

Section - 5
TECHNICAL SPECIFICATION

Name of Work: SR to Rajpipla circuit house at Rajpipla, Dist. Narmada (Reparing of Furniture Work)

SPECIFICATION INDEX

Sr. No.	ITEM DESCRIPTION	Applicable Specification	Specification Booklet Attached
1	2	3	4
1	Providing and fixing stainless steel / brass / powder coated auto closing hinges to kitchen cabinet shutters including screws, removing old damaged hinges, alignment of shutters, complete fixing and testing as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
2	Providing and fixing approved quality hydraulic door closer to wooden / aluminium door shutter including all necessary screws, fittings, accessories, complete in all respect as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
3	Providing and supplying dining table of approved size and design made out of teak wood / hardwood frame with plywood/laminate top finish, including polishing, necessary fittings and complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
4	Providing and supplying conference dining table of approved size and design made out of teak wood / hardwood frame with plywood / block board top finished with laminate / veneer / polish including necessary supports, edge banding, hardware fittings, leveling arrangement and complete in all respect as directed by Engineer-in-	As per separate sheet attached	As per separate sheet attached
5	Providing and fixing wooden door shutter for made out of teak wood frame with commercial plywood/flush door shutter finished with approved quality paint/laminate including necessary hinges, door handle, lock, tower bolts, screws and all fittings complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
6	Providing and fixing stainless steel hanging pipe (clothes hanger rod) in cupboard made of 19 mm dia / 25 mm dia SS tube of approved quality including necessary brackets, supports, screws and fixing arrangements complete as directed by	As per separate sheet attached	As per separate sheet attached
7	Providing and fixing stainless steel / brass / powder coated cabinet handles of approved design and quality to dressing table / cupboard shutters including necessary screws and fixing arrangements complete as directed by Engineer-in-	As per separate sheet attached	As per separate sheet attached
8	Repairing and refixing stand including tightening of existing fittings, replacement of damaged screws/brackets, minor carpentry/metal work if required, proper alignment and fixing at existing location complete as directed by Engineer-in-	As per separate sheet attached	As per separate sheet attached

Name of Work: SR to Rajpipla circuit house at Rajpipla, Dist. Narmada (Reparing of Furniture Work)

SPECIFICATION INDEX

Sr. No.	ITEM DESCRIPTION	Applicable Specification	Specification Booklet Attached
9	Providing and supplying glass top table of size 2'-6" × 3'-0" made out of MS/SS/wooden frame of approved design with 12 mm thick toughened glass top, including necessary rubber pads, supports, polishing/painting of frame and complete in all respect as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
10	Providing and fixing curtains for windows/partitions made out of approved quality fabric (cotton / polyester / blackout cloth) of required width and colour including stitching, hemming, hooks/rings, curtain rods/tracks, brackets, fittings and fixing in position complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
11	Providing and fixing cupboard shutters made of plywood with laminate finish for reception cupboard including necessary fittings such as hinges, handles, tower bolts and screws complete.	As per separate sheet attached	As per separate sheet attached
12	Providing and fixing mortise door lock / cylindrical lock of approved make and quality to wooden / flush door shutter including necessary handles, keys, strike plate, screws and all accessories complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
13	Repairing existing window shutters including tightening/repairing of frame and shutters, replacement of damaged hinges, handles, stays, screws and minor carpentry/steel work, refixing glass panes if required and making functional condition complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
14	Providing and supplying executive high-back revolving chair with ergonomic design, hydraulic lift mechanism, cushioned armrests and PU/leatherette upholstery including all fittings complete.	As per separate sheet attached	As per separate sheet attached
15	Removing existing damaged decorative laminate from furniture surface and providing and fixing new approved quality decorative laminate sheet (1.0 mm / 1.5 mm thick) of approved shade and design on existing wooden surface including surface preparation, adhesive, cutting, finishing, edge trimming and complete in all respect as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached

Name of Work: SR to Rajpipla circuit house at Rajpipla, Dist. Narmada (Reparing of Furniture Work)

SPECIFICATION INDEX

Sr. No.	ITEM DESCRIPTION	Applicable Specification	Specification Booklet Attached
16	Providing and fixing mirror of approved quality 5 mm / 6 mm thick float glass with bevelled edges, backed with silvering and protective backing board, fixed on wall/wooden frame with necessary clamps, screws, adhesive and complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
17	Three seated sofas Providing and supplying sofa. (3 seated) made with using 19mm Thk. Plywood (M1) structure frame with S.S. legs required necessary support fixed with necessary fixtures and fastening (Hardware)(M14). It shall be covered with 32 Density PU foam(M22) with required Thickness as per design in seat & back and handle portion this should be again covered with 14mm thick PU foam(M22) with Madarpat cover on it & upholstered fabric(M26) or leather of suggested & approved by architect finished with seat, back & all visible side as per architect drawing. Complete as per architect's drawing and as per instruction of architect &	As per separate sheet attached	As per separate sheet attached
18	Providing and supplying chair of approved design made out of teak wood / hardwood frame with cushioned or non-cushioned seat and backrest, polished / painted finish including necessary fittings and complete in all respect as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
19	Removing existing damaged seat upholstery of dining chair and providing and fixing new cushioned seat with high quality foam and synthetic leather / fabric upholstery of approved shade including necessary stitching, fixing on existing frame, screws, adhesives and complete in all respect as directed by Engineer-in-	As per separate sheet attached	As per separate sheet attached
20	Providing and fixing door stopper of approved make and quality made out of stainless steel / brass / rubber buffer type including necessary screws, fasteners and fixing in position complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
21	Providing and supplying wooden file cupboard of approved size and design made out of teak wood / hardwood frame with plywood/block board shutters, internal shelves, necessary hinges, handles, locking arrangement and finished with polish/laminate of approved quality including all fittings complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached

Name of Work: SR to Rajpipla circuit house at Rajpipla, Dist. Narmada (Reparing of Furniture Work)

SPECIFICATION INDEX

Sr. No.	ITEM DESCRIPTION	Applicable Specification	Specification Booklet Attached
22	Medium back revolving & tilting chair(M39) Providing and supplying Medium back chair with Metal frame work. Upholstered with changeable fabric upholstery covers (as per requirement) and molded PU foam, together with molded seat & back covers. The back foam should be designed with contoured lumber support for extra comfort. Caster of high durability & hydraulic. The chair should have cylinder with 5 years warranty. The size of chair 47.5cm x 58cm (Back side) and 49cm x 48cm (seat size). The PU foam should be molded with density =45 ± 2 kg/m ³ . With One-piece armrests. The armrests are scratch and weather resistant. The permanent contact mechanism is designed with 360° revolving type, with pneumatic height adjustment & 17 ° maximum tilt only & tilt tension adjustment facility. As per Instruction of EIC & User Department	As per separate sheet attached	As per separate sheet attached
23	Providing and supplying moulded plastic chairs of approved quality, made of high-density polyethylene (HDPE) / polypropylene, of standard size, with ergonomic design, suitable for general seating use, including all lead, lift, transportation, loading, unloading and stacking, complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
24	Repairs to existing sofa set including replacement of damaged/sagged webbing, springs, cushions, plywood frame wherever required, re-stitching and refilling with suitable foam of approved density, providing new upholstery cloth/foam leather of approved shade and quality, stitching, fixing, polishing/finishing and all necessary carpentry work, including cost of materials, labour, tools & plants, transportation and all incidental charges, complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
25	Repairing of existing table including replacement of damaged plywood/board, laminate, drawer fittings, locks, handles, screws, nails and necessary carpentry work, polishing/painting wherever required, including cost of all materials, labour, tools & plants, transportation and all incidental charges complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached

Name of Work: SR to Rajpipla circuit house at Rajpipla, Dist. Narmada (Reparing of Furniture Work)

SPECIFICATION INDEX

Sr. No.	ITEM DESCRIPTION	Applicable Specification	Specification Booklet Attached
26	Repairing of existing main door including removal of damaged/broken glass panes and providing & fixing new glass of approved quality and thickness in wooden/aluminium/steel frame, including necessary beading, rubber gasket, putty, screws, sealant, cutting, fitting, labour charges, scaffolding, transportation and all incidental charges complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
27	Repairing of existing cupboard including replacement of damaged plywood/boards, shutters, hinges, handles, locks, tower bolts, channels and other fittings, necessary carpentry work, alignment of shutters, polishing/painting wherever required, including cost of materials, labour, tools & plants, transportation and all incidental charges complete as directed by Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached
28	Repairs to existing porch including dismantling damaged plaster/concrete, removing loose/unsound material, cleaning surface, re-plastering with cement mortar of required proportion, repairing cracks with polymer modified mortar/epoxy grout where necessary, providing and fixing reinforcement if required, finishing smooth with cement plaster, curing, and making good all edges, joints, and surfaces, replacing of damaged glass, repairing of wooden frame etc. complete as directed by	As per separate sheet attached	As per separate sheet attached
29	Providing and fixing PVC printed false ceiling with flush type with alluminium frame, frame work is done with three different sections of G.I. sheet of 24 gauge thickness named as C, U and L. The C section is fixed with hangers at an equal distance of 36" each and then U section is fixed perpendicular on C section with steel screws at and equal distance of 16" each. The complete frame work is supported by G.I. L angle/6 mm rod hangers from the roof and L sections is fixed all around the wall as shown in the diagram. 5mm PVC sheet strips of size 2 wide are fixd with counter sunk steel screws on the U section. Further 3mm PVC sheet is stuck to these PVC strips with solvent cement such that joining lines are perfectly matched. P.U. putty is filled, dried and leveled and requisite coats of primer and paint is done on the ceiling for getting fine surface finish etc. complete as per direction of Engineering and charge manufacturer's specification and drawing	As per separate sheet attached	As per separate sheet attached

Name of Work: SR to Rajpipla circuit house at Rajpipla, Dist. Narmada (Reparing of Furniture Work)

SPECIFICATION INDEX

Sr. No.	ITEM DESCRIPTION	Applicable Specification	Specification Booklet Attached
30	Providing and fixing wall panelling with approved quality MDF/plywood board of required thickness over aluminium/wooden framework at required spacing, finished with approved shade and make laminate/veneer including adhesive, screws, nails, edge lipping, necessary fittings & fixtures, cutting, wastage, scaffolding and finishing complete as per approved drawing and direction of Engineer-in-Charge.	As per separate sheet attached	As per separate sheet attached

Deputy Executive Engineer
Const.(R&B) sub Division
Rajpipla

Executive Engineer
Rajpipla (R&B) Division
Rajpipla

ITEM WISE SPECIFICATION

Item No.1 Providing and fixing stainless steel / brass / powder coated auto closing hinges to kitchen cabinet shutters including screws, removing old, damaged hinges, alignment of shutters, complete fixing and testing as directed by Engineer-in-Charge.

1. Materials

- Hinges shall be auto-closing type, of approved make and quality.
- Hinges shall be manufactured from:
 - Stainless Steel (SS),
 - Brass, or
 - Powder-coated steel, as specified or approved by the Engineer-in-Charge.
- Hinges shall be free from defects, rust, cracks, bends or other imperfections.
- Screws shall be corrosion-resistant and of suitable size matching the hinge manufacturer's recommendations.

2. Removal of Existing Hinges

- Existing damaged or defective hinges shall be carefully removed without causing damage to cabinet shutters or frames.
- Residual screws, fittings and loose materials shall be removed and the surface cleaned before fixing new hinges.

3. Fixing

- Hinges shall be fixed at locations matching the existing arrangement or as directed by the Engineer-in-Charge.
- Necessary holes shall be drilled carefully to avoid damage to cabinet members.
- Hinges shall be secured firmly using approved screws and accessories.
- Cabinet shutters shall be properly aligned to ensure uniform gaps and smooth movement.
- The auto-closing mechanism shall function effectively without obstruction.

