

## **TAMBARAM BUILDERS' WELFARE TRUST**

The main objective of the technical skill development programme is to uplift the downtrodden students who are not able to continue their higher studies due to lack of financial support. One of the major revenue generating industry in any country is construction industry. In our country this industry stands next to agriculture and supports the socio-economic conditions. In 19<sup>th</sup> century there was a tradition that a Mason, Electrician, Carpenter children's will follow the same family business and the elders teach their children's with proper guidance and step by step procedures in their profession. The children's also follow the same and become proper technicians. For the last ten years there is a big scarcity of these of kind of skilled Electrician/Carpenter/Plumbers in the industry. The main reason is due to the diversified growth and attractive salaries and return of investment in other professions.

With the view of developing the construction industry and to support our future generations these technical development courses are being offered by" TAMBARAM BUILDERS WEFARE TRUST" .which is ably supported by BUILDERS ASSOCAITION OF INDIA .

The main advantages of studying these courses are

- Good Job opportunities to the students
- Good technical problem-solving ability
- Availability of technicians in critical care industries

Various courses offered :

- Diploma in Electrician
- Diploma in Plumbing
- Diploma in Carpentry

### Diploma in Electrician :

A **Diploma in Electrician** is a vocational training program that equips students with the skills and knowledge necessary to work as professional electricians. The course focuses on electrical systems, circuits, installations, maintenance, and safety practices, preparing students for a variety of roles in the electrical and construction industries.

Diploma in Electrician quantity

### **Description**

Course Name: **Diploma in Electrician**

**Eligibility:** Completion of **10th Grade (high School)** or equivalent.

**Objective:** A **Diploma in Electrician** offers students the technical skills and theoretical knowledge required to pursue a career in the electrical field. With practical experience and training in electrical installations, maintenance, and troubleshooting, graduates can find

rewarding opportunities in various industries such as construction, manufacturing, and power distribution.

Duration: 370 Hrs (Equivalent to One Year).

**Benefits of Certification:**

- Government Authorized Assessment Agency Certification.
- Certificate Valid for Lifetime.
- Lifetime Verification of Certificate.
- Free Job Assistance as per your Interest Area.

**Syllabus**

**Electrical Instruments & Measurement:** Classification of instruments, permanent magnet moving coil, dynamometer, induction type instrument, current transformers, measurement of power and energy, power measurement in 3 phase 3 wire system, single phase energy meter, DC and AC bridges, transducers and oscilloscopes.

**Power Electronics:** Power semiconductor devices, phase-controlled converters, dc to dc chopper, inverters, ac chopper, cycloconverter & voltage controller.

**Electrical Design & Drawing:** Safety aspects of electrical system design, types of buildings, electric/ buildings service & its classifications, classification of voltages standards and specifications, installation of induction motor, earthing, design of illumination scheme.

**Transmission & Distribution of Electricity:** Meaning of electric Power Supply, Generating station, EHVAC transmission system, DC & AC Distributor, Radial system, Types of HVDC links, Voltage control, FACTS control, UPFC, Types of insulators, String Efficiency, Single core cable, wind & Ice loading, classification of sub stations.

**Electrical M/c:** D.C generator, D.C. motor, single phase transformer, three phase transformer, autotransformer, synchronous machines, three- phase induction motor, single phase motors.

**Digital Electronics & Microprocessor:** Binary numbers, number base conversion, octal and hexadecimal numbers, complements, binary codes, binary storage and registers, binary logic integrated circuits.

After completing a **Diploma in Electrician** program, graduates have access to a range of career opportunities in various industries. These roles often come with competitive salary packages based on the individual's skills, experience, and the industry they join. Here's a detailed overview of career options and the typical salary range in India:

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### 1. Electrical Technician

- **Role:** Installation, maintenance, and repair of electrical systems in residential, commercial, or industrial settings.
  - **Industries:** Construction, manufacturing, utilities, and service sectors.
  - **Salary:** ₹1.5–3 LPA (entry-level); ₹3–5 LPA (with 3–5 years of experience).
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### 2. Maintenance Electrician

