

22  
**MASON (Building Constructor)**

SYLLABUS FOR  
UNDER  
CRAFTSMEN TRAINING SCHEME  
&  
APPRENTICESHIP TRAINING SCHEME

As approved by  
GOVERNMENT OF INDIA

In consultation with  
THE NATIONAL COUNCIL FOR  
VOCATIONAL TRAINING  
&  
CENTRAL APPRENTICESHIP COUNCIL

Issued by  
GOVERNMENT OF INDIA  
MINISTRY OF LABOUR  
DIRECTORATE GENERAL OF  
EMPLOYMENT & TRAINING  
NEW DELHI

2004 (Revised)

**LIST OF THE MEMBERS APPROVED THE SYLLABUS FOR THE  
TRADE OF "MASON (BUILDING CONSTRUCTOR)"  
UNDER CTS & ATS**

**CHAIRMAN**

Shri M.S. Lingaiah

: Director  
CSTARI, Salt Lake, Kolkata-91

**Members**

(S/Shri)

1. S.K. Sengupta  
Executive Engineer (Civil)  
: Bidhannagar Municipality,  
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2. Sanat Kumar Saha,  
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: Architect's Forum  
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: George Telegraph Trg. Instt.  
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4. T. Mukhopadhyay  
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6. M.S. Ekambaram  
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: CSTARI, Kolkata

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## SYLLABUS FOR THE TRADE OF MASON (Building Constructor) UNDER CRAFTSMEN TRAINING SCHEME

### General Information

1. Name of the Trade : MASON (Building Constructor)
2. N.C.O. Code No. : 951.20
3. Entry Qualification : Passed 8th class Examination under 10+2 system of education or its equivalent
4. Duration of Craftsmen Training : One Year
5. Duration of Apprenticeship Training : One Year
6. Unit Size : 16 Trainees
7. Ratio of Apprentices to Workers : 1 : 4
8. Space Requirement : 100 sq. meter (50 sq. meter open space & 50 sq. meter covered with roof)

### Note :

1. The Practical Training Programmes of Apprentices under ATS (Apprentices Training Scheme) should be as per the facilities available in the establishment.
2. Building Construction/Civil Construction Industry should engage apprentices as per Apprenticeship Act.
3. Question papers are not set on All India basis for final examination at the end of Shop Floor Training and the examination is conducted at establishment level, based on actual on the job training.

### Period of Training : 52 Weeks (12 Months)

1. Allied training in Carpentry	1 Month
2. Pointing, Plastering, Flooring & Paving	1 Month
3. Elementary Drainage Work	1 Month
4. Elementary Bricks Masonry	3 Month
5. Elementary Concreting	1 Month
6. Setting out excavation, timbering for trenches and erection of scaffolding	2 Months
7. Advanced brick work plastering & tiling	3 Months
<b>Total</b>	<b>12 Months</b>

After completing first year training in the ITI according to this syllabus, the passed out trainees may join the building industry as skilled workers/ or may join as apprentices for Apprenticeship Training for a further period of one year.

(4)

Practical	Trade Theory	Engineering Drawing	Workshop Calculation & Science
2	3	4	5

**Introduction to Training**

Make the trainees familiar with shop discipline, layout of the tools and equipment—safety

utions.

ing out for carpentry work. Use carpenters' basic hand tools for operations, viz., sawing, planing, chiselling, drilling etc. Grind-

f tools.

ing simple carpentry joints used in doors, roof trusses, timber floors, joists, centering work.

Use of joining devices nails, screws & bolts.

ing centering for arches, door frames, form work for pre-cast concrete members. Jelly work etc.

Introduction of trades, scope for training in the trade Safety precautions.

Carpenter's hand tools, their names, materials from which made and uses. Grinding of tools and precautions to be taken.

Common joints, their description and use.

Use of nails screws hinges, dowels etc., joining compounds.

Purpose of arch centering door frames etc., and points to be attended to while making them.

