely encouraging from inception to conclusion and it is with their input that we have tried to bridge the skill gaps existing today in the industry.

This participant handbook is dedicated to the aspiring youth who desire to achieve special skills which will be a lifelong asset for their future endeavours.

## About this book

This Participant Handbook is designed for providing skill training and /or upgrading the knowledge level of the Trainees to take up the job of an "Lead Assembler Modular Furniture (Option : Lock Installer)" in the Furniture & Fittings Sector.

This Participant Handbook is designed based on the Qualification Pack (QP) under the National Skill Qualification framework (NSQF) and it comprises of the following National Occupational Standards (NOS)/topics and additional topics.

- (FFS/N5103) Assembling and installation of different parts of the modular furniture
- (FFS/N8601) Ensure health and safety at workplace
- (FFS/N8501) Maintain work area tools and machines
- (FFS/N8801) work effectively with others
- (FFS/N5703) Carry out lock installation activities
- (FFS/N5704) Perform lock repairing and servicing

## Symbols Used



Key Learning Outcomes



Activity



Summary



Tips



Notes



Unit Objectives

## Table of Contents

S.No	Modules and Units	Page No
1.	<b>Introduction</b>	<b>1</b>
	Unit 1.1 Discussing the Furniture & Fittings Sector in India	3
	Unit 1.2 Common Furniture Styles	5
	Unit 1.3 Defining the Modular Design of Furniture	12
2.	<b>Discussing the Job Description of the Lead Assembler Modular Furniture (FFS/N5103)</b>	<b>17</b>
	Unit 2.1 Discussing the Job Description of the Lead Assembler Modular Furniture	19
	Unit 2.2 Skills Required and Personal Attributes Expected in a Lead Assembler Modular Furniture	21
3.	<b>Identifying the Various Types of Furniture Accessories, Fittings, Joinery, and Estimating the Quantities Required (FFS/N5103)</b>	<b>25</b>
	Unit 3.1 Types of Joinery	27
	Unit 3.2 Technique of Touch Up, Sanding, Polishing Furniture for Proper Finishing, if Needed	32
	Unit 3.3 Get Requisite Approval on the Cost Budget and Timelines before Work Initiation	42
4.	<b>Understanding Site Measurements (FFS/N5103)</b>	<b>47</b>
	Unit 4.1 The Process of Site Measurement For Project Level Work	49
	Unit 4.2 Measurement of Length, Width & Depth in MKS & FPS System, Its Application, Undertake Measuring Accurately	56
5.	<b>Assembling and Installation of Different Parts of Modular Furniture (FFS/N5103)</b>	<b>65</b>
	Unit 5.1 Definition and Types of Modular Furniture	67
	Unit 5.2 Different Layouts of Modular Furniture Location	71
	Unit 5.3 Different Process Involved In Assembling and Installation of Products and Various Appropriate Fittings	82
	Unit 5.4 Different Types of Tools and Equipment And the Processes of Operating the Same	103
6.	<b>Common Issues, Troubleshooting Knowledge and Method of Conducting Visual Inspection (FFS/N8501)</b>	<b>123</b>
	Unit 6.1 Common Issues Troubleshooting Knowledge	125
	Unit 6.2 Method of Conducting Visual Inspection for any Errors or Damages to the Cut Components	130













# 1. Introduction

Unit 1.1 Introducing the Furniture & Fittings Sector in India

Unit 1.2 Common Furniture Styles

Unit 1.3 Defining Modular Design of Furniture



## Key Learning Outcomes

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

1. Discuss the Furniture & Fittings sector in India
2. Discuss the common furniture styles
3. Define the Modular Design of Furniture

## Unit 1.1 Discussing the Furniture & Fittings Sector in India

### Unit Objectives

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

1. Discuss an overview of the Furniture & Fittings sector in India

#### An Overview of the Furniture & Fittings sector in India

Currently, India is the 14th largest market in the world for the Furniture and Fittings sector, as stated by HKTDC Research. The Indian middle-class population and business organizations are gradually recovering from the temporary market decline, which was driven by recent economic reforms and measures like Demonetization, introduction of the GST (Goods and Services Tax) and advent of the Long Term Capital Gains Tax.

The GDP (Gross Domestic Product) of India, for the fiscal year 2018-19, has been forecasted to grow by 7-7.5% by the Economic Survey of India (2017-18). This can be attributed to the rise of per capita income level and the subsequent growth in consumption by the urban and semi-urban middle-class population. The choice and consumption of middle-class population in India are now driven by need, quality and convenience, rather than affordable prices. Middle-class households are now interested in enhancing their lifestyle standards by decorating their homes with modern and chic furniture, fixtures and fittings. The Furniture & Fittings sector in India has been forecasted, by TechSci Research, to beat INR 3200 crores by 2019.