- **Role:** Regular maintenance and troubleshooting of electrical equipment and machinery in factories, plants, and buildings.
  - **Industries:** Manufacturing, automotive, FMCG, and heavy industries.
  - **Salary:** ₹1.8–3.5 LPA (entry-level); ₹4–6 LPA (mid-level).
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### 3. Industrial Electrician

- **Role:** Handling complex electrical equipment and systems in industrial settings, ensuring optimal performance.
  - **Industries:** Power generation, steel plants, chemical factories.
  - **Salary:** ₹2–4 LPA (entry-level); ₹4.5–7 LPA (experienced).
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### 4. Electrician for Renewable Energy

- **Role:** Installing and maintaining solar panels, wind turbines, and other renewable energy systems.
  - **Industries:** Renewable energy companies and projects.
  - **Salary:** ₹2–4 LPA (entry-level); ₹4.5–8 LPA (mid-level).
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### 5. Wireman

- **Role:** Wiring installation in residential and commercial buildings, electrical layouts, and connections.
- **Industries:** Construction and real estate.
- **Salary:** ₹1.2–2.5 LPA (entry-level); ₹3–4 LPA (experienced).

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## 6. Electrical Supervisor

- **Role:** Overseeing electrical installation projects, ensuring safety, compliance, and quality standards.
- **Industries:** Real estate, infrastructure, and government projects.
- **Salary:** ₹2.5–4.5 LPA (entry-level); ₹5–8 LPA (mid-level).

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## 7. Field Service Technician

- **Role:** On-site servicing and maintenance of electrical appliances and machinery.
- **Industries:** Consumer electronics, industrial equipment suppliers.
- **Salary:** ₹1.8–3 LPA (entry-level); ₹3.5–5.5 LPA (mid-level).

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## 8. Entrepreneur (Self-employed Electrician)

- **Role:** Running an independent electrical services business, offering wiring, repair, and maintenance services.
- **Earnings:** ₹15,000–50,000/month initially, with potential growth based on customer base and expertise.

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## 9. Government Jobs

- **Role:** Positions such as Junior Technician, Lineman, and Electrical Inspector in government departments like power distribution companies and public works.
- **Salary:** ₹2.5–5 LPA (based on pay grade and department).

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## 10. Technician in Power Plants

- **Role:** Installation, repair, and maintenance of power systems in thermal, hydro, or nuclear power plants.
  - **Industries:** Power and energy.
  - **Salary:** ₹2.5–4 LPA (entry-level); ₹4.5–8 LPA (experienced).
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## 11. Electrical Design Assistant

- **Role:** Assisting in the design and drafting of electrical systems using tools like AutoCAD.
  - **Industries:** Engineering and consultancy firms.
  - **Salary:** ₹2–3.5 LPA (entry-level); ₹4–6 LPA (experienced).
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## 12. Overseas Opportunities

Diploma electricians are in demand globally, especially in countries like the Gulf, Canada, and Australia. Overseas jobs may offer significantly higher pay, starting from ₹6–15 LPA depending on the region and industry.

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### Factors Affecting Salary

1. **Location:** Salaries in metropolitan cities (e.g., Mumbai, Delhi, Bangalore) are generally higher.
  2. **Experience:** Skilled electricians with certifications or apprenticeships command higher pay.
  3. **Industry:** Sectors like renewable energy and power plants offer better compensation.
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### Upskilling and Certifications

To increase employability and salary, graduates can pursue additional certifications:

- PLC/SCADA programming.
- AutoCAD for electrical drafting.
- Specialized training in solar energy systems.
- Electrical safety certifications (e.g., OSHA or NEBOSH).

By acquiring experience and staying updated with industry trends, diploma electricians can significantly enhance their earning potential and career prospects.

## **Diploma in Plumbing**

A **Diploma in Plumbing** is a vocational training program that provides individuals with the skills and knowledge necessary to pursue a career as a plumber. This diploma covers all the essential aspects of plumbing, including the installation, maintenance, and repair of plumbing systems in residential, commercial, and industrial settings.

Diploma in Plumbing quantity

### **Description**

Course Name: **Diploma in Plumbing**

**Eligibility:** Completion of 8th Grade or equivalent.

**Objective:** A **Diploma in Plumbing** is an excellent choice for individuals interested in pursuing a stable and rewarding career in a skilled trade. The program provides comprehensive training in plumbing systems, covering installation, repair, and maintenance, and equips students with the practical skills needed for real-world challenges.