4. Adjustment and Testing

- After fixing, hinges shall be adjusted to ensure proper opening, closing and alignment of shutters.
- All shutters shall operate smoothly without sagging, rubbing or excessive play.
- Defective components, if any, shall be replaced at no extra cost.

5. Completion

- The rate shall include cost of all materials, labour, tools and equipment, removal of old hinges, fixing, alignment, adjustments, testing and all incidental works required for satisfactory completion of the item.

Mode of Measurement

The item shall be measured in Numbers (No.) of hinges actually supplied and fixed.

Item No.2 Providing and fixing approved quality hydraulic door closer to wooden / aluminium door shutter including all necessary screws, fittings, accessories, complete in all respect as directed by Engineer-in-Charge.

1. Materials

- Hydraulic door closer shall be of approved make, model and capacity suitable for the size and weight of the door shutter.
- The body shall be fabricated from high-quality aluminium alloy or other approved material with corrosion-resistant finish.
- The closer shall be complete with arm assembly, mounting brackets, cover plate, screws, anchor fasteners and all accessories required for installation.
- All components shall be new, sound and free from manufacturing defects.

2. Installation

- The door closer shall be fixed in accordance with the manufacturer's specifications and the directions of the Engineer-in-Charge.
- Necessary marking, drilling and fixing of screws, bolts and anchor fasteners shall be carried out carefully without damaging the door shutter or frame.
- The closer shall be mounted in the correct position to ensure efficient operation.
- The arm assembly shall be securely connected and properly adjusted.

3. Adjustment and Testing

- Closing speed, latching speed and back-check (where provided) shall be adjusted to achieve smooth and controlled door operation.
- The door shall close completely without slamming and shall function properly throughout its full opening and closing cycle.
- Any defects noticed during testing shall be rectified without extra cost.

4. Completion

- The work shall include all labour, materials, tools, tackles, transportation, handling, fixing, adjustments and testing necessary for satisfactory completion of the item.
- The installed door closer shall be handed over in proper working condition.

Mode of Measurement

The item shall be measured in Number (No.).

Item No.3 Providing and supplying dining table of approved size and design made out of teak wood / hardwood frame with plywood/laminate top finish, including polishing, necessary fittings and complete as directed by Engineer-in-Charge.

1. Materials

Timber

- The frame, legs and supporting members shall be made from well-seasoned teak wood or approved hardwood.
- Timber shall be free from sapwood, decay, insect attack, cracks, warping and other defects.
- Moisture content shall conform to relevant standards for interior furniture works.

Plywood

- Table top shall be made from approved quality commercial grade or BWR grade plywood of specified thickness.
- Plywood shall conform to relevant IS specifications and shall be free from delamination and manufacturing defects.

Laminate

- The top surface shall be finished with decorative laminate of approved make, shade and texture.
- Laminate shall be bonded using approved adhesive to achieve a smooth and durable finish.

Fittings and Accessories

- Necessary screws, brackets, corner blocks, fasteners and other hardware required for fabrication and assembly shall be provided.
- All fittings shall be rust-resistant and of approved quality.

2. Fabrication

- The dining table shall be fabricated strictly to the approved dimensions, design and drawings.
- Joints shall be properly mortised, tenoned, screwed, glued or otherwise fixed to ensure rigidity and durability.
- All edges shall be smoothly finished and rounded where required.
- The structure shall be stable, level and free from wobbling.

3. Finishing

- Exposed wooden surfaces shall be sanded smooth and finished with approved French polish, melamine polish, PU polish or synthetic enamel paint as specified.
- Laminate surfaces shall be clean, smooth and free from scratches, blisters and unevenness.
- All visible surfaces shall be properly finished and protected.

4. Delivery

- The item shall be supplied at the specified location including loading, unloading, handling and stacking.
- The dining table shall be delivered in ready-to-use condition.

5. Completion

- The rate shall include cost of all materials, labour, fabrication, finishing, fittings, transportation, loading, unloading and all incidental charges required for complete supply of the dining table.

Mode of Measurement

The dining table shall be measured in Number (No.).

Item No.4 Providing and supplying conference dining table of approved size and design made out of teak wood / hardwood frame with plywood / block board top finished with laminate / veneer / polish including necessary supports, edge banding, hardware fittings, leveling arrangement and complete in all respect as directed by Engineer-in-Charge.

1. Materials

a) Timber Frame

- Frame members shall be made from well-seasoned first-class teak wood or approved hardwood, free from sapwood, cracks, knots, decay, insect attack and other defects.
- Moisture content shall not exceed 12% at the time of fabrication.
- Sections shall be of adequate size to provide structural rigidity and durability.

b) Table Top

- Top shall be made from approved quality commercial plywood or block board conforming to relevant IS specifications.
- Thickness shall be as approved by the Engineer-in-Charge, generally not less than 19 mm.

c) Surface Finish

- Table top shall be finished with approved quality laminate of minimum 1.0 mm thickness or natural wood veneer with melamine/polish finish as specified.
- Laminate shall be scratch-resistant, stain-resistant and fixed with approved adhesive.
- Veneer shall be uniform in grain and shade and finished with approved polish.

d) Edge Banding

- Exposed edges shall be finished with matching hardwood lipping, PVC edge banding or veneer edging as approved.
- Edge banding shall be properly bonded and neatly finished.

e) Hardware and Fittings

- All screws, brackets, connecting plates, nuts, bolts and fittings shall be of approved quality.
- Leveling arrangement such as adjustable nylon or metal shoes shall be provided to all legs where specified.

f) Adhesives and Polish

- Synthetic resin adhesive of approved make shall be used.
- Wood polish, melamine finish or PU coating shall be applied as specified and approved.

2. Workmanship

- Timber shall be accurately cut, planed, joined and assembled to the required dimensions and design.
- All joints shall be properly mortised, tenoned, dowelled, screwed or otherwise fixed to ensure rigidity.
- Surfaces shall be smooth, even and free from undulations, dents, scratches and tool marks.
- Laminate/veneer shall be fixed without bubbles, wrinkles or visible joints.
- Corners and edges shall be neatly rounded or chamfered as approved.
- The completed table shall be stable, level and capable of carrying intended loads without wobbling.
- All exposed timber surfaces shall receive approved polish or protective finish.
- The table shall be supplied and placed in position complete with all accessories and fittings.

3. Quality Control

- Dimensions, shape, finish and workmanship shall conform to approved drawings or samples.
- Timber and board materials shall be free from visible defects.
- Laminate/veneer finish shall be uniform in colour and texture.
- Any damaged or defective components shall be replaced at the contractor's cost.

4. Rate Shall Include

- Cost of teak wood/hardwood frame.
- Cost of plywood/block board top.
- Laminate/veneer/polish finish.
- Edge banding and lipping.
- Adhesives, hardware, fittings and leveling devices.

- Fabrication, assembly, transportation, loading, unloading and placing in position.
- All labour, tools, plants and incidental charges.
- Complete finished work as directed by the Engineer-in-Charge.

Mode of Measurement

- Measurement shall be by Number (Nos.) of completed conference dining tables supplied and placed in position.

Item No.5 Providing and fixing wooden door shutter for made out of teak wood frame with commercial plywood/flush door shutter finished with approved quality paint/laminate including necessary hinges, door handle, lock, tower bolts, screws and all fittings complete as directed by Engineer-in-Charge.

1. Materials

a) Timber Frame

- The internal frame of the shutter shall be made from well-seasoned first-class teak wood or approved hardwood.
- Timber shall be free from sapwood, decay, cracks, knots, insect attack and other defects.
- Moisture content shall not exceed 12%.

b) Door Shutter

- The shutter shall be commercial flush door conforming to relevant IS specifications or approved commercial plywood fixed over timber framework.
- Thickness of shutter shall generally be 30 mm to 35 mm or as specified in the Schedule of Quantities.
- Core shall be solid core, block board core or cellular core as approved.

c) Plywood Facing

- Commercial plywood shall conform to relevant IS standards.
- Plywood shall be free from delamination, warping and surface defects.

d) Laminate / Paint Finish

- Where laminate finish is specified, approved quality decorative laminate of minimum 1.0 mm thickness shall be fixed using approved adhesive.
- Where paint finish is specified, the surface shall be prepared with primer, putty and minimum two coats of approved paint over one coat primer.
- Colour and shade shall be as approved by the Engineer-in-Charge.

e) Hardware Fittings

The following fittings of approved make and quality shall be provided:

- Stainless steel/brass butt hinges.
- Door handle.
- Mortise lock, cylindrical lock or aldrop as specified.
- Tower bolts.
- Door stopper if specified.
- Screws, nails and fixing accessories.

f) Adhesives and Fasteners

- Synthetic resin adhesive of approved quality shall be used.
- Screws shall be stainless steel, brass or cadmium-plated steel.

2. Workmanship

- The shutter shall be fabricated true to line, level and dimensions shown in drawings.
- All joints shall be properly formed, glued and secured.
- The shutter shall be free from twisting, warping and buckling.

- Laminate shall be fixed uniformly without wrinkles, bubbles or open joints.
- Hardware fittings shall be fixed firmly at approved locations.
- Hinges shall be properly aligned to ensure smooth opening and closing of the shutter.
- Lock, handle and tower bolts shall operate smoothly without binding.
- Exposed edges shall be properly finished and protected.
- The shutter shall be fixed plumb, level and in perfect working condition.

3. Quality Control

- Timber shall be properly seasoned and free from defects.
- Flush door/plywood shall conform to approved specifications.
- Hardware fittings shall be of approved make and quality.
- Finished surface shall be smooth, uniform and free from visible defects.
- Any defective materials or workmanship shall be replaced at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Cost of teak wood/hardwood frame.
- Cost of commercial plywood/flush door shutter.
- Cost of laminate or paint finish.
- Cost of hinges, handles, locks, tower bolts and all hardware fittings.
- Adhesives, screws, nails and accessories.
- Labour for fabrication, transportation and fixing.
- All tools, plants, scaffolding and incidental charges.
- Complete finished work ready for use.

Mode of Measurement

- Wooden door shutter shall be measured in numbers (No.) based on the clear overall area of the shutter fixed in position.

Item No.6 Providing and fixing stainless steel hanging pipe (clothes hanger rod) in cupboard made of 19 mm dia / 25 mm dia SS tube of approved quality including necessary brackets, supports, screws and fixing arrangements complete as directed by Engineer-in-Charge.

1. Materials

a) Stainless Steel Tube

- The hanging rod shall be made from stainless steel tube of 19 mm diameter or 25 mm diameter as specified in the Schedule of Quantities.
- The tube shall be of approved make and quality, seamless or welded, with smooth surface and uniform thickness.
- Stainless steel shall generally conform to Grade SS 202 or SS 304 as specified.
- The tube shall be free from dents, bends, cracks, corrosion and manufacturing defects.

b) Brackets / Supports

- Rod supports shall be stainless steel, aluminium alloy, zinc alloy or other approved heavy-duty fittings suitable for supporting the rod and anticipated loads.
- Supports shall be designed to firmly hold the tube without movement or sagging.

c) Screws and Fasteners

- Stainless steel or cadmium-plated screws of approved quality shall be used.
- Necessary wall plugs, anchors, clips and fixing accessories shall be provided wherever required.

2. Workmanship

- The hanging pipe shall be cut accurately to the required length.
- Ends of the tube shall be smooth, properly finished and free from burrs or sharp edges.
- Brackets and supports shall be fixed true to line and level at locations approved by the Engineer-in-Charge.
- The rod shall be securely fixed to withstand normal service loads without deflection or loosening.
- Intermediate supports shall be provided where required for longer spans.
- Installation shall not damage the cupboard panels or surrounding finishes.
- The completed hanging rod shall be rigid, stable and capable of smooth use for hanging garments.

3. Quality Control

- Stainless steel tube shall have a smooth polished finish and uniform diameter.
- Brackets and fittings shall be free from defects and securely fixed.
- The rod shall remain level throughout its length.
- Any damaged, loose or defective materials shall be replaced at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Cost of stainless steel tube.
- Cost of brackets, supports and end sockets.
- Screws, fasteners and fixing accessories.
- Cutting, drilling, fitting and installation.
- Labour, tools and plants.
- Transportation, handling and wastage.
- Complete finished work as approved by the Engineer-in-Charge.