Apart from the rising consumption of middle-class households, expansion of the Tourism and Hospitality sector would also substantially contribute towards the mammoth growth of the Furniture & Fittings sector. According to recent reports by KPMG India, the current Furniture & Fittings sector in India comprises the following segments:

- 85% Unorganized
- 15% Organized

The key market players contributing towards the 15% organized chunk are:



Fig. 1.1.1: Key market players in India for Modular Furniture



## Unit 1.2 Common Furniture Styles

### Unit Objectives




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




1. Identify and learn about the common furniture styles

#### Common Furniture Styles





The common styles of furniture are:



##### A. Before the 20th Century:

Style	Characteristics	Images
Jacobean	<ul style="list-style-type: none"> <li>• Geometric, symmetrical design and strong emphasis on rectilinear lines and shapes</li> <li>• Ornate carvings, influenced by the Classical era and detailed geometric motifs</li> <li>• Physically and visually heavy</li> <li>• Very close to the ground level</li> </ul>	
William and Mary	<ul style="list-style-type: none"> <li>• Replaced the orthogonal, rectilinear Jacobean style with soft curves and graceful spirals</li> <li>• Physically lighter and sleeker, as compared to the Jacobean style</li> <li>• Visually disconnected from and higher off the ground</li> <li>• Implemented Dovetails joints to incorporate softer features in furniture</li> </ul>	
Queen Anne	<ul style="list-style-type: none"> <li>• Geometric, symmetrical design and strong emphasis on rectilinear lines and shapes</li> <li>• Ornate carvings, influenced by the Classical era and detailed geometric motifs</li> <li>• Physically and visually heavy</li> <li>• Very close to the ground level</li> </ul>	

Style	Characteristics	Image
Pennsylvania Dutch	<ul style="list-style-type: none"> <li>• Influenced by American and German culture</li> <li>• Straightforward and utilitarian style</li> <li>• Incorporated straight lines and tapered legs</li> <li>• Less use of ornate curves</li> <li>• Decorated with colourful folk painting on the cases, generally depicting natural sceneries or geometric patterns</li> <li>• Often polished, finished and varnished with veneer (thin, decorative piece of fine wood)</li> </ul>	
Chippendale	<ul style="list-style-type: none"> <li>• Pioneered by English cabinet-maker Thomas Chippendale</li> <li>• Highly elegant and classy, this style incorporates the important features of Gothic, Chinese and Rococo influence</li> <li>• Pointed arches, wooded lattice and S-shaped curves were adopted from the Gothic culture</li> <li>• Fretwork design and Japanning were adopted from the Chinese culture</li> <li>• Rococo influence brought about designs like broad chair seats, decorated with interlacing ribbon backs</li> <li>• Stained Maple was used, instead of Mahogany, Walnut and Cherry Wood, in order to reduce cost</li> <li>• Such furniture were often finished with clear wax coating</li> <li>• Easily recognized from designs like the Ball-and-Claw foot and Chair backs decorated with ribbon and shell motifs</li> </ul>	
Hepplewhite	<ul style="list-style-type: none"> <li>• Pioneered by English designer George Hepplewhite</li> <li>• Very graceful and influenced by the Neoclassical style</li> <li>• Delicate appearance due to extensive use of veneers with contrasting colours (Marquetry)</li> <li>• Presence of decorative motifs like elegant swags, tapered legs, curling ribbons, feathers, urns, trees, etc.</li> <li>• Use of narrow vertical strips of wood glued to a heavy background clot called 'Tambours'</li> <li>• Incorporates simple geometric shapes like circle and primary curves</li> </ul>	








Style	Characteristics	Image
<p><b>Sheraton</b></p>	<ul style="list-style-type: none"> <li>• Marked with the use of thinner legs</li> <li>• Visually lighter as compared to other styles</li> <li>• Characterized with Rectangular Chair and Sofa backs</li> <li>• Characterized with Cabinets and dressers with rectilinear features</li> <li>• Flaunts the presence of ornate and delicate lines and contrasting veneers, influenced by the Neoclassical style</li> <li>• The legs are usually tapered, often resembling columns of a Greek temple in appearance</li> </ul>	
<p><b>Federal</b></p>	<ul style="list-style-type: none"> <li>• Incorporates the borderline features of the Sheraton and the Hepplewhite styles</li> <li>• Depicts strong use of ornate inlay, tapered legs, straight lines and delicate feature</li> </ul>	
<p><b>American Empire</b></p>	<ul style="list-style-type: none"> <li>• Characterized by traditional ornamentation, rustic decoration and dark finish</li> <li>• Depicts a strong presence of Roman and Greek motifs</li> <li>• Visually heavy, thus communicating strength and durability</li> <li>• Highly decorated, to depict prosperity</li> </ul>	
<p><b>Victorian</b></p>	<ul style="list-style-type: none"> <li>• This style was greatly influenced by Queen Victoria's love for heavy, ornate decoration</li> <li>• This style primarily includes a mixture of the Gothic, Neoclassical and Rococo features</li> <li>• Usually characterized by dark pieces of furniture, heavy fabrics and chinaware and glassware as accessories</li> </ul>	