### **Benefits of Certification:**

- Government Authorized Assessment Agency Certification.
- Certificate Valid for Lifetime.
- Lifetime Verification of Certificate.
- Free Job Assistance as per your Interest Area.

### **Syllabus**

**Pipe Materials & Joining Methods:** Introduction. Objectives, excavation, Water Supply, Plumbing, Sources, Springs, Tube wells Pumping, Testing of Pumps, Treatment Plants, Sedimentation Tanks, Filtration Plants, Reservoirs, Pipe Lines.

**Plumbing Fixture:** Introduction, objectives, systems of supply. Layout of distribution system, guidelines for design of a distribution system, design of a distribution system analysis of network of pipes, appurtenances in plumbing system, water supply plumbing.

**Distribution Piping:** Defects in Bath Fittings, Defects in Plumbing Lines, Defects in Sewer Lines, During Manufacturing Stages, Permissible Blemishes and Defects, Wash Basins and Laboratory Sinks, Test Procedures and Performance Requirements, War page, Cracking.

**Drain, Waste & Vent System:** Introduction objectives, during manufacturing, Permissible Blemishes and Defects, Test Procedures and Performance Requirements, Defects Due to Bad Workmanship in Fixing and Malfunctioning of Sanitary Fittings.

**Water Heating / Fuel Storage Equipment:** Municipal Waste water estimation, Collection and Pumping, Introduction, Estimation of Quantity of Sewage, Collection of Sewage, System of

Plumbing, Choice of Plumbing, Sanitary Fittings, Sewerage Plans and Pipe Design in Buildings.

**Site & Drain Design: Checking the Quality of Pipes before Using on Works,** Jointing OF GI Pipes polyvinyl chloride pipes (PVC pipes), damages while handling and storage, jointing of PVC pipes. design of plumbing system, pressure testing, defects during construction.

Job Opportunities after completion of **Diploma in Plumbing** course:

After successful completion of the **Diploma in Plumbing** program, graduates are equipped with the technical skills required to work in the plumbing industry, handling tasks like installation, maintenance, and repair of plumbing systems in residential, commercial, and industrial buildings. Plumbing is a critical part of construction, facility management, and infrastructure development, and skilled plumbers are in demand across various sectors.

**Career Options and Salary Range for Graduates of the Diploma in Plumbing Program in India:**

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## 1. Plumber

- **Role:** A plumber is responsible for installing, maintaining, and repairing water supply, heating, and drainage systems in buildings. This includes working with pipes, fixtures, valves, and fittings.
- **Salary Range:**
  - **Fresher:** ₹12,000 to ₹18,000 per month
  - **Experienced:** ₹20,000 to ₹35,000 per month
  - **Senior Plumber:** ₹40,000 to ₹60,000 per month (for high-end projects or working with large companies)

## 2. Plumbing Technician

- **Role:** Plumbing technicians are specialized in diagnosing and repairing plumbing systems. They focus on fixing broken systems, clearing blockages, and ensuring all installations comply with building regulations.
- **Salary Range:**
  - **Fresher:** ₹15,000 to ₹20,000 per month
  - **Experienced:** ₹25,000 to ₹40,000 per month
  - **Senior Plumbing Technician:** ₹50,000 to ₹70,000 per month (for senior roles or in specialized companies)

### 3. Plumbing Supervisor

- **Role:** Plumbing supervisors oversee the work of plumbers and plumbing technicians, ensuring that plumbing systems are installed and repaired according to codes and regulations. They also manage teams, schedules, and resources for plumbing projects.
- **Salary Range:**
  - **Fresher:** ₹20,000 to ₹30,000 per month
  - **Experienced:** ₹35,000 to ₹50,000 per month
  - **Senior Plumbing Supervisor:** ₹60,000 to ₹80,000 per month

### 4. Plumbing Engineer

- **Role:** Plumbing engineers are involved in the design, planning, and installation of plumbing systems in large-scale construction projects. They ensure that all plumbing systems function properly and efficiently while adhering to safety standards and regulations.
- **Salary Range:**
  - **Fresher:** ₹30,000 to ₹40,000 per month
  - **Experienced:** ₹50,000 to ₹80,000 per month
  - **Senior Plumbing Engineer:** ₹90,000 to ₹1 lakh per month