Mode of Measurement

- Measurement shall be made in numbers (Nos.) of stainless steel hanging pipe fixed in position.

Item No.7 Providing and fixing stainless steel / brass / powder coated cabinet handles of approved design and quality to dressing table / cupboard shutters including necessary screws and fixing arrangements complete as directed by Engineer-in-Charge.

1. Materials

a) Cabinet Handles

- Handles shall be made of stainless steel, brass or powder-coated metal as specified in the Schedule of Quantities.
- Handles shall be of approved design, size and finish.
- Stainless steel handles shall be of Grade SS 202 or SS 304, as specified.
- Brass handles shall be solid brass with polished, satin or antique finish as approved.
- Powder-coated handles shall have a uniform, durable and scratch-resistant coating.
- Handles shall be free from cracks, dents, sharp edges, corrosion, pitting and manufacturing defects.

b) Screws and Fasteners

- Fixing screws shall be stainless steel, brass or zinc-coated steel of suitable size.
- All screws shall be compatible with the handle finish and base material.

- Necessary washers, nuts and fixing accessories shall be provided wherever required.

2. Workmanship

- Handles shall be fixed at approved locations and heights on cupboard shutters, drawers or dressing tables.
- Holes shall be drilled accurately to prevent damage to the furniture surface.
- Handles shall be aligned properly and fixed firmly to ensure smooth and convenient operation.
- Fixing shall be neat and secure without causing cracks, chips or damage to laminate, veneer, paint or polish finishes.
- All exposed surfaces shall be cleaned after installation.
- Handles shall operate smoothly and remain rigid without looseness or movement.

3. Quality Control

- Handles shall conform to approved samples and specifications.
- Finish shall be uniform throughout and free from scratches, stains or discoloration.
- All fittings shall be securely fixed and properly aligned.
- Defective materials or workmanship shall be replaced at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Supply of stainless steel, brass or powder-coated cabinet handles.
- Supply of screws, washers, nuts and fixing accessories.
- Drilling, fitting and fixing in position.
- Labour, tools and plants.
- Transportation, handling and wastage.
- Cleaning and finishing after installation.
- Complete work as directed by the Engineer-in-Charge.

Mode of Measurement

- Measurement shall be made by Number (Nos.) of cabinet handles fixed in position and accepted by the Engineer-in-Charge.

Item No.8 Repairing and refixing stand including tightening of existing fittings, replacement of damaged screws/brackets, minor carpentry/metal work if required, proper alignment and fixing at existing location complete as directed by Engineer-in-Charge.

1. Materials

a) Fasteners and Fittings

- Screws, nuts, bolts, washers, brackets, clamps and other fittings required for repairs shall be of approved quality and size.
- Replacement components shall match the existing stand in material, strength and finish as far as practicable.

b) Repair Materials

- Timber pieces, metal sections, welding electrodes, adhesives, sealants or fillers required for minor repairs shall be of approved quality.
- All materials used shall be free from defects and suitable for the intended purpose.

2. Workmanship

- The stand shall be carefully dismantled wherever necessary without causing damage to reusable components.
- Loose fittings shall be tightened and adjusted properly.
- Damaged screws, brackets, nuts, bolts or other accessories shall be replaced with new approved components.
- Minor carpentry works such as plugging, filling, replacement of small timber sections and re-fixing shall be carried out where required.
- Minor metal works including straightening, welding, grinding and fastening shall be carried out as necessary.
- The stand shall be aligned correctly, made level and securely fixed at its original location.
- All repaired portions shall be properly finished and cleaned after completion.
- The completed stand shall be stable, safe and fully functional.

3. Quality Control

- All fittings shall be securely fixed and properly tightened.
- Repaired portions shall be neat and structurally sound.
- Alignment, level and stability shall be checked after completion.
- Any defective workmanship noticed during inspection shall be rectified by the contractor at no extra cost.

4. Rate Shall Include

The rate shall include:

- Labour for dismantling, repairing and refixing.
- Replacement of screws, nuts, bolts, washers, brackets and minor accessories.
- Minor carpentry and metal repair works.
- Welding, drilling, cutting, grinding and fitting operations where required.
- Tools, plants, consumables and incidental materials.
- Transportation of minor materials within the site.
- Testing, adjustment and complete fixing in working condition.
- All leads, lifts and incidental charges.

Mode of Measurement

- Measurement shall be made by Number (No.) of stand repaired and refixed in position.

Item No.9 Providing and supplying glass top table of size 2'-6" × 3'-0" made out of MS/SS/wooden frame of approved design with 12 mm thick toughened glass top, including necessary rubber pads, supports, polishing/painting of frame and complete in all respect as directed by Engineer-in-Charge.

1. Materials

a) Frame

- The frame shall be fabricated from Mild Steel (M.S.), Stainless Steel (S.S.) or seasoned teak wood/hardwood as specified in the Schedule of Quantities.
- M.S. sections shall be free from rust, cracks, bends and other defects.
- S.S. members shall be of approved grade and finish.
- Wooden members shall be well seasoned, free from knots, warping, decay, insect attack and other defects.

b) Toughened Glass Top

- Glass top shall be 12 mm thick clear toughened safety glass conforming to relevant IS specifications.
- Glass shall be free from bubbles, waviness, scratches, cracks, chips or other defects.
- All exposed edges shall be machine polished and rounded for safety.
- Corners shall be slightly rounded unless otherwise specified.

c) Rubber Pads and Supports

- Suitable neoprene/rubber pads, bushes or spacers shall be provided between the frame and glass top.
- Pads shall prevent direct contact between glass and supporting frame and shall avoid vibration or movement.

d) Finishing Materials

- M.S. frame shall receive one coat of metal primer and two coats of synthetic enamel paint or powder coating as approved.
- Stainless steel frame shall have a matt, satin or mirror finish as specified.
- Wooden frame shall be finished with approved melamine polish, French polish, PU finish or paint as specified.

e) Fasteners and Accessories

- Necessary screws, brackets, connectors, fixing plates and supporting hardware shall be of approved quality.
- All accessories required for complete assembly shall be included.

2. Workmanship

- The frame shall be accurately fabricated to approved dimensions and design.
- All joints shall be properly welded, screwed, bolted or joined as required.
- Welded joints shall be ground smooth and finished neatly.
- The table shall be rigid, level and free from wobbling.
- Glass top shall be carefully placed and supported uniformly over the frame.
- Rubber pads shall be properly positioned to avoid stress concentration on the glass.
- All surfaces shall be finished smoothly and uniformly.
- The completed table shall be stable, aesthetically finished and ready for use.

3. Quality Control

- Toughened glass shall be of approved quality and thickness.
- Frame members shall conform to approved dimensions and design.
- Finishes shall be uniform and free from visible defects.
- The table shall be checked for stability, alignment and workmanship before acceptance.
- Any damaged glass, defective frame or poor workmanship shall be replaced at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Cost of M.S./S.S./wooden frame.
- Cost of 12 mm thick toughened glass top.
- Rubber pads, spacers and supports.
- Painting, polishing or finishing of frame.
- Fabrication, assembly and placing in position.
- All hardware, fittings and accessories.
- Loading, unloading, transportation and handling.
- Labour, tools and plants.

- Complete finished work as directed by the Engineer-in-Charge.

Mode of Measurement

- Measurement shall be made by Number (No.) of completed glass top tables supplied and placed in position.

Item No.10 Providing and fixing curtains for windows/partitions made out of approved quality fabric (cotton / polyester / blackout cloth) of required width and colour including stitching, hemming, hooks/rings, curtain rods/tracks, brackets, fittings and fixing in position complete as directed by Engineer-in-Charge.

1. Materials

a) Curtain Fabric

- Fabric shall be of approved quality cotton, polyester, blackout cloth or other specified material.
- Fabric shall be uniform in weave, texture, colour and finish.
- The material shall be free from stains, tears, weaving defects, fading and other imperfections.
- Colour, design and pattern shall be as approved by the Engineer-in-Charge.
- Blackout curtains shall have suitable light-blocking properties where specified.

b) Stitching Thread

- Thread shall be colour-matched, durable and of approved quality.
- Stitching shall be strong, neat and uniform throughout.

c) Curtain Rods / Tracks

- Curtain rods shall be made of powder-coated steel, aluminium, stainless steel, brass or approved material.
- Curtain tracks shall be of approved aluminium or heavy-duty PVC section where specified.
- Rods/tracks shall be straight, rigid and capable of supporting the curtain weight without bending.

d) Brackets and Supports

- Brackets, supports and end caps shall be of approved quality and matching finish.
- Adequate supports shall be provided at suitable intervals to prevent sagging.

e) Hooks, Rings and Accessories

- Hooks, rings, runners, gliders and other accessories shall be of approved quality.
- All accessories shall operate smoothly and securely.

f) Fasteners

- Screws, wall plugs, anchor fasteners and fixing accessories shall be of approved quality and suitable for the supporting surface.

2. Workmanship

- Fabric shall be accurately measured, cut and stitched to the required dimensions.
- Side hems, bottom hems and top folds shall be neatly finished.
- Pleats, eyelets or gathering arrangements shall be provided as specified.
- Curtain rods/tracks shall be fixed true to line and level using approved brackets.
- Brackets shall be firmly anchored to walls, partitions or structural members.
- Curtains shall hang evenly without wrinkles, twisting or uneven folds.
- Hooks, rings and runners shall permit smooth movement of curtains.
- All fittings shall be securely fixed and properly aligned.
- The completed work shall present a neat appearance and function smoothly.

3. Quality Control

- Fabric quality, colour and pattern shall conform to approved samples.
- Stitching shall be uniform and free from loose threads.
- Rods/tracks and accessories shall be properly aligned and securely fixed.
- Curtains shall operate smoothly without snagging or obstruction.
- Defective materials or workmanship shall be replaced at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Supply of approved curtain fabric.
- Cutting, stitching, hemming and pleating.
- Curtain rods/tracks, brackets and supports.
- Hooks, rings, runners, gliders and accessories.
- Screws, wall plugs and fasteners.
- Transportation, handling and installation.
- Labour, tools and plants.
- All incidental charges required for complete installation.
- Complete finished work as directed by the Engineer-in-Charge.

Mode of Measurement

- Curtains shall be measured in Numbers (Nos.) based on the finished area of curtain fabric installed.

Item No.11 Providing and fixing cupboard shutters made of plywood with laminate finish for reception cupboard including necessary fittings such as hinges, handles, tower bolts and screws complete.

1. Materials

a) Plywood

- Plywood shall be of approved quality commercial plywood conforming to relevant IS specifications.
- Plywood shall be free from warping, delamination, cracks, open joints and other defects.
- Thickness shall generally be 19 mm or as specified in the Schedule of Quantities.

b) Decorative Laminate

- Decorative laminate shall be of approved make, colour, texture and finish.
- Laminate shall be of minimum 1.0 mm thickness unless otherwise specified.
- Laminate shall be scratch-resistant, moisture-resistant and firmly bonded to the plywood surface using approved adhesive.

c) Edge Lipping / Banding

- Exposed edges shall be finished with teak wood lipping, PVC edge banding or approved edging material.
- Edge finish shall match the laminate and provide a neat appearance.

d) Hinges

- Hinges shall be stainless steel, brass or powder-coated concealed hinges of approved quality and size.
- Hinges shall provide smooth opening and closing of shutters.

e) Handles

- Handles shall be stainless steel, brass, aluminium or powder-coated metal of approved design and quality.
- f) Tower Bolts and Catches
- Tower bolts, magnetic catches, stoppers and locking arrangements shall be of approved make and quality as specified.
- g) Fasteners
- Screws, nails, adhesives and other fixing accessories shall be of approved quality and suitable for the work.