Style	Characteristics	Image
<b>Scandinavian Contemporary</b>	<ul style="list-style-type: none"> <li>• Involves basic, utilitarian style</li> <li>• Primarily built out of natural wood</li> <li>• Influenced by less ornate details</li> <li>• Defined strongly by modern, clean, solid pieces</li> <li>• Designed to occupy less space, in a clutter-free manner</li> </ul>	
<b>Arts and Crafts Movement</b>	<ul style="list-style-type: none"> <li>• Rectilinear style, often characterized with occasional vertical and elongated features</li> <li>• Incorporated hand finish during the final stages of production</li> <li>• In general, minimal decoration is done, so that the emphasis is on the natural look and craftsmanship</li> <li>• This style is simple and utilitarian</li> </ul>	

**B. Post 20<sup>th</sup> Century:**

- Antique
- Traditional
- Vintage
- Rustic
- Art Deco
- Retro
- Modern
- Contemporary
- Modular

Style	Characteristics	Image
<b>Antique</b>	<ul style="list-style-type: none"> <li>• A piece of furniture is considered "Antique", if it is at least 100 years old</li> <li>• Generally built out of wood</li> <li>• Antique furniture comprises ornate details and specific motifs that help in determining their date of origin and thus, their prices</li> </ul>	

Style	Characteristics	Image
<b>Traditional</b>	<ul style="list-style-type: none"> <li>• This style incorporates the best features of styles like Queen Anne, Chippendale and Sheraton</li> <li>• Significant features are the elegant ornamentation, straight lines and gently tapered legs</li> </ul>	
<b>Vintage</b>	<ul style="list-style-type: none"> <li>• Younger in age as compared to Antique, this style of furniture flaunts the most prominent features of a particular detail associated with a certain period</li> <li>• Incorporates a very charming, delicate, lightweight style</li> <li>• Wood is painted in light pastel colours like Wool White, Beryl Green, Santa's Gray, Mauve, Oriental Pink, etc.</li> </ul>	
<b>Rustic</b>	<ul style="list-style-type: none"> <li>• Emphasizes on homespun, worn out, handcrafted or natural materials</li> <li>• Typical building materials comprise wood, reclaimed timber, stone, bamboo, etc.</li> <li>• Characterized by warmth, cosiness and homely feeling</li> <li>• Other materials include Hide, Cotton and Linen</li> </ul>	
<b>Art Deco</b>	<ul style="list-style-type: none"> <li>• Characterized by geometric and angular patterns</li> <li>• Typical examples of such patterns are ziggurats, pyramidal, triangular, trapezoidal, zigzagged, chevron, sunburst, sweeping curves, stepped forms, etc.</li> <li>• Harmonizes jazzy patterns with materials like glass, chrome, mirrors, etc.</li> </ul>	

Style	Characteristics	Image
<b>Retro</b>	<ul style="list-style-type: none"> <li>• This style bears the look of having been built between the 1950s and the 1980s</li> <li>• This style simply imitates previous fashion trends</li> <li>• Evokes nostalgic feelings and memories related to a particular era or place</li> </ul>	
<b>Modern</b>	<ul style="list-style-type: none"> <li>• Characterized by smooth surfaces, minimal decoration, standardized dimensions, neutral design and combination of different materials in an ad hoc manner</li> <li>• Common materials are Steel, Vinyl, Plastic and Leather</li> <li>• However, the use of natural materials is predominant</li> <li>• Prominent use of monochromatic colour palettes</li> <li>• Marked by a balance between aesthetics, utility and affordability</li> </ul>	
<b>Contemporary</b>	<ul style="list-style-type: none"> <li>• This style is ever-changing and adapts itself with time</li> <li>• Contemporary style pertains to the style most popular nowadays</li> <li>• Although referred to synonymously, the Contemporary style is completely different from the modern style of furniture</li> <li>• The Modern style refers to a particular era (1900s), while the Contemporary style walks hand-in-hand with the changing time</li> </ul>	
<b>Modular</b>	<ul style="list-style-type: none"> <li>• Specific form of portable furniture aimed at saving space</li> <li>• Highly utilitarian and cost-effective</li> <li>• Divided into numerous small and solid units, which can be connected horizontally, vertically and matrixwise, using a simple series of steps</li> <li>• All small parts or “modules” in a system are reusable and scalable</li> </ul>	

Notes



A large rectangular area with a thin orange border, containing 25 horizontal lines for writing notes.