### 5. Plumbing Contractor

- **Role:** Plumbing contractors manage plumbing installations and repair contracts, either as part of a company or as independent professionals. They bid on plumbing projects, coordinate work, and ensure timely project completion while managing resources and costs.
- **Salary Range:**
  - **Fresher:** ₹20,000 to ₹30,000 per month
  - **Experienced:** ₹40,000 to ₹60,000 per month
  - **Senior Plumbing Contractor:** ₹70,000 to ₹1 lakh per month (for large or complex projects)

### 6. Plumbing Instructor/Trainer

- **Role:** Plumbing instructors teach plumbing techniques, skills, and codes to students in vocational schools, colleges, or private training institutes. They are responsible for preparing lesson plans, conducting classes, and evaluating students.



- **Salary Range:**
  - **Fresher:** ₹20,000 to ₹30,000 per month
  - **Experienced:** ₹35,000 to ₹50,000 per month
  - **Senior Instructor:** ₹60,000 to ₹80,000 per month (in high-profile institutions or corporate training)

## 7. Facility Management Plumber

- **Role:** Facility management plumbers work with building management teams to ensure the plumbing systems of commercial and residential properties are functioning properly. This includes preventive maintenance, repair work, and upgrades of existing plumbing systems.
- **Salary Range:**
  - **Fresher:** ₹18,000 to ₹25,000 per month
  - **Experienced:** ₹30,000 to ₹45,000 per month
  - **Senior Facility Plumber:** ₹50,000 to ₹70,000 per month

## 8. Sales/Marketing Executive (Plumbing Equipment)

- **Role:** Sales or marketing executives in the plumbing sector work with companies that manufacture or distribute plumbing materials (pipes, fittings, water heaters, etc.). They promote and sell these products to contractors, builders, and consumers.
- **Salary Range:**
  - **Fresher:** ₹18,000 to ₹25,000 per month (plus commission)
  - **Experienced:** ₹30,000 to ₹50,000 per month (plus commission)
  - **Senior Sales Executive:** ₹60,000 to ₹80,000 per month (depending on sales performance and market)

## 9. Plumbing Consultant

- **Role:** Plumbing consultants offer their expertise to construction companies, architects, and developers on the design, implementation, and management of plumbing systems for new buildings or renovation projects. They help ensure that plumbing systems meet required standards and work efficiently.
- **Salary Range:**
  - **Fresher:** ₹25,000 to ₹35,000 per month
  - **Experienced:** ₹50,000 to ₹70,000 per month

- **Senior Consultant:** ₹80,000 to ₹1 lakh per month (depending on reputation and project size)

## 10. Plumbing Designer

- **Role:** Plumbing designers create detailed blueprints and plans for plumbing systems in construction projects, ensuring all aspects of plumbing, such as water supply, drainage, and HVAC systems, are efficiently integrated and functional.
  - **Salary Range:**
    - **Fresher:** ₹25,000 to ₹35,000 per month
    - **Experienced:** ₹50,000 to ₹75,000 per month
    - **Senior Plumbing Designer:** ₹80,000 to ₹1 lakh per month
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### Factors Affecting Salary:

1. **Experience:** As with most professions, the more experience you gain in plumbing, the higher your earning potential. Senior positions such as plumbing supervisors, contractors, or consultants tend to offer significantly higher salaries.
  2. **Location:** Salaries tend to be higher in metropolitan cities like **Mumbai, Delhi, Bengaluru**, and **Chennai** due to the higher cost of living and greater demand for skilled plumbers. In contrast, smaller towns and rural areas may offer lower salaries.
  3. **Type of Work:** Working in commercial or industrial sectors often pays more than residential plumbing, as the complexity and scale of plumbing systems are larger.
  4. **Certifications:** Plumbers with additional certifications or skills in specialized areas like pipefitting, leak detection, or green plumbing (eco-friendly plumbing solutions) may command higher wages.
  5. **Freelancing:** Plumbers working as freelancers or contractors may earn higher hourly rates, especially for emergency repairs or specialized work, but they also face the uncertainty of project-based income.
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## **Conclusion:**