2. Workmanship

- Plywood shutters shall be cut accurately to the required size and shape.
- Laminate shall be fixed uniformly without bubbles, wrinkles or visible defects.
- All exposed edges shall be neatly finished with approved lipping or edge banding.
- Hinges, handles, tower bolts and accessories shall be fixed firmly and accurately.
- Shutters shall be properly aligned and operate smoothly without binding or sagging.
- Necessary clearances shall be maintained between shutters and cupboard frame.
- All surfaces shall be cleaned after installation and handed over in good condition.

3. Quality Control

- Plywood and laminate shall conform to approved specifications and samples.
- Hardware fittings shall be of approved make and free from defects.
- Laminate finish shall be smooth, uniform and free from scratches or damage.
- Cupboard shutters shall open and close freely and remain properly aligned.
- Defective materials or workmanship shall be replaced by the contractor at no extra cost.

4. Rate Shall Include

The rate shall include:

- Supply of plywood shutters.
- Decorative laminate finish on exposed surfaces.
- Edge lipping or edge banding.
- Hinges, handles, tower bolts, magnetic catches and other fittings.
- Adhesives, screws and fixing accessories.
- Cutting, fabrication and fixing in position.
- Labour, tools, plants and equipment.
- Transportation, loading, unloading and handling.
- All incidental charges required for completion of the work.

Mode of Measurement

- Cupboard shutters shall be measured in Numbers (Nos.) of shutter area fixed in position.

Item No.12 Providing and fixing mortise door lock / cylindrical lock of approved make and quality to wooden / flush door shutter including necessary handles, keys, strike plate, screws and all accessories complete as directed by Engineer-in-Charge.

1. Materials

a) Lock

- Lock shall be mortise type or cylindrical type as specified in the Schedule of Quantities.

- Lock shall be of approved make, quality and size.
- Lock body shall be manufactured from brass, stainless steel, zinc alloy or other approved corrosion-resistant material.
- Lock mechanism shall be smooth in operation and free from manufacturing defects.
- Lock shall be supplied with minimum three keys unless otherwise specified.

b) Handles

- Door handles shall be stainless steel, brass, aluminium or zinc alloy of approved design and finish.
- Handles shall be compatible with the lock system and securely fixed.

c) Strike Plate

- Strike plate and latch receiver shall be made of brass, stainless steel or approved metal.
- The strike plate shall be properly matched to the lock mechanism.

d) Screws and Accessories

- Screws shall be stainless steel, brass or zinc-coated steel of approved quality.
- All fixing accessories, spindle, escutcheon plates, rosettes and cover plates required for complete installation shall be provided.

2. Workmanship

- The lock shall be installed at the approved location and height on the door shutter.
- Necessary recesses, mortises and holes shall be carefully cut without damaging the door shutter.
- Lock body shall be accurately fitted and securely fixed.
- Handles, strike plates and accessories shall be properly aligned and firmly secured.
- The lock shall operate smoothly without binding, sticking or excessive play.
- Keys shall function properly in all locking positions.
- Exposed surfaces shall be cleaned and protected from scratches or damage.
- The completed installation shall be neat, secure and fully operational.

3. Quality Control

- Lock and accessories shall conform to approved samples and specifications.
- Locking and unlocking operations shall be tested after installation.
- Handles and fittings shall be firmly fixed and properly aligned.
- Defective locks, keys or fittings shall be replaced at the contractor's cost.
- Installation shall ensure smooth and trouble-free operation.

4. Rate Shall Include

The rate shall include:

- Supply of mortise lock or cylindrical lock.
- Supply of handles, keys, strike plate and accessories.
- Screws, spindle, escutcheon plates and fixing materials.
- Cutting, mortising, drilling and fitting work.
- Labour, tools and plants.
- Transportation, handling and incidental charges.
- Testing and adjustment of lock mechanism.
- Complete installation ready for use.

Mode of Measurement

Measurement

- Measurement shall be made by Number (No.) of lock sets fixed in position and accepted by the Engineer-in-Charge.

Item No.13 Repairing existing window shutters including tightening/repairing of frame and shutters, replacement of damaged hinges, handles, stays, screws and minor carpentry/steel work, refixing glass panes if required and making functional condition complete as directed by Engineer-in-Charge.

1. Materials

a) Hardware Fittings

- Hinges, handles, stays, friction stays, screws, nuts, bolts, washers and other accessories required for repairs shall be of approved quality and compatible with the existing window.
- Replacement fittings shall match the existing type and finish as closely as possible.

b) Timber Materials (Where Applicable)

- Timber used for repairs shall be well-seasoned teak wood or approved hardwood matching the existing work.
- Timber shall be free from cracks, knots, decay and insect attack.

c) Steel Materials (Where Applicable)

- Mild steel flats, angles, plates or sections required for minor repairs shall conform to relevant IS specifications.
- Steel members shall be free from rust and defects.

d) Glazing Materials

- Existing serviceable glass panes shall be reused.
- Putty, glazing beads, clips, rubber gaskets and fixing materials required for refixing glass panes shall be of approved quality.

e) Fasteners and Consumables

- Screws, nails, adhesives, welding electrodes and other consumables shall be of approved quality.

2. Workmanship

- Existing window shutters and frames shall be carefully inspected before commencement of repair work.
- Loose, damaged or defective fittings shall be removed and replaced.
- Hinges, handles and stays shall be adjusted or replaced to ensure smooth opening and closing.
- Minor carpentry work such as plugging, filling, replacement of small timber portions and tightening of joints shall be carried out wherever necessary.
- Minor steel work including welding, straightening, grinding and fastening shall be carried out where required.
- Existing glass panes found loose shall be refixed using suitable glazing materials.
- Window shutters shall be properly aligned and adjusted to eliminate sagging, jamming or excessive clearance.
- All moving parts shall be lubricated where necessary.
- The repaired window shall be tested for smooth and satisfactory operation.
- All debris generated during repair shall be removed and the work area left clean.

3. Quality Control

- Window shutters shall open and close smoothly without obstruction.
- All replaced fittings shall be securely fixed and properly aligned.
- Repaired joints shall be firm and structurally sound.
- Glass panes shall be securely fixed without rattling.

- Any defective workmanship observed during inspection shall be rectified at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Labour for dismantling, repairing and refixing.
- Replacement of hinges, handles, stays, screws and minor accessories.
- Minor carpentry and steel repair works.
- Welding, drilling, grinding and fitting operations.
- Refixing of existing glass panes including glazing materials.
- Lubrication, adjustment and testing.
- Tools, plants and consumables.
- Transportation of minor materials within the site.
- All leads, lifts and incidental charges.
- Complete restoration of the window to functional condition.

Mode of Measurement

The work shall be measured by Number (No.) of window shutters repaired and made functional.

Item No.14 Providing and supplying executive high-back revolving chair with ergonomic design, hydraulic lift mechanism, cushioned armrests and PU/leatherette upholstery including all fittings complete.

1. Materials

a) Chair Frame

- The chair frame shall be made of heavy-duty steel, moulded polymer, aluminium alloy or other approved material.
- Structural components shall be strong, durable and capable of withstanding normal office usage.

b) Seat and Backrest

- The chair shall have a high-back ergonomic design providing adequate support to the back, shoulders and neck.
- Seat and backrest shall be cushioned with high-density polyurethane foam of approved quality.
- Cushioning shall be resilient, durable and free from deformation.

c) Upholstery

- Upholstery shall be of approved quality PU leather, leatherette or equivalent material.
- Upholstery shall be wrinkle-free, neatly stitched and resistant to normal wear and tear.
- Colour and finish shall be as approved by the Engineer-in-Charge.

d) Armrests

- Armrests shall be fixed or adjustable type with cushioned top support.
- Armrests shall be securely fixed and ergonomically designed.

e) Hydraulic Lift Mechanism

- Chair shall be provided with a gas-lift hydraulic height adjustment mechanism of approved quality.
- The mechanism shall enable smooth height adjustment and locking at the desired position.

f) Revolving Mechanism

- The chair shall have a 360-degree revolving arrangement with smooth operation.

- Tilt and locking mechanism shall be provided where specified.

g) Base and Castors

- The chair shall be provided with a five-legged base made of reinforced nylon, metal or aluminium.
- Twin-wheel castors shall be provided for smooth mobility and floor protection.
- Castors shall rotate freely without excessive noise.

h) Hardware and Accessories

- All nuts, bolts, screws, bushings, covers and fittings shall be of approved quality and corrosion-resistant.
- Necessary accessories required for complete assembly shall be provided.

2. Workmanship

- The chair shall be factory-manufactured and assembled as per approved specifications.
- All components shall be properly fitted and securely fastened.
- Upholstery shall be neatly finished without wrinkles, tears or visible defects.
- Hydraulic and revolving mechanisms shall operate smoothly.
- The chair shall be stable and free from wobbling.
- Edges and exposed surfaces shall be smooth and safe for use.
- The completed chair shall be delivered in ready-to-use condition.

3. Quality Control

- Materials and workmanship shall conform to approved samples and specifications.
- Hydraulic mechanism shall be tested for smooth operation.
- Castors and revolving mechanism shall function properly.
- Upholstery and cushioning shall be free from defects.
- Any damaged or defective component shall be replaced before acceptance.

4. Rate Shall Include

The rate shall include:

- Supply of executive high-back revolving chair.
- Hydraulic lift and revolving mechanism.
- Cushioned seat, backrest and armrests.
- PU/leatherette upholstery.
- Five-legged base and castor wheels.
- All fittings, hardware and accessories.
- Assembly, testing and quality checks.
- Transportation, loading, unloading and handling.
- Placement at designated location.
- All labour, tools, plants and incidental charges.
- Complete chair ready for use.

Mode of Measurement

- Measurement shall be made by Number (No.) of executive high-back revolving chairs supplied and placed in position.

Item No.15 Removing existing damaged decorative laminate from furniture surface and providing and fixing new approved quality decorative laminate sheet (1.0 mm / 1.5 mm thick) of approved shade and design on existing wooden surface including surface preparation, adhesive, cutting, finishing, edge trimming and complete in all respect as directed by Engineer-in-Charge.

1. Materials

a) Decorative Laminate

- Decorative laminate shall be of approved make, colour, texture and finish.
- Laminate thickness shall be 1.0 mm or 1.5 mm as specified in the Schedule of Quantities.
- Laminate shall be resistant to scratches, stains, moisture and normal wear and tear.
- Sheets shall be free from cracks, blisters, delamination, colour variation and other defects.

b) Adhesive

- Adhesive shall be approved synthetic resin adhesive, contact adhesive or equivalent suitable for laminate fixing.
- Adhesive shall provide strong and durable bonding between laminate and substrate.

c) Edge Finishing Materials

- Exposed edges shall be finished neatly by trimming, polishing or providing matching edge strips/PVC edge banding wherever required.
- Edge finishing materials shall match the laminate shade and quality.

d) Consumables

- Sandpaper, cleaning solvents, fillers and other consumables required for surface preparation and finishing shall be of approved quality.

2. Surface Preparation

- Existing damaged laminate shall be carefully removed without damaging the underlying wooden surface.
- Residual adhesive, dirt, loose particles and irregularities shall be completely removed.
- Damaged portions of the substrate shall be repaired using suitable filler or patching material where necessary.
- The surface shall be cleaned, smoothened and made ready for receiving the new laminate.

3. Workmanship

- Laminate sheets shall be cut accurately to the required size and shape.
- Approved adhesive shall be uniformly applied to both laminate and substrate surfaces as recommended by the manufacturer.
- Laminate shall be carefully positioned and pressed to ensure full contact and proper bonding.
- No air bubbles, wrinkles, blisters, gaps or open joints shall be permitted.
- Edges shall be neatly trimmed and finished flush with the furniture surface.
- Corners and joints shall be finished smoothly and uniformly.
- Finished surfaces shall be clean, level and aesthetically acceptable.
- Care shall be taken to protect adjoining finished surfaces from damage.