Sketching of tools.

Sketching of various carpentry joints.

Sketching of jointing devices and the joints made with them.

Sketching of arch centering Door frames with joints etc.

(5)

2	3	4	5
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g a brick for stretcher and faces gripping travel. Shap-  
ortar and lifting the same to  
on the bed-jointing bricks for  
er and header courses.

g a 4½" straight wall of about  
cher bricks length and about  
es high with one end stepped  
er racked back. Preparation  
ous types of mortars.

ig a 4½" quoin wall with one  
ked back and the other end  
l—use of plumb rule—set-  
t a quoin straightening the  
use of line pins and line.

Description—specification and general care & maintenance of common tools used by a brick mason. Evolution of brick size and shape of bricks-constituents of brick earth-steps in manufacturing of bricks : details regarding preparation of earth moulding drying & burning types of kilns used for burning.

Fundamental technical terms used in brick masonry and their description sizes of common bricks and joints. Necessity of bending bricks. Material used for bonding bricks, mortars, types of mortars including mud, mortar. Ratio of mix, method of mixing mortar for masonry and plaster.

Description: specification and general care of alignment tools used by brick mason gauge rod. Kinds of bricks and their uses. Characteristics of good bricks, transportation and handling of the bricks tiles roofing & flooring-brief description about their manufacture and

Properties of lines, angles, triangles and circles (drawing as a language of communication) kinds of drawings including pictorial projections.

Properties of lines, angles, triangles and circles (drawing as a language of communication) kinds of drawings including pictorial projections.

Free hand sketching of simple solids, such as cubes, rectangular blocks, cylinders and the views of these objects when viewed perpendicular to their surfaces or axes.

Site problems involving multiplication division common fraction addition, subtraction multiplication and division. Application of fractions to site problems.

Site problems involving multiplication division common fraction addition subtraction, multiplication and division. Application of fractions in site problems.

Site problems involving multiplication, division, common fraction, addition, subtraction, multiplication and division. Application of fractions to site problems.

2	3	4	5
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use. Necessity of wetting bricks & tiles before use.

ing 9" and 13½" wall in English bond with quoin one end stopped her end stopped and other end l back. Plumbing the first three tting quoin bricks—use of corner-ocks and line laying bricks to racking out the joints and finishing flush.

ing a 9" and 13½" wall in Flemish bond with quoin—stopped end othing method of setting out a jointing the joints in weather, id raised types.

uction of 9" long English & sh garden wall bond forming pping with brick on edge.

Brick work—racking back and toothing details of bonding 9" and 13½" English and Flemish bond special precautions at quoins - characteristics of each, description, specifications of mortar tools.

Cross wall and methods of construction-grouting of mortar jointing and finishing of brick work. Different types of pointing tools used for same details of bonding cross wall. English & Flemish bond-special precautions at junctions. Lime types-technical terms, method of manufacturing lime kilns, and methods of slacking comparison of hydraulic lime & cement.

Method of construction of English and Flemish garden wall bonds its advantages & disadvantages over English and Flemish bonds PWD specification on brick work.

Free hand sketching of simple solids such as cubes, rectangular blocks, cylinders and views of these objects when viewed perpendicular to their surfaces or axes.

Free hand sketching of bricks, queen closer bats, half bats half queen closers king closer.

Free hand sketching of bricks-queen closer bats, half bats, half queen closers king closer.

Square root finding square root of perfect square-whole numbers, decimals.

2	3	4	5
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struction of 8" main wall and 9" s walls in English Bond typing tions of walls Block-Bending.

ining a door opening in a wall of lish Bond Bonding of jambs & als.

ining a window opening in a wall igh bond constructing sill with ricks with a even sailing course of gauge rod, method of fixing and window frames.

ining of opening with a semi lar Arch, setting out a semi circular arch and making of centering ng of templates for voussoirs & aring voussoirs setting uprights

Block bonding of cross walls. Construction of coping-different shapes of Copings materials, used weathering & providing drip cement types brief description of method of manufacturing ordinary field test-methods of precautions-PWD instructions on the above. Foundations definition purpose types and importance technical terms causes of failure.