The **Diploma in Plumbing** offers a variety of career opportunities ranging from installation and repair work to supervisory and managerial roles. The demand for skilled plumbers is expected to continue growing, with urbanization, infrastructure development, and increased focus on water conservation driving the need for qualified plumbing professionals. With experience, specialization, and effective networking, plumbing graduates can pursue lucrative and rewarding careers in both public and private sector

## Diploma in Carpenter & Furniture Design

Course Description : A **Diploma in Carpenter & Furniture Design** is a specialized vocational program that focuses on the skills and techniques required to work in the carpentry and furniture design industry. This diploma program provides practical knowledge and training in designing, crafting, and assembling furniture, as well as understanding the materials, tools, and techniques used in carpentry.

Diploma in Carpenter & Furniture Design quantity

**Eligibility:** Completion of **8th Grade** or equivalent.

**Objective:** A **Diploma in Carpenter & Furniture Design** is an excellent choice for individuals passionate about working with wood and creating functional and beautiful furniture. This program provides a solid foundation in both the practical and design aspects of the field, opening doors to various career opportunities, from carpentry and furniture design to entrepreneurship. The demand for skilled carpenters and furniture designers is steady, making this a viable and rewarding career path.

### **Benefits of Certification:**

- Government Authorized Assessment Agency Certification.
- Certificate Valid for Lifetime.
- Lifetime Verification of Certificate.
- Free Job Assistance as per your Interest Area.

## **Diploma in Carpenter & Furniture Design**

**Introduction to Carpentry:** Introduction, objectives, need for the work, need for training, relationship between timber, tools and carpentry, classification tools, measuring and marking tools, holding tools.

**Carpentry Tools: Nails, Screws and Other Materials:** Introduction, objectives, cutting tools, miscellaneous tools, precautions to be taken while using carpentry tools, wood working machines, nails, screws, dowels, bolts and nuts, glue.

**Basic Drawing and Calculations:** Introduction, objectives, instruments for drawing, preliminary practice, different methods, need, units of measurement, examples on calculation.

**Types of Work and Working Procedure:** Introduction, objectives, marking, sawing, planing, chiselling, boring, striking, sharpening.

**Joints in Carpentry work and Finishing:** Introduction, objectives, classification, lengthening/widening joints, corner (angle) joints, framing joints, preparation of timber and marking joint, precautions in making a joint.

**Cost Estimation:** Introduction, objectives, cost components, cost estimation, direct costs, total cost.

Job Opportunities after completion of **Diploma in Carpenter & Furniture Design** course:

A **Diploma in Carpenter & Furniture Design** opens doors to a wide range of career opportunities in India, thanks to the growing demand for custom furniture, modular designs, and skilled craftsmanship. Graduates can work in various industries, including construction, interior design, manufacturing, and self-employment. Here's a detailed look at potential career options and salary ranges in India:

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### 1. Carpenter

- **Role:** Creating, assembling, and repairing wooden structures, furniture, and fixtures.
- **Workplaces:** Construction companies, furniture manufacturers, or freelance.
- **Salary:** ₹1.5–3 LPA (entry-level); ₹3–6 LPA (experienced).

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### 2. Furniture Designer

- **Role:** Designing aesthetic and functional furniture pieces, often using software like AutoCAD or SketchUp.
- **Workplaces:** Furniture manufacturing companies, interior design firms, or freelance.
- **Salary:** ₹2.5–5 LPA (entry-level); ₹5.5–10 LPA (with experience and portfolio).

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### 3. Interior Fit-Out Specialist

- **Role:** Working on interiors, creating custom furniture and fittings, and ensuring seamless integration of designs.
- **Workplaces:** Interior design firms, modular furniture companies.