4. Quality Control

- Laminate shall conform to approved samples and specifications.
- Bonding shall be firm and uniform over the entire surface.
- Surface finish shall be smooth and free from scratches, bubbles, dents or visible defects.
- Colour and texture shall be consistent throughout the work.
- Any defective portion shall be removed and replaced at the contractor's cost.

5. Rate Shall Include

The rate shall include:

- Removal and disposal of existing damaged laminate.
- Surface cleaning, scraping and preparation.
- Supply of new decorative laminate.
- Supply and application of approved adhesive.
- Cutting, fixing, pressing and finishing.
- Edge trimming and edge finishing.
- Minor repairs to substrate surface necessary for laminate fixing.
- Labour, tools, equipment and consumables.
- Transportation, handling and wastage.
- Complete finished work as directed by the Engineer-in-Charge.

Mode of Measurement

- Measurement shall be made in Number (Nos.) of laminate surface replaced and fixed.

Item No.16 Providing and fixing mirror of approved quality 5 mm / 6 mm thick float glass with bevelled edges, backed with silvering and protective backing board, fixed on wall/wooden frame with necessary clamps, screws, adhesive and complete as directed by Engineer-in-Charge.

1. Materials

a) Mirror Glass

- Mirror shall be manufactured from high-quality float glass of 5 mm or 6 mm thickness as specified.
- Glass shall conform to relevant IS specifications for mirror quality.
- Mirror shall be free from bubbles, waves, scratches, stains, distortions and other defects.
- Reflective surface shall provide clear and undistorted images.

b) Silvering and Protective Coating

- The back of the mirror shall be uniformly silvered using approved manufacturing processes.
- Silvered surface shall be protected with suitable copper coating and protective paint backing to resist corrosion and deterioration.

c) Backing Board

- Protective backing board shall be marine plywood, commercial plywood, MDF, PVC board or approved material as specified.
- Thickness shall generally not be less than 6 mm unless otherwise specified.
- Backing board shall be smooth, rigid and free from warping and defects.

d) Edge Finish

- All exposed edges shall be machine polished and bevelled where specified.
- Edges shall be smooth and free from chips or sharp corners.

e) Adhesive and Fixing Materials

- Adhesive shall be mirror-compatible neutral cure silicone or approved adhesive that does not damage the silvering.
- Mirror clips, clamps, brackets and screws shall be stainless steel, brass or approved non-corrosive material.
- Necessary wall plugs, fasteners and accessories shall be provided.

2. Workmanship

- The mirror shall be cut accurately to the required dimensions.
- Wall or frame surface shall be cleaned and prepared before fixing.
- Backing board shall be securely fixed wherever specified.
- Mirror shall be fixed plumb, level and true to alignment.
- Approved adhesive shall be applied uniformly to ensure proper bonding.
- Mirror clips or clamps shall be fixed neatly without causing stress on the glass.
- Adequate spacing shall be maintained to avoid breakage due to thermal movement.
- Finished installation shall be free from distortion, stains, scratches and visible defects.
- Care shall be taken to avoid damage to adjoining finishes during installation.

3. Quality Control

- Mirror glass shall be of approved quality and specified thickness.
- Reflective surface shall be clear and free from blemishes.
- Silvering and protective backing shall be uniform throughout.
- Fixing shall be secure and stable without vibration or movement.
- Any cracked, chipped or damaged mirror shall be replaced at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Supply of mirror glass.
- Silvering and protective backing.
- Protective backing board.
- Bevelled/polished edge finishing.
- Adhesive, clamps, clips, screws and fixing accessories.
- Cutting, handling and installation.
- Labour, tools and equipment.
- Transportation, loading and unloading.
- All incidental charges required for complete installation.
- Complete finished work as directed by the Engineer-in-Charge.

Mode of Measurement

- Mirror shall be measured in Numbers (Nos.) based on the net finished area fixed in position.

Item No.17 Three seated sofas

Providing and supplying sofa. (3 seated) made with using 19mm Thk. Plywood (M1) structure frame with S.S. legs required necessary support fixed with necessary fixtures and fastening (Hardware)(M14). It shall be covered with 32 Density PU foam(M22) with required Thickness as per design in seat & back and handle portion this should be again covered with 14mm thick PU foam(M22) with Madarpat cover on it & upholstered fabric(M26) or leather of suggested & approved by architect finished with seat, back & all visible side as per architect drawing. Complete as per architect's drawing and as per instruction of architect & engineer in charge.

1. Materials

a) Structural Frame

- The sofa framework shall be fabricated from 19 mm thick approved quality plywood (M1).
- Plywood shall be free from warping, delamination, cracks and other defects.
- Internal members shall be adequately braced to provide rigidity and durability.

- All joints shall be glued, screwed and reinforced as required.
- b) Stainless Steel Legs
 - Legs shall be fabricated from approved quality stainless steel of suitable grade and section.
 - Stainless steel shall be corrosion-resistant and provided with brushed, matt or mirror finish as approved.
 - Legs shall be securely fixed to the frame and capable of carrying the design load without deformation.
- c) Hardware and Fasteners
 - All screws, bolts, brackets, connectors and fastening accessories (M14) shall be of approved quality.
 - Hardware shall be rust-resistant and suitable for furniture applications.
- d) Cushioning Foam
 - Seat, backrest and armrest portions shall be provided with 32 density PU foam (M22) of approved thickness as per design.
 - Foam shall be resilient, uniform in density and free from deformation.
 - Foam shall conform to approved quality standards.
- e) Secondary Foam Layer
 - A 14 mm thick PU foam (M22) layer shall be provided over the primary cushioning for smooth contouring and comfort.
 - Foam shall be properly bonded to the underlying surface.
- f) Madarpat Lining
 - Foam shall be covered with approved quality madarpat cloth before upholstery.
 - Madarpat shall be neatly stretched and securely fixed.
- g) Upholstery
 - Upholstery shall be of approved fabric (M26) or leather as specified.
 - Fabric/leather shall be durable, colourfast and free from defects.
 - Colour, texture and pattern shall be as approved by the Architect.
 - Stitching shall be neat, straight and uniform.

2. Workmanship

- Sofa shall be manufactured strictly as per approved drawings and dimensions.
- Frame shall be rigid, stable and free from distortion.
- Foam shall be properly bonded and shaped to achieve the required profile.
- Upholstery shall be stretched uniformly without wrinkles, sagging or visible defects.
- Stitching shall be neat and symmetrical.
- Corners, joints and edges shall be properly finished.
- Stainless steel legs shall be aligned correctly and fixed firmly.
- The completed sofa shall be comfortable, stable and aesthetically finished.
- All exposed surfaces shall be cleaned before delivery.

3. Quality Control

- Materials shall conform to approved samples and specifications.
- Plywood, foam and upholstery materials shall be inspected before fabrication.
- Upholstery finish shall be free from tears, stains, loose stitching or colour variations.
- Sofa shall be checked for dimensional accuracy, stability and workmanship.
- Any defective material or workmanship shall be replaced at the contractor's cost.

4. Rate Shall Include

The rate shall include:

- Supply of 19 mm thick plywood structural frame.
- Internal supports and reinforcement members.
- Stainless steel legs.
- Hardware, fasteners and accessories.
- 32 density PU foam cushioning.
- 14 mm PU foam overlay.
- Madarpad lining.
- Upholstery fabric or leather.
- Cutting, stitching, fabrication and assembly.
- Transportation, loading, unloading and placement.
- Labour, tools, plants and consumables.
- Complete finished sofa ready for use as approved by the Architect and Engineer-in-Charge.

Mode of Measurement

- Measurement shall be made by Number (No.) of completed three-seated sofas supplied and placed in position.

Item No.18 Providing and supplying chair of approved design made out of teak wood / hardwood frame with cushioned or non-cushioned seat and backrest, polished / painted finish including necessary fittings and complete in all respect as directed by Engineer-in-Charge.

1. Materials

Timber

- Teak wood or approved hardwood shall be well-seasoned, free from sapwood, knots, cracks, warping, insect attack, and other defects.
- Moisture content shall not exceed 12%.
- Timber shall conform to relevant IS specifications for furniture-grade wood.

Seat and Backrest

For Cushioned Chair:

- Seat and back shall be made from 12 mm to 19 mm thick commercial plywood/BWR plywood as approved.
- Cushioning shall consist of PU foam of minimum 32 kg/m³ density and thickness as per approved design.
- Upholstery shall be of approved fabric, rexine, leatherette, or leather finish.

For Non-Cushioned Chair:

- Seat and backrest shall be made from solid wood, moulded plywood, or decorative laminated board as approved.

Hardware and Accessories

- Screws, bolts, corner blocks, brackets, dowels, adhesives, and other fittings shall be of approved quality.
- Nylon bushes, rubber shoes, or floor protectors shall be provided at chair legs wherever specified.

Finish

- Exposed wooden surfaces shall receive approved melamine polish, PU polish, French polish, or paint finish.
- Colour and shade shall be as approved by the Engineer-in-Charge.

2. Workmanship

- Chairs shall be manufactured strictly as per approved design, shape, dimensions, and drawings.
- Timber members shall be accurately cut, planed, jointed, and assembled to ensure rigidity and durability.
- All joints shall be mortise and tenon, dowel, screwed, glued, or otherwise approved type.
- Surfaces shall be smoothly finished and sanded without visible tool marks.
- Upholstery work shall be neatly executed with proper stretching and fixing of fabric without wrinkles.
- All exposed edges and corners shall be rounded and finished smoothly.
- The chair shall be stable, free from wobbling, distortion, sharp edges, or defects.
- Necessary protection shall be provided during transportation and handling to avoid damage.

3. Inspection and Quality Control

- Chairs shall be subject to inspection for dimensions, finish, stability, workmanship, and material quality.
- Defective or damaged chairs shall be rejected and replaced at the contractor's cost.
- Samples shall be approved before bulk supply wherever directed.

4. Mode of Measurement

- Measurement shall be made in Numbers (Nos.) of completed and accepted chairs supplied and placed at the designated location.

Item No.19 Removing existing damaged seat upholstery of dining chair and providing and fixing new cushioned seat with high quality foam and synthetic leather / fabric upholstery of approved shade including necessary stitching, fixing on existing frame, screws, adhesives and complete in all respect as directed by Engineer-in-Charge.

1. Materials

Foam Cushion

- High-quality polyurethane (PU) foam of approved make.
- Foam density shall not be less than 32 kg/m³ unless otherwise specified.
- Foam thickness shall generally be 25 mm to 50 mm or as approved by the Engineer-in-Charge.
- Foam shall be uniform, resilient, free from defects, cracks, or deformation.

Upholstery Material

- Synthetic leather, rexine, leatherette, or fabric upholstery of approved quality, colour, pattern, and shade.
- Upholstery material shall be stain-resistant, durable, tear-resistant, and suitable for furniture use.
- Material shall be free from visible defects, wrinkles, cuts, or discoloration.

Fixing Materials

- Approved quality adhesive for foam fixing.
- Stainless steel staples, screws, tacks, clips, or other approved fastening accessories.
- Necessary backing cloth, lining, edge finishing materials, and protective layers wherever required.

2. Workmanship

- Existing damaged upholstery, foam, staples, tacks, and other fixing materials shall be carefully removed without damaging the existing chair frame.
- The existing seat base shall be cleaned and prepared before fixing new materials.
- Any minor repairs required to the seat base for proper fixing shall be carried out as directed.
- New foam shall be accurately cut and securely bonded to the seat base using approved adhesive.
- Upholstery material shall be stretched uniformly and fixed neatly to avoid wrinkles, folds, sagging, or looseness.
- Stitching shall be straight, uniform, and properly finished.
- Edges shall be neatly folded and securely fixed at the underside of the seat.
- The completed seat shall have a smooth, firm, and aesthetically pleasing finish.
- The chair shall be left clean and ready for use after completion of the work.

3. Quality Control

- Upholstery material, foam quality, colour, and workmanship shall be subject to approval by the Engineer-in-Charge.
- Any defective workmanship, loose fixing, damaged upholstery, or uneven cushioning shall be rectified or replaced at the contractor's cost.
- Finished seats shall be free from wrinkles, tears, exposed staples, or visible defects.