Construction of sill with over sailing courses-gauge rod. Its purpose construction and use door and window frames. Hold fats and do dowels purpose & method of fixing PWD specification on the above. Sand types building.

Arch purpose and types technical terms used in connection with arches setting out use of trammel and template for preparing voussoirs and key bricks dead man (Bunjji) construction of

Free hand sketching of bricks queen closer bats, half bats, half queen closers king closer.

Preparation of free hand sketches in plan and elevation 4½ wall straight and junction.

Preparation of free hand sketches of rattrap, bond and other ornamental panels.

Square root finding square root of perfect square whole numbers, decimals.

Metric System, Metric Measurement & Metric Units.

Metric system metric weights and measurements units conversion factors problem.

Metric system metric weights and measurements units conversion factors problem.

Ratio and proportion problems on the above such as finding out quantities of material. For various mixes of mortar concrete.

(8)

2	3	4	5
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centering placing wedges. centering for arch.

and fixing of centering—construction of arch—fixing of key reinforcement of centering.

ing of openings pre-casting a curing & setting the same in on—checking for equal bearing plumb and solid bed.

Reinforced concrete lintel materials required method of construction handling and lifting precautions necessary setting lintels in position methods of construction of form works for casting the lintel method of fixing uprights folding wedges for stripping cutting, bending binding and placing of reinforcement including canopy and porch.

ing of opening by casting a in site construction of shuttering supports with uprights and es placing reinforcements - affixing of bars-mixing of concrete.

Hollow bricks-glazed sand lime bricks method of manufacture land uses advantages and disadvantages.

(9)

2	3	4	5
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#### MENTS :

ould be able to :

arpenters's basic tools.

simple Carpentry joints.

ricks to line and plumb and plumb and joint them.

asic brick mason tools.

rect a wall with racking back, toothing and block bonding.

rect straight walls with quoins 9" and 13½" thick in English & Flemish bond.

i the brick joints in weather key and raised pointing.

rect 9" and 13½" thick wall in English and Flemish garden wall bond.

48" 9" junction wall with a 9" or 13½" thick wall at right angle.

rect and use a gauge rod.

a door or window opening in 4½", 9" or 13½" wall in English bond.

rect a semi-circular brick arch over a door or window opening.

re a pre cast or cast in situ R.C.C. lintel and fix it over a door or window opening.

ruction of detached pillars. e and rectangular footings to

Necessity to pillars types relations between cross section and height. Details of bending for square and rectangular pillars. Precautions by construction.

Use of Drawing instrument Tee square and drawing boards printing of letters and numbers. Mensuration areas and perimeters of rectangles, square and triangles.

ruction of cavity walls setting th leaves provision of wall ties cavity road.

Technical terms advantages and constructional details regarding cavity wall precautions to be taken at the bottom of cavity provision of weep holes and metal ties with their proper distribution

Drawing of simple geometrical problems involving lines, squares and polygons. Mensuration areas and perimeters of rectangles, square and triangles.

2	3	4	5
special care at the junctions of doors or window openings. Definition of scafolding types and parts precautions to be observed. Local PWD specifications (Surki-Puzzolina).			
ing out a building obtaining first, d, third and fourth lines, marking diagonals, setting out of cross and offsets marking the lines and cavation fixing of plinth and level pegs or burji dead man aring down from the plinth level laying pegs for concrete foundation laying of concrete foundation g the windows and ventilators. ering of walls setting of spots ing of mortar use of screeds loats.	Site clearance profile and builders squares steps in setting out marking of center line, excavation and other lines use of dead man and checking accuracy precautions. Windows & ventilators: including steel windows and ventilators fixtures and fastening used in doors, windows and ventilators.	Construction and reading of plain scales reading of tapes and foots rules.	Mensuration of areas and perimeters and circles, sectors, segments, problems of perimeters and areas of quadrilaterals, trapezium, parallelogram and rhombus.