- **Salary:** ₹2.5–4.5 LPA (entry-level); ₹5–8 LPA (experienced).
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#### 4. Modular Furniture Installer

- **Role:** Assembling and installing modular kitchen units, wardrobes, and furniture.
  - **Workplaces:** Modular furniture companies like Godrej Interio, Livspace, and Pepperfry.
  - **Salary:** ₹1.8–3.5 LPA (entry-level); ₹4–6 LPA (experienced).
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#### 5. Cabinet Maker

- **Role:** Building custom cabinets for kitchens, offices, or retail spaces.
  - **Workplaces:** Furniture workshops, interior contractors, or freelance.
  - **Salary:** ₹1.8–3 LPA (entry-level); ₹3.5–5 LPA (with expertise).
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#### 6. Woodworking Machine Operator

- **Role:** Operating machinery like CNC routers, panel saws, and sanders to create precision furniture.
  - **Workplaces:** Furniture factories, woodworking units.
  - **Salary:** ₹1.8–3.5 LPA (entry-level); ₹4–6 LPA (with experience).
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#### 7. Upholstery Specialist

- **Role:** Designing and crafting upholstered furniture, including sofas, chairs, and headboards.
  - **Workplaces:** Furniture companies, bespoke design studios.
  - **Salary:** ₹2–4 LPA (entry-level); ₹4.5–6.5 LPA (experienced).
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#### 8. Furniture Restoration Specialist

- **Role:** Repairing and restoring antique or damaged furniture to its original condition.
  - **Workplaces:** Antique shops, restoration companies, or freelance.
  - **Salary:** ₹2–4 LPA (entry-level); ₹4.5–7 LPA (experienced).
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## 9. Freelance Carpenter/Entrepreneur

- **Role:** Starting a self-employed business offering custom furniture or carpentry services.
  - **Earnings:** ₹2–6 LPA initially, with potential to earn ₹8–12 LPA or more depending on client base and expertise.
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## 10. Exhibition and Event Set Designer

- **Role:** Designing and constructing temporary structures, furniture, and fixtures for events and exhibitions.
  - **Workplaces:** Event management companies, exhibition firms.
  - **Salary:** ₹2.5–4 LPA (entry-level); ₹4.5–7 LPA (experienced).
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## 11. Construction Site Carpenter

- **Role:** Building frameworks, scaffolding, and woodwork for construction projects.
  - **Workplaces:** Construction companies, infrastructure projects.
  - **Salary:** ₹1.8–3.5 LPA (entry-level); ₹3.5–6 LPA (experienced).
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## 12. Furniture Sales and Showroom Consultant

- **Role:** Assisting customers in selecting furniture and providing design advice.
  - **Workplaces:** Furniture showrooms, retail outlets.
  - **Salary:** ₹2–4 LPA (entry-level); ₹4.5–6.5 LPA (experienced).
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## 13. CAD Technician (Furniture Design)

- **Role:** Using design software to create furniture models and blueprints.
  - **Workplaces:** Design studios, furniture manufacturers.
  - **Salary:** ₹2.5–4.5 LPA (entry-level); ₹5–8 LPA (experienced).
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## 14. Set Carpenter (Film and Theater)

- **Role:** Building sets, props, and furniture for movies, TV shows, and theatrical productions.
  - **Workplaces:** Film studios, production companies.
  - **Salary:** ₹2–5 LPA (entry-level); ₹5.5–8 LPA (experienced).
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## 15. Government and Public Sector Roles

- **Role:** Working as a carpenter in government departments or public works projects.
  - **Workplaces:** Railways, PWD, defense services.
  - **Salary:** ₹1.8–3.5 LPA (based on role and pay grade).
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## Factors Affecting Salary

1. **Location:** Urban areas like Bangalore, Mumbai, and Delhi offer higher pay due to demand for skilled carpenters and designers.
  2. **Experience:** Experienced professionals or those with a strong portfolio command higher salaries.
  3. **Specialization:** Niche skills like furniture restoration, modular design, or upholstery fetch better pay.
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## Upskilling Opportunities

1. **Certifications in CAD Design:** Courses in AutoCAD, SketchUp, or SolidWorks enhance furniture design skills.
2. **Advanced Carpentry Techniques:** Specialized training in joinery, carving, or precision woodworking.
3. **Interior Design Courses:** Adding knowledge of space planning and decor boosts employability.
4. **Entrepreneurship Training:** Learning business skills to start and manage a carpentry or furniture design business.

By gaining hands-on experience, building a portfolio, and staying updated with modern furniture design trends, graduates can explore lucrative and fulfilling career paths in this growing field.