4. Mode of Measurement

- Measurement shall be made in Number (No.) of dining chair seats successfully repaired, reupholstered, and accepted.

Item No.20 Providing and fixing door stopper of approved make and quality made out of stainless steel / brass / rubber buffer type including necessary screws, fasteners and fixing in position complete as directed by Engineer-in-Charge.

1. Materials

Door Stopper

- Door stopper shall be of approved make and quality.
- It shall be manufactured from:
 - Stainless Steel (SS 304 grade or approved equivalent), or
 - Solid Brass, or
 - Aluminium with protective finish, or
 - Rubber buffer type with metallic base, as specified in the item description.
- The stopper shall be of suitable size and design to effectively prevent damage to doors, walls, furniture, or other adjoining surfaces.

- Exposed metallic surfaces shall have smooth polished, satin, brushed, chrome-plated, or powder-coated finish as approved.

Fasteners

- Stainless steel screws, anchor fasteners, rawl plugs, expansion bolts, or approved fixing accessories shall be used.
- Fasteners shall be corrosion-resistant and suitable for the type of floor, wall, or door surface.

2. Workmanship

- The location of the door stopper shall be approved by the Engineer-in-Charge before installation.
- The stopper shall be fixed firmly to the floor, wall, skirting, or door as specified.
- Necessary drilling, plugging, and fixing operations shall be carried out carefully without damaging adjoining finishes.
- The rubber buffer shall make proper contact with the door to absorb impact and prevent noise and damage.
- The installed stopper shall be aligned properly and securely fixed without looseness or movement.
- All exposed surfaces shall be cleaned after installation and left free from scratches, stains, or damage.

3. Quality Control

- Door stoppers shall be checked for proper functioning, alignment, finish, and secure fixing.
- Any defective, loose, damaged, or improperly fixed stopper shall be removed and replaced at the contractor's cost.
- The finish and workmanship shall conform to approved samples wherever required.

4. Mode of Measurement

- Measurement shall be made in Number (No.) of door stoppers provided and fixed in position and accepted by the Engineer-in-Charge.

Item No.21 Providing and supplying wooden file cupboard of approved size and design made out of teak wood / hardwood frame with plywood/block board shutters, internal shelves, necessary hinges, handles, locking arrangement and finished with polish/laminate of approved quality including all fittings complete as directed by Engineer-in-Charge.

1. Materials

Timber Frame

- The structural framework shall be made from well-seasoned teak wood or approved hardwood.
- Timber shall be free from cracks, knots, warping, insect attack, decay, and other defects.

- Moisture content of timber shall not exceed 12%.

Panels and Shutters

- Side panels, top, bottom, back panels, shelves, and shutters shall be made from:
 - Commercial plywood,
 - BWR/BWP plywood,
 - Block board,
 - Veneered board, as specified and approved.
- Thickness shall generally be:
 - 19 mm for shutters and shelves.
 - 6 mm to 12 mm for back panel.
 - Or as per approved design.

Shelves

- Internal shelves shall be fixed or adjustable type as shown in approved design.
- Shelves shall be capable of carrying office files and records without excessive deflection.

Hardware and Fittings

- Hinges shall be stainless steel, brass, or powder-coated steel of approved make.
- Handles shall be stainless steel, aluminium, brass, or approved equivalent.
- Locking arrangement shall consist of cupboard lock, cam lock, drawer lock, tower bolt, magnetic catch, or approved locking system.
- Necessary screws, brackets, shelf supports, fasteners, buffers, and accessories shall be provided.

Finish

- Exposed wooden surfaces shall be finished with approved:
 - Melamine polish,
 - PU polish,
 - French polish,
 - Decorative laminate,
 - Veneer finish,
 - Synthetic enamel paint, as specified.
- Laminate shall be of approved shade, texture, and thickness.
- All edges shall be properly edge-banded or lipped.

2. Workmanship

- The cupboard shall be fabricated strictly as per approved drawings, dimensions, and design.
- All members shall be accurately cut, assembled, and fixed to provide a rigid and durable structure.
- Joints shall be properly glued, screwed, dowelled, mortised, or otherwise secured.
- Shutters shall operate smoothly without binding or misalignment.
- Shelves shall be level, securely fixed, and properly aligned.
- Hardware fittings shall be firmly fixed and function smoothly.

- All surfaces shall be properly sanded and finished to provide a smooth appearance free from dents, scratches, or tool marks.
- The completed cupboard shall be stable, level, and free from defects affecting appearance or performance.

3. Quality Control

- Materials, workmanship, dimensions, finish, and fittings shall be subject to approval by the Engineer-in-Charge.
- Any defective materials, damaged surfaces, faulty fittings, or poor workmanship shall be replaced or rectified at the contractor's cost.
- Cupboards shall be checked for proper operation of shutters, locks, and shelves before acceptance.

4. Mode of Measurement

- Measurement shall be made in Number (No.) of completed wooden file cupboards supplied, delivered, and placed in position.

Item No.22 Medium back revolving & tilting chair(M39)

Providing and supplying Medium back chair with Metal frame work. Upholstered with changeable fabric upholstery covers (as per requirement) and molded PU foam, together with molded seat & back covers. The back foam should be designed with contoured lumber support for extra comfort. Caster of high durability & hydraulic. The chair should have cylinder with 5 years warranty. The size of chair 47.5cm x 58cm (Back side) and 49cm x 48cm (seat size). The PU foam should be molded with density = 45 ± 2 kg/m³. With One-piece armrests. The armrests are scratch and weather resistant. The permanent contact mechanism is designed with 360° revolving type, with pneumatic height adjustment & 17 ° maximum tilt only & tilt tension adjustment facility. As per Instruction of EIC & User Department

1. Materials

Chair Frame

- Chair shall be constructed with robust metal framework designed to withstand normal office usage.
- Metal components shall be rust-resistant and finished with powder coating, chrome plating, or approved protective finish.

Seat and Backrest

- Seat and backrest shall be ergonomically designed and provided with moulded polyurethane (PU) foam.
- PU foam density shall be 45 ± 2 kg/m³.
- Backrest foam shall incorporate contoured lumbar support to provide proper spinal support and enhanced seating comfort.
- Seat and back shall be provided with moulded protective covers of approved quality.

Upholstery

- Upholstery shall consist of removable/changeable fabric covers of approved colour, texture, and quality as selected by the User Department.

- Fabric shall be durable, breathable, stain-resistant, and suitable for office use.

Armrests

- Chair shall be provided with fixed one-piece armrests.
- Armrests shall be manufactured from high-quality polymer or equivalent material.
- Armrests shall be scratch-resistant, weather-resistant, and ergonomically designed.

Hydraulic System

- Chair shall be fitted with a pneumatic gas-lift cylinder for seat height adjustment.
- Hydraulic cylinder shall operate smoothly and efficiently.
- The cylinder shall carry a minimum 5-year manufacturer's warranty.

Revolving and Tilting Mechanism

- Permanent contact mechanism shall be provided.
- Chair shall have:
 - 360° revolving facility.
 - Pneumatic height adjustment.
 - Maximum tilt angle of 17°.
 - Tilt tension adjustment facility.
- All moving parts shall function smoothly without noise or jerks.

Base and Castors

- Chair shall be provided with a heavy-duty five-legged base.
- Castors shall be twin-wheel, high-durability type suitable for office flooring.
- Castors shall permit smooth movement and rotation without damaging floor surfaces.

2. Dimensions

The chair shall generally conform to the following dimensions:

Component	Size
Backrest Size	47.5 cm × 58 cm
Seat Size	49 cm × 48 cm

Minor variations as per manufacturer's standard design may be permitted subject to approval by the Engineer-in-Charge.

3. Workmanship

- The chair shall be factory manufactured and assembled using approved quality materials.
- All components shall be accurately fitted and securely assembled.
- Upholstery shall be neat, wrinkle-free, and properly stretched.
- All edges and corners shall be smooth and free from sharp projections.
- Moving mechanisms shall operate smoothly and safely.
- The chair shall be stable under normal operating conditions without wobbling or excessive movement.
- Any damaged, defective, or improperly functioning component shall be replaced before acceptance.

4. Testing and Quality Control

- Hydraulic mechanism, revolving system, tilt mechanism, armrests, castors, and structural stability shall be tested before acceptance.
- Manufacturer's warranty certificate for hydraulic cylinder shall be submitted.
- Materials and workmanship shall conform to approved samples and specifications.

5. Mode of Measurement

- Measurement shall be made in Number (No.) of complete Medium Back Revolving & Tilting Chairs supplied, delivered, assembled, and placed in position.

Item No.23 Providing and supplying moulded plastic chairs of approved quality, made of high-density polyethylene (HDPE) / polypropylene, of standard size, with ergonomic design, suitable for general seating use, including all lead, lift, transportation, loading, unloading and stacking, complete as directed by Engineer-in-Charge.

1. Materials

Plastic Material

- Chairs shall be manufactured from virgin High-Density Polyethylene (HDPE) or Polypropylene (PP) of approved quality.
- Material shall be UV-stabilized and weather-resistant where outdoor use is intended.
- Plastic shall be free from cracks, bubbles, sharp edges, warping, discoloration, and manufacturing defects.
- Recycled plastic shall not be used unless specifically approved by the Engineer-in-Charge.

Colour and Finish

- Chairs shall be of uniform colour and finish as approved by the Engineer-in-Charge.
- Surface shall be smooth, non-toxic, washable, and resistant to normal wear and tear.
- Colour shall remain stable without significant fading under normal conditions of use.

2. Dimensions and Design

- Chairs shall be of standard size suitable for adult seating.
- Design shall be ergonomically shaped to provide comfort and adequate support to the back and seating posture.
- Chair shall generally consist of:
 - Integral seat and backrest.
 - Armrest type or armless type as specified.
 - Stable four-leg construction or moulded equivalent design.
- Dimensions shall conform to manufacturer's standard specifications and approved sample.

3. Workmanship

- Chairs shall be manufactured using injection moulding or equivalent approved process.
- The finished product shall be strong, rigid, and capable of withstanding normal service loads.
- All surfaces shall be smooth and free from burrs, sharp projections, cracks, dents, or deformities.
- Chairs shall stand level on a flat surface without wobbling.
- Stacking type chairs shall be capable of being stacked safely without damage.
- The chairs shall be delivered in good condition and protected against damage during transportation and handling.

4. Quality Control

- Chairs shall conform to approved sample and manufacturer's specifications.
- Each chair shall be inspected for material quality, dimensions, stability, colour uniformity, and workmanship.
- Defective, damaged, warped, or cracked chairs shall be rejected and replaced at the contractor's cost.

- The Engineer-in-Charge may require submission of manufacturer's product literature or test certificates where necessary.

5. Mode of Measurement

- Measurement shall be made in Number (No.) of moulded plastic chairs supplied, delivered, unloaded, stacked/placed in position, and accepted by the Engineer-in-Charge.

Item No.24 Repairs to existing sofa set including replacement of damaged/sagged webbing, springs, cushions, plywood frame wherever required, re-stitching and refilling with suitable foam of approved density, providing new upholstery cloth/foam leather of approved shade and quality, stitching, fixing, polishing/finishing and all necessary carpentry work, including cost of materials, labour, tools & plants, transportation and all incidental charges, complete as directed by Engineer-in-Charge.

1. Materials

Timber and Plywood

- Replacement framework members shall be made from approved quality teak wood, hardwood, or equivalent timber.
- Plywood used for seat base, back support, or side panels shall be commercial grade or BWR grade plywood of approved thickness.
- Timber and plywood shall be free from defects, decay, insect attack, warping, or cracks.

Webbing and Springs

- New webbing shall be high-strength nylon, jute, polyester, or elastic furniture-grade webbing.
- Springs shall be high-quality tempered steel zig-zag, coil, or equivalent type matching the original construction.
- Webbing and springs shall be securely fixed to provide adequate support and comfort.