Plastering tools use description necessity for screeds and their fixing steps in plastering door and window openings. Concrete ingredients selection of materials various ratios of mix and where they are used measuring of materials for mixing.

Drawing architectural mouldings such as ovalo Cavetto, forus, scotia cyma recta, cyma reversa.

ing of screeds to so fits of door window openings reversing the d and squaring.

Construction of ellipse by different methods.

Volume and surface areas of simple geometrical solids as cubes, prisms.

2	3	4	5
ering of ceiling application of ar strengthening and finishing rovide a roof with stone slab or rete slab for the purpose of demation).	Architectural terms concerned with classic mouldings such as architrave, apex, baluster bose column pedestals tympanum hand and machine mixing of concrete laying concrete. Method of curing local PWD specification water cement ratio.	Different types of lines and symbols used in building drawings.	Volume and surface areas of simple geometrical solids as cubes and prisms.
ing formation of pane by fixing ds for flooring laying of base e concrete 1:2:4 1½" thick, for-on of slope application of slurry nishing, setting out of skirting ater level method of formation ois for skirting use of screeds quired thickness formation of e at thy junction of skirting and ing.	Types of floor and construction details such as consolidation of beds and filling concrete base & finishing. Types of floors such as mud or mureom, bricks, stone, cement, concrete, terrazzo, mosaic, asphalt. Familiarisation with the local municipal bye laws Granolithic flooring.	Simple isometric scaled drawings, isometric views of simple objects such as cubes, squares and rectangular prisms, Pyramids.	Mensuration applied to area of brick works requirement to volume and its application to simple excavation area of damp proof course.
age setting out a drainage line ding position of manhole and trap-practice in getting up and ng of dumpy level.	Purpose of drainage different systems their advantages & disadvantages method of collection, carriage and final disposal of wastage various types of constructions necessary. Classification of roofs-types parts, trusses roof covering materials for flat roof.	Simple isometric scaled drawings isometric views of simple solid objects such as cubes, square prisms rectangular prisms.	

2	3	4	5
to required gradients with the dumpy level and or boning of excavation. Laying out a surface drain with brick.	House drainage system normal layout of drainage to dwelling traps. (Gulley, nahani etc.) their description purpose and method of fixing sanitary fitting such as W.C. urinal, wash basin kitchen suit, construction of surface drains & paying its surface with bricks.	Projection of straight lines in various positions inclined to one plane and parallel to others projection of squares, rectangular.	Simple cost comparison between facing bricks and common bricks cost comparison between was built in English Flemish garde wall and cavity walls.
of concrete foundation for pipe laying of pipes and use of hamp rope and slurry of alignment cutting the pipe required length covering of pipe with concrete as per local pecification.	Drainage pipes types, materials and size gradient for different diameters methods of jointing and laying importance of water tightness concrete base and covering timber structure of tree, classification, felling seasoning defects in timber types of local wood available their characteristics and use ply wood laminated boards brief description and use.	Projection relating to circles and polygons projections of solids & hollow objects such as cones, prisms, pyramids, etc.	
out of foundation manhole of foundation concrete construction of manhole method of projection of manhole of drain and foot rest forming of drain and ing.	Manhole standard sizes, necessity details of construction & benching provisions of foot rests and drops top cover of manhole.	Code of practice for general engineering drawing as published by ISI.	Problems on areas allowance for simple rectangular window & other openings weight of walling supported by lintels and arches. Simple problems.
ing the manhole walls casting manhole cover fixing of cast anhole frame construction of	Different methods of testing drainage system local PWD specification or the above subject.	Preparation of following (To scale):	-do-

(13)