## Unit 1.3 Defining the Modular Design of Furniture

### Unit Objectives

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

1. Define and explain Modularity
2. Recall the characteristics of Modular Furniture
3. Classify Modular Furniture according to design

### 1.3.1 Defining and Explaining Modularity

**Modularity** is an approach of designing furniture, which involves subdividing a system into numerous small building blocks, or elementary components, commonly known as "**modules**" or "**skids**". These elementary modules, building blocks or skids can be autonomously created for developing various systems. In simple words, Modularity enables us to develop and administer a system by the "divide and rule" policy.

The procedure, in which a system can be broken down or subdivided into modules, is called "**Functional Allocation**". Modular furniture can not only be assembled from small modules but also be dismantled into them, thus making repeated assembly and disassembly possible. For re-assembling specific pieces of furniture (say, modular bed), entire sets of modules are available and sold in the market in the form of prefilled packages. Modularity is a popular concept applicable not only in building furniture but also in the following areas:

- Architecture
- Designing and building Heavy Vehicles
- Aerodynamics
- Building Heavy Machinery
- Manufacturing Computer Hardware
- Developing and testing Software using OOPS (Object-oriented Programming System) concept

### 1.3.2 Characteristics of Modular Furniture

Modular Furniture and their components exhibit the following characteristics:

- 1. Reusability** - The same modules can be arranged and built up according to various designs or matrices for developing diverse types of furniture.
- 2. Discreteness** - Individual modules or skids have autonomous properties and are functionally distinct from the other modules in the matrix.
- 3. Adaptability** - An existing modular design can be broken down into its modules, which can be reconstructed into another modular design, serving a different purpose.
- 4. Scalability** - A modular design is scalable, i.e., its size, shape and dimensions can be varied by rearranging, increasing or decreasing (as per requirement) the number of modules used in building it.
- 5. Simplicity** - As the term suggests, modular designs are very simple to understand and easy to build. This is because, the first step in building a design is to understand the individual, small building blocks.



## Summary

- India is the 14th largest market in the world for the Furniture and Fittings sector, as stated by HKTDC Research.
- The Indian middle-class population and business organizations are gradually recovering from the temporary market decline.
- The GDP (Gross Domestic Product) of India, for the fiscal year 2018-19, has been forecasted to grow by 7-7.5% by the Economic Survey of India (2017-18).
- Middle-class households are now interested in enhancing their lifestyle standards by decorating their homes with modern and chic furniture, fixtures and fittings.
- The Furniture & Fittings sector in India has been forecasted, by TechSci Research, to beat INR 3200 crores by 2019.
- According to recent reports by KPMG India, the current Furniture & Fittings sector in India comprises the following segments:
  - 85% Unorganized
  - 15% Organized
- Furniture styles can be broadly categorized into: Before and After the 20th Century
- Modularity is an approach of designing furniture, which involves subdividing a system into numerous small building blocks
- Modular Furniture can be classified according to the design.

## Activity

- The trainer asks students to play a "Word Game", where they will have to speak out words about Furniture and Fittings, as and when they appear in their minds.
- The trainer asks students to name few places at home and office, where modular furniture are widely used.
- The trainer, from his/her laptop, shows few ppt slides and asks the students to identify the furniture styles and the era that they belong to.



## Exercise

### Match the Furniture Styles with the Features:

Furniture Style	Feature	
Queen Anne	Fretwork design and Japanning were adopted from the Chinese culture	[ ]
Chippendale	Emphasizes on homespun, worn out, handcrafted or natural materials	[ ]
Sheraton	Prominent use of monochromatic colour palettes	[ ]
Rustic	Very close to the ground level	[ ]
Modern	Evokes nostalgic feelings and memories related to a particular era or place	[ ]
Retro	Decorated with colourful folk painting on the cases, generally depicting natural sceneries or geometric patterns	[ ]
Art Deco	Incorporated the use of comfortable cushions and winged backs on chairs and lounges	[ ]
Modular	Divided into numerous small and solid units, which can be con-nected horizontally, vertically and matrixwise, using a simple series of steps	[ ]
Jacobean	Harmonizes jazzy, geometric and angular patterns with materi-als like glass, chrome, mirrors, etc.	[ ]
Pennsylvania Dutch	The legs are usually tapered, often resembling columns of a Greek temple in appearance	[ ]