Foam and Cushioning

- Cushion filling shall consist of approved quality polyurethane (PU) foam.
- Foam density shall generally be not less than 32 kg/m³ for normal seating applications or as approved.
- Additional fibre, polyester wadding, rebonded foam, or cushioning material may be provided where required.

Upholstery Material

- Upholstery shall consist of approved quality fabric, foam leather, leatherette, rexine, synthetic leather, or equivalent material.
- Colour, texture, pattern, and shade shall be approved by the Engineer-in-Charge.
- Upholstery material shall be durable, tear-resistant, stain-resistant, and suitable for furniture applications.

Adhesives and Hardware

- Approved adhesives, staples, nails, screws, corner blocks, brackets, clips, and fastening accessories shall be used.
- All hardware shall be corrosion-resistant and suitable for furniture applications.

Finishing Materials

- Exposed wooden portions shall be finished with melamine polish, PU polish, French polish, synthetic enamel paint, or approved finish to match the existing furniture.

2. Workmanship

- Existing damaged upholstery, cushions, webbing, springs, and other defective components shall be carefully removed without causing unnecessary damage to reusable portions.
- Damaged plywood, wooden members, or frame components shall be repaired or replaced wherever required.
- New webbing and springs shall be fixed firmly and uniformly to provide proper support.
- Cushioning shall be refilled or replaced with approved density foam and shaped to restore the original profile and comfort.
- Upholstery shall be accurately cut, stitched, stretched, and fixed neatly without wrinkles, folds, or loose areas.
- Stitching shall be uniform, straight, and of professional quality.
- All exposed timber surfaces shall be properly sanded, polished, or painted as specified.
- The repaired sofa shall be structurally sound, stable, comfortable, and aesthetically acceptable.
- The completed work shall closely match the original design and appearance unless otherwise directed.

3. Quality Control

- All replacement materials shall be of approved quality and subject to inspection by the Engineer-in-Charge.
- Upholstery, cushioning, stitching, finishing, and carpentry repairs shall be checked for workmanship and durability.
- Any loose fittings, uneven cushions, defective stitching, poor finishing, or damaged materials shall be rectified or replaced at the contractor's cost.
- The repaired sofa shall be free from squeaking, instability, sagging, or visible defects.

4. Mode of Measurement

- Measurement shall be made in Number (No.) of complete sofa sets repaired and restored as specified and accepted by the Engineer-in-Charge.

Item No.25 Repairing of existing table including replacement of damaged plywood/board, laminate, drawer fittings, locks, handles, screws, nails and necessary carpentry work, polishing/painting wherever required, including cost of all materials, labour, tools & plants, transportation and all incidental charges complete as directed by Engineer-in-Charge.

1. Materials

Timber, Plywood and Boards

- Replacement members shall be made from approved quality teak wood, hardwood, commercial plywood, BWR plywood, block board, MDF, particle board, or equivalent material matching the existing construction.
- Materials shall be free from warping, cracks, decay, insect attack, delamination, and other defects.

Laminates and Surface Finishes

- Decorative laminate shall be of approved shade, texture, and thickness matching the existing finish.
- Edge beading, lipping, PVC edge bands, or wooden mouldings shall be provided wherever required.

Hardware and Fittings

- Drawer slides/channels, hinges, locks, handles, knobs, tower bolts, magnetic catches, brackets, screws, nails, and other fittings shall be of approved make and quality.
- Locks shall be supplied complete with keys.
- All hardware shall be corrosion-resistant and suitable for furniture use.

Adhesives and Fasteners

- Approved synthetic resin adhesive, wood glue, screws, nails, brackets, corner blocks, and fastening accessories shall be used as required.

Finishing Materials

- Exposed wooden surfaces shall be finished with approved melamine polish, PU polish, French polish, synthetic enamel paint, duco paint, or equivalent finish matching the existing table.
- Paints and polishes shall be of approved make and quality.

2. Workmanship

- Damaged or defective portions of the table shall be carefully dismantled and removed without causing damage to reusable components.
- Broken, cracked, swollen, or deteriorated plywood, boards, laminates, drawer parts, and frame members shall be replaced with new approved materials.
- Drawer channels, locks, handles, hinges, and fittings shall be repaired or replaced to ensure smooth operation.
- Laminates shall be neatly fixed using approved adhesive without bubbles, wrinkles, or loose edges.
- All joints shall be properly aligned, glued, screwed, and secured to restore structural stability.
- Surface preparation, sanding, polishing, or painting shall be carried out to obtain a smooth and uniform finish.
- The repaired table shall be level, rigid, free from wobbling, and fit for intended use.
- All exposed surfaces shall be cleaned and left in a neat condition upon completion.

3. Quality Control

- Replacement materials shall match the existing table as closely as possible in quality, thickness, finish, and appearance.
- All repairs shall be inspected for proper workmanship, stability, alignment, and functioning of drawers and fittings.
- Defective workmanship, poor finish, loose fittings, or damaged materials shall be rectified or replaced at the contractor's cost.
- The completed table shall be free from visible defects, rough surfaces, and operational issues.

4. Mode of Measurement

- Measurement shall be made in Number (No.) of tables repaired, restored, and accepted by the Engineer-in-Charge.

Item No.26 Repairing of existing main door including removal of damaged/broken glass panes and providing & fixing new glass of approved quality and thickness in wooden/aluminium/steel frame, including necessary beading, rubber gasket, putty, screws, sealant, cutting, fitting, labour charges, scaffolding, transportation and all incidental charges complete as directed by Engineer-in-Charge.

1. Materials

Glass

- Glass shall be clear float glass, sheet glass, toughened glass, frosted glass, tinted glass, or other approved type as specified.
- Thickness shall be as specified in the schedule of quantities or as directed by the Engineer-in-Charge.
- Glass shall conform to relevant Indian Standards and shall be free from scratches, bubbles, waves, cracks, edge defects, and other imperfections.

Beading

- Beading shall be of matching material suitable for the existing frame, such as:
 - Wooden beading for wooden doors.
 - Aluminium beading for aluminium doors.
 - Metal glazing strips for steel doors.
- Beading shall be properly seasoned, straight, and free from defects.

Gaskets and Sealants

- EPDM, neoprene, PVC, or approved rubber gaskets shall be used wherever required.
- Silicone sealant or approved glazing compound shall be used for weatherproof and airtight fixing.
- Putty shall be of approved quality where applicable.

Fasteners

- Screws, clips, glazing pins, fixing accessories, and other hardware shall be of approved quality and corrosion-resistant.

2. Workmanship

- Existing broken or damaged glass shall be carefully removed without damaging the door frame, shutter, beading, or surrounding finishes.
- Broken glass fragments and debris shall be safely collected and disposed of in accordance with safety requirements.
- The glazing rebate shall be thoroughly cleaned and prepared before fixing new glass.
- New glass shall be accurately cut to the required size, allowing proper clearance for expansion and fitting.
- Glass shall be fixed securely using approved beading, gaskets, putty, sealants, or glazing accessories as applicable.
- Beading shall be neatly fixed and aligned to provide a firm and uniform hold.
- Sealant joints shall be smooth, continuous, and watertight.
- Care shall be taken to prevent damage to existing doors, frames, walls, flooring, and adjoining finishes.
- Upon completion, all glass surfaces shall be cleaned and left free from stains, marks, adhesive residues, and defects.

3. Safety Requirements

- Necessary safety precautions shall be observed during removal and installation of glass.
- Suitable ladders, scaffolding, platforms, and protective equipment shall be used wherever required.
- Broken glass shall be handled and disposed of safely to prevent injury.

4. Quality Control

- Glass quality, thickness, transparency, finish, and workmanship shall be subject to approval by the Engineer-in-Charge.

- Installed glass shall be free from cracks, chips, distortions, looseness, rattling, or visible defects.
- Improperly fixed or damaged glass shall be replaced at the contractor's cost.

5. Mode of Measurement

- Measurement shall be made in Numbers (no.) of glass actually replaced and fixed in position.

Item No.27 Repairing of existing cupboard including replacement of damaged plywood/boards, shutters, hinges, handles, locks, tower bolts, channels and other fittings, necessary carpentry work, alignment of shutters, polishing/painting wherever required, including cost of materials, labour, tools & plants, transportation and all incidental charges complete as directed by Engineer-in-Charge.

1. Materials

Timber, Plywood and Boards

- Replacement components shall be made from approved quality teak wood, hardwood, commercial plywood, BWR plywood, block board, MDF, particle board, or equivalent material matching the existing cupboard construction.
- Materials shall be free from cracks, warping, delamination, insect attack, decay, and other defects.

Shutters and Shelves

- Damaged shutters and shelves shall be replaced with materials of equivalent thickness, strength, and finish as the existing cupboard.
- Edge lipping, beading, and finishing strips shall be provided wherever required.

Hardware and Fittings

- Hinges shall be stainless steel, brass, or approved quality metal hinges.
- Handles, knobs, locks, tower bolts, magnetic catches, channels, shelf supports, brackets, and other fittings shall be of approved make and quality.
- Locks shall be supplied complete with keys.
- Drawer channels shall be smooth-operating telescopic or approved standard type.

Fasteners and Adhesives

- Screws, nails, bolts, brackets, corner cleats, wood glue, synthetic resin adhesive, and fixing accessories shall be of approved quality.

Finishing Materials

- Exposed wooden surfaces shall be finished with approved melamine polish, PU polish, French polish, synthetic enamel paint, laminate, veneer finish, or equivalent treatment to match the existing cupboard.
- Paints, polishes, and laminates shall be of approved make and quality.

2. Workmanship

- Damaged and unserviceable components shall be carefully removed without causing damage to the reusable portions of the cupboard.
- Broken or deteriorated plywood, boards, shutters, shelves, and framework members shall be replaced as required.
- Hinges, handles, locks, tower bolts, channels, and fittings shall be repaired or replaced to ensure smooth and efficient operation.
- Cupboard shutters shall be properly aligned and adjusted to ensure correct opening, closing, and locking.

- All carpentry work shall be carried out neatly with proper jointing, fixing, and finishing.
- Laminates, veneers, or finishing materials shall be fixed uniformly without bubbles, gaps, or defects.
- Polishing or painting shall be carried out after proper surface preparation, sanding, and cleaning.
- The repaired cupboard shall be structurally sound, stable, and fully functional.
- All exposed surfaces shall be cleaned upon completion of the work.

3. Quality Control

- All replacement materials and fittings shall be subject to approval by the Engineer-in-Charge.
- The repaired cupboard shall be checked for stability, alignment, smooth operation of shutters and drawers, locking arrangements, and quality of finish.
- Any defective workmanship, loose fittings, misaligned shutters, damaged surfaces, or poor finishing shall be rectified at the contractor's cost.
- The completed cupboard shall be free from visible defects and shall operate satisfactorily.

4. Mode of Measurement

- Measurement shall be made in Number (No.) of complete cupboards repaired, restored, and accepted by the Engineer-in-Charge.

Item No.28 Repairs to existing porch including dismantling damaged plaster/concrete, removing loose/unsound material, cleaning surface, re-plastering with cement mortar of required proportion, repairing cracks with polymer modified mortar/epoxy grout where necessary, providing and fixing reinforcement if required, finishing smooth with cement plaster, curing, and making good all edges, joints, and surfaces, replacing of damaged glass, repairing of wooden frame etc. complete as directed by Engineer-in-Charge.

1. Materials

Cement

- Cement shall conform to the latest relevant IS specifications for Ordinary Portland Cement (OPC) or Portland Pozzolana Cement (PPC) as approved.

Fine Aggregate

- Sand shall be clean, well-graded, and free from silt, clay, organic matter, and other deleterious substances.

Coarse Aggregate

- Coarse aggregate, where required for concrete repairs, shall be hard, durable, and conform to relevant IS specifications.

Repair Mortar

- Cement mortar shall be of specified proportion (generally 1:3, 1:4, or as directed by the Engineer-in-Charge).
- Polymer-modified mortar shall be used for crack repairs and patch repairs where specified.
- Epoxy grout or epoxy mortar shall be used for structural crack repairs wherever directed.