2	3	4	5
s methods of connecting drain-line with existing manhole or r testing of drain for water tight-		(i) 4½" wall stopped, and (ii) 4" wall racking back (iii) 9" wall English & Flemish in stopped end racking back & toothing.	
g of brackets for wash basin & ing cistern fixing of WC pan, en & bathroom traps, sinks fixing vent pipe to walls.	Septic tank its purpose parts & methods of construction bonding & water proofing of tank walls methods of lining field drains with bricks shoring for deep trenches names and sizes of timber members used safety precautions method of pumping sub soil water.	Preparation of scaled drawings incorporating (iv) 4 ½" wall corner racking back and stopped end, (v) 4 ½" wall junction wall, (vi) 9" wall corner English and Flemish bond. (vii) 9" wall Flemish bond junction (viii) 9" Flemish English garden wall bond bonding details of 13½" garden main wall and 9" cross wall in English and Flemish bonds.	-do-
work, method of cutting stone required size from a block selection. bed bunkering of stone choosing surface of operation and taking of winding.	Importance of stone as a material for building construction coping conversion and dressing step in stone dressing types of dressing stones as per ISI specifications.	Preparation of scaled drawing incorporating (xi) 18" English garden wall bond.	-do-



2	3	4	5
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Introduction to R.C.C. Uses, materials, properties and form work, including bending of bars & construction reference to ISI, code. Reinforced brick work.

Code of Practice for General Engineering Drawing as published by ISI.

Electricity Ohm's Law parallel and series connection & problems.

Method of and roof finishing.

g first & second joint forming  
aced finish bedding a piece of  
-building Ashlar between cor-

Ashlar masonry. Types of joints used in Ashlar such as Chamfered bevelled construction of stone steps with moulded nosing classification of stone geological and chemical characteristics of good stone brief description of and use of granite basalt trap lime and sand stone slate late rite, gravel marble.

Hexagonal & Octagonal pillars showing bonds and cavity walls.

g a sheet metal profile for ar-  
tural moulding applying the  
metal mould in forming the  
l in stone forming V joggle.  
ruction of a rubble masonry

Preparation of drawing showing timbering in trenches preparation of drawing showing methods of setting out simple segmental, circular, elliptical arches.

Calculation of rise and span for arches volumes of brick work in mass retaining walls volume of stone work or concrete work required for a given piece or work.

e works, method of cutting &  
as required size, form a dif-  
shapes, such as Stair, Floor  
Pillar.

Simple Isometric sealed drawing isometric views of simple objects such as cubes, square

Mensuration applied to area of Marble Words.

2	3	4	5
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of flag stone for flooring of  
ear, paths, crazy paving.

Coping method of construction of different form of coping, such as brick on edge, slabs, semi circular, triangular. Heathering throttling projecting courses such as corbal cornice. Rules regarding over hand.

Calculation from a detailed simple drawing. The length and weight of steel requirements for RCC structural parts.

#### NTS:

ould be able to do :

ut and lay house drainage with glazed earthen ware pipes with necessary gully traps and manhole including fixing of pans.

and dress the face and bed a piece of ashlars to given dimensions.  
an RCC roof slab column and concrete pillars.

truct a rubble masonry Wall.  
an RCC newel stair.

uction of compound with at-  
piers and wall panel wall pro-  
of coping with tile pre cast  
nstruction of reinforced brick  
necessity.

Interpretation of building drawing preparation of plan, elevation and section of a simple building.

Calculation of quantity of cement sand aggregate and reinforcement required for a given RCC work.