Reinforcement

- Reinforcement steel, if required, shall conform to relevant IS specifications and shall be free from rust, oil, scale, and other contaminants.

- Corrosion protection coating shall be applied where necessary.

Glass

- Replacement glass shall be of approved type, quality, and thickness matching the existing installation.
- Glass shall be free from scratches, cracks, bubbles, and other defects.

Wooden Members

- Replacement wooden frame members shall be of approved teak wood, hardwood, or equivalent material.
- Timber shall be seasoned and free from defects, warping, insect attack, and decay.

Finishing Materials

- Cement plaster, putty, primer, paint, polish, sealants, and finishing materials shall be of approved make and quality.

2. Workmanship

Dismantling and Surface Preparation

- Damaged plaster, loose concrete, unsound material, deteriorated mortar, and defective portions shall be carefully dismantled and removed.
- Surfaces shall be thoroughly cleaned of dust, laitance, loose particles, grease, paint, and other foreign matter.
- Exposed reinforcement, if any, shall be cleaned and treated with approved anti-corrosive coating.

Crack Repair

- Cracks shall be cleaned and opened where necessary.
- Minor cracks shall be filled with polymer-modified mortar.
- Structural cracks shall be repaired using approved epoxy grout or epoxy injection methods as directed by the Engineer-in-Charge.

Concrete and Plaster Repair

- Damaged concrete portions shall be repaired using approved repair mortar or micro-concrete.
- Re-plastering shall be carried out using specified cement mortar to match the existing profile and finish.
- Finished surfaces shall be true, even, and free from undulations.

Reinforcement Repairs

- Additional reinforcement shall be provided where directed by the Engineer-in-Charge.
- Reinforcement shall be properly anchored and embedded in repair works.

Glass Replacement

- Damaged or broken glass shall be removed carefully.
- New glass shall be cut to size and fixed with suitable beading, gaskets, putty, sealant, screws, and accessories.
- Glass installation shall be secure, watertight, and free from rattling.

Wooden Frame Repairs

- Damaged wooden frame members shall be repaired or replaced as necessary.
- New members shall match existing dimensions and appearance.
- Joints shall be properly secured and finished.
- Exposed timber surfaces shall be polished or painted to match the existing finish.

Finishing and Curing

- Repaired surfaces shall be finished smoothly to match adjoining work.
- Cement-based repairs shall be cured adequately for a minimum period as specified.
- All edges, corners, joints, and interfaces shall be neatly finished and made good.
- Debris and surplus materials shall be removed from the site after completion.

3. Quality Control

- Materials used for repairs shall be subject to approval by the Engineer-in-Charge.
- Repaired portions shall be checked for soundness, bonding, alignment, finish, and durability.
- Cracks, hollowness, loose plaster, defective glass installation, poor carpentry work, or unsatisfactory finishes shall be rectified at the contractor's cost.
- Finished work shall match the existing structure in appearance and quality as closely as possible.

4. Mode of Measurement

For General Porch Repair Works

- Measurement shall be made in numbers (Nos.) of repaired porch surface area actually treated and accepted.

Item No.29 Providing and fixing PVC printed false ceiling with flush type with alluminium frame, frame work is done with three different sections of G.I. sheet of 24 gauge thickness named as C, U and L. The C section is fixed with hangers at an equal distance of 36" each and then U section is fixed perpendicular on C section with steel screws at and equal distance of 16" each. The complete frame work is supported by G.I. L angle/6 mm rod hangers from the roof and L sections is fixed all around the wall as shown in the diagram. 5mm PVC sheet strips of size 2 wide are fixd with counter sunk steel screws on the U section. Further 3mm PVC sheet is stuck to these PVC strips with solvent cement such that joining lines are perfectly matched. P.U. putty is filled, dried and leveled and requisite coats of primer and paint is done on the ceiling for getting fine surface finish etc. complete as per direction of Engineering and charge manufacturer's specification and drawing

1. Materials

PVC Sheets

Base PVC Strips

- PVC sheet strips shall be of approved quality and make.
- Thickness: 5 mm.
- Width: 50 mm (2").
- Strips shall be free from cracks, warping, discoloration, and manufacturing defects.

PVC Printed Sheets

- PVC printed sheets shall be of approved make, colour, texture, pattern, and finish.
- Thickness: 3 mm.
- Sheets shall be moisture-resistant, termite-proof, corrosion-resistant, and suitable for false ceiling applications.
- Surface finish shall be smooth, uniform, and free from visible defects.

Framework

G.I. C Section

- Fabricated from galvanized iron sheet of 24 gauge thickness.
- Shall form the primary supporting framework.

G.I. U Section

- Fabricated from galvanized iron sheet of 24 gauge thickness.
- Shall form the secondary supporting framework.

G.I. L Section

- Fabricated from galvanized iron sheet of 24 gauge thickness.

- Fixed along wall perimeters for edge support.

Hangers and Supports

- Framework shall be suspended using:
 - G.I. L-angle supports, or
 - 6 mm diameter G.I. rod hangers, as approved.
- Hangers shall be adequately anchored to the roof slab or structural members.

Fasteners

- Counter-sunk steel screws.
- Self-drilling/self-tapping screws.
- Anchor fasteners, nuts, bolts, washers, and approved fixing accessories.

Adhesive

- Approved PVC solvent cement for bonding PVC sheets and strips.

Putty and Finishing Materials

- Polyurethane (P.U.) putty for joint filling and surface levelling.
- Approved primer compatible with PVC surfaces.
- Approved acrylic emulsion paint or specified paint finish.

2. Framework Installation

Primary Framework

- G.I. C sections shall be suspended from the roof using approved hangers.
- Spacing of C sections shall not exceed 900 mm (36 inches) centre-to-centre.

Secondary Framework

- G.I. U sections shall be fixed perpendicular to the C sections.
- U sections shall be fixed using steel screws.
- Spacing of U sections shall not exceed 400 mm (16 inches) centre-to-centre.

Perimeter Framework

- G.I. L sections shall be fixed continuously along walls and other vertical surfaces forming the perimeter support.
- Fixing shall be carried out using approved fasteners at suitable intervals.

Alignment

- Framework shall be true to line, level, plumb, and free from distortion.
- Adequate bracing and supports shall be provided to prevent sagging and vibration.

3. Fixing of PVC Sheets

- 5 mm thick PVC strips shall be fixed over U sections using counter-sunk steel screws.
- PVC strips shall be fixed straight and aligned to receive PVC ceiling sheets.
- 3 mm thick PVC printed sheets shall be bonded to the PVC strips using approved solvent cement.
- Joints shall be accurately matched so that printed patterns and joining lines remain uniform and inconspicuous.
- PVC sheets shall be fixed without waviness, bulging, gaps, or visible distortions.

4. Joint Treatment and Finishing

- All joints, screw heads, and minor surface irregularities shall be filled with approved P.U. putty.
- Filled areas shall be properly dried and sanded smooth.
- Primer coat shall be applied over the entire ceiling surface.
- Necessary coats of approved paint shall be applied to achieve a smooth, uniform, and aesthetically pleasing finish.

- Finished ceiling shall be free from cracks, unevenness, stains, visible joints, and surface defects.

5. Workmanship

- All materials shall be new and of approved quality.
- Installation shall be carried out by skilled personnel experienced in false ceiling works.
- The ceiling shall be rigid, level, and securely fixed.
- Openings for light fixtures, fans, air-conditioning grills, detectors, speakers, or other services shall be neatly cut and finished.
- Any damaged sheets or defective work shall be replaced at the contractor's cost.
- The completed ceiling shall conform to approved drawings and manufacturer's recommendations.

6. Mode of Measurement

- Measurement shall be made in Square Metres (Sq.m.) of completed false ceiling measured on the finished surface area.

Item No.30 Providing and fixing wall panelling with approved quality MDF/plywood board of required thickness over aluminium/wooden framework at required spacing, finished with approved shade and make laminate/veneer including adhesive, screws, nails, edge lipping, necessary fittings & fixtures, cutting, wastage, scaffolding and finishing complete as per approved drawing and direction of Engineer-in-Charge.

1. Materials

MDF Board / Plywood

- MDF board shall be moisture-resistant interior/exterior grade as specified.
- Plywood shall be commercial grade, BWR grade, or BWP grade plywood of approved make.
- Thickness shall be as specified in the drawings or Schedule of Quantities (generally 6 mm, 9 mm, 12 mm, 18 mm, or as approved).
- Boards shall be free from warping, delamination, cracks, swelling, and manufacturing defects.

Framework

Aluminium Framework

- Aluminium sections shall be of approved size, gauge, and alloy suitable for supporting the wall panelling.
- Sections shall be straight, true, and free from bends or distortions.

Wooden Framework

- Framework shall be made from well-seasoned teak wood, hardwood, or approved treated timber.
- Timber shall be free from knots, cracks, decay, warping, and insect attack.
- Moisture content shall not exceed permissible limits.

Decorative Finish

Laminate

- Decorative laminate shall be of approved make, shade, texture, and thickness.
- Laminate shall be scratch-resistant, stain-resistant, and moisture-resistant.

Veneer

- Veneer shall be natural or engineered veneer of approved species, pattern, and finish.
- Veneer shall be properly seasoned and free from defects.

Adhesives

- Adhesive shall be synthetic resin adhesive, contact adhesive, or approved equivalent suitable for fixing laminates, veneers, and boards.

Edge Lipping

- Exposed edges shall be finished with teak wood lipping, PVC edge banding, veneer lipping, or approved equivalent.
- Edge finishing shall match the approved design and finish.

Fasteners

- Screws, nails, anchor fasteners, brackets, clips, and fixing accessories shall be of approved quality and corrosion-resistant.

2. Framework Installation

- The framework shall be securely fixed to the wall surface using approved fasteners and anchor systems.
- Framework members shall be installed at regular spacing as shown in the approved drawings.
- Additional supports shall be provided at corners, joints, openings, and other locations where necessary.
- The framework shall be properly aligned, level, plumb, and rigid.

3. Fixing of Boards

- MDF boards or plywood panels shall be accurately cut to the required size and shape.
- Panels shall be fixed firmly over the framework using approved screws, nails, adhesives, or a combination thereof.
- Joints shall be neat, uniform, and aligned as per approved design.
- Necessary openings for electrical fixtures, switches, sockets, ducts, or other services shall be neatly cut and finished.
- Care shall be taken to avoid damage to adjoining finishes.

4. Laminate/Veneer Finishing

Laminate Finish

- Laminate sheets shall be bonded to the board surface using approved adhesive.
- Surfaces shall be smooth, wrinkle-free, and free from bubbles or delamination.
- Joints shall be aligned and finished neatly.

Veneer Finish

- Veneer shall be fixed using approved adhesive and pressed properly.
- Veneered surfaces shall be sanded smooth and finished with approved melamine polish, PU polish, or clear protective coating.

Edge Treatment

- Exposed edges shall be provided with approved lipping or edge banding.
- Edge finishing shall be smooth, uniform, and free from visible gaps.

5. Workmanship

- All work shall be carried out by skilled craftsmen experienced in interior finishing works.
- Finished surfaces shall be true, level, and free from waves, bulges, dents, scratches, stains, or visible defects.
- Pattern matching of laminate or veneer shall be maintained wherever applicable.
- The completed panelling shall be rigid, secure, and aesthetically finished.
- Any damaged materials or defective workmanship shall be replaced at the contractor's cost.

6. Quality Control

- All materials shall be approved by the Engineer-in-Charge before installation.
- Samples of laminate, veneer, edge lipping, and framework shall be submitted for approval when required.
- The completed work shall be inspected for alignment, finish, joint treatment, and overall appearance.
- Defective portions shall be rectified or replaced as directed.

7. Mode of Measurement

- Measurement shall be made in Square Metres (Sq.m.) of finished wall panelling surface actually fixed and accepted.