2	3	4	5
lar work 4½" and 9" wall on irvelling of walls.	Setting out and bonding detail in wall circular in plan, use of profiles and trammel purpose made bricks lining of walls with RCC pre cast circular wall lining with brick.	-do-	-do-
lar work construction of gate s in alternate brick and tile work moduled work on top.	Setting out and construction of circular 'gate pillars with brick and stone bend- ing use of different types of materials such as brick and tile concrete.	Interpretation of building draw- ing preparation of plan, eleva- tion and section of a simple building.	Calculation of quantities of vari- ous materials for the following types of flooring brick tiles ce- ment concrete terrace quantities of materials required for skirt- ing.
truction of walls with hollow construction of roofs with pre- cast hollow blocks and beams slabs.	Hollow block masonry laying of hol- low block for walls, columns use of structural clay tile for partition pre cast concrete partition walls metal lathe par- tition, with post and planks foam con- crete block partitions. Mixing laying compacting of RCC curing thumb rule regarding percentage of reinforcement for lintels, beams slabs, columns ne- cessity for hook and cranking shear reinforcement.	Reading of a drawing of plan of a building showing drainage line, position of manhole up to sewer constructional details of hollow blocks roofs with precast RCC joints.	-do-
nal finishes rough casting peb- ble stucco finish fixing cement slate jelly.	Types of external and internal finishes such as rough cast pebble dash and stucco-materials used and methods of	Drawing of manhole and in- spection chamber with details.	Calculation of drainage pipe length, materials in foundations covering concrete for drain cal-

2	3	4	5
ring, mosaic terrazzo and tile ring laying out a stair on the nd.	finishing factors to be kept in view, Local PWD specification on the sub- ject.	Stone work drawing of random coursed and uncoursed rubble masonry, Ashlar masonry lay- out of stairs.	culations of different materials for a manhole taking out quan- tities excavations, foundation concrete footings D.P.C. includ- ing walls from a given simple building drawing. -do-
ng of glazed tiles fixing the id filling between ends and lbing setting out a jamb bonding ternal and external angle mark- nd cutting tiles.	Use of glazed tiles for wall facing steps in fixing precaution necessity use of tiles in internal corners general precau- tion on finished job faulty workman- ship and waste of material resulting from unfinished pieces construction and expansion joints method of filling re-	Drawing of stone pillar show- ing architectural moulding.	Revision

pair of cracks. Roof Pitched roof types,  
roof covering component parts of roof.  
Theory of trussing, king & queen port  
trusses.

### Revision & Test

### ENTS :

should be able to do :

construct circular gate pillars with bricks.  
construct compound wall with attached brick piers and brick Panel with tile coping.  
make external finishes on the wall such as rough casting, pebble dash and stucco finish.  
trowel and fixing glazed tiles on wall surface at jambs, internal and external angles.  
lay mosaic, terrazzo and tile flooring.

## LIST OF TOOLS AND EQUIPMENT

For a unit of 16 trainees for the Trade of  
MASON (Building Constructor)

Sl. No.	Items	For Trainees	For Instructors
1	2	3	

### 1. TOOL KIT

1.	Bolster 4" (100 mm)	16	1
2.	Pitching tool (mason)	16	1
3.	Chisels Masons Hammer headed punch	16	1
4.	-do- ½" (12 mm)	32	2
5.	-do- 1" (25 mm)	32	2
6.	-do- Cross cut type	16	1
7.	-do- ¾" (18 mm)	16	1
8.	-do- 1½" (35 mm)	16	1
9.	Hammer Mason (club) 1½/1 lbs.	16	1
10.	Hammer brick mason (600 - 800 gm)	16	1
11.	Helmets	16	1
12.	Leather gloves	16	1
13.	Goggles	16	
14.	Level masons 36" (Plumb level) (1 meter)	16	
15.	Pins (Line)	16	Pairs
16.	Plumb bob	16	Nos.
17.	Square (Steel)	16	"
	2'0" x 1'0" (.75 m x .5 m)	16	"
18.	Trowel plastering double	16	"
19.	Wooden floats	16	"
20.	Trowel brick 10" (25 cm long)	16	"
21.	Trowel pointing 6" (15 cm)	16	"
22.	Spade	8	"
23.	Tasla (tin) pans	16	"
24.	Shovels	8	"
25.	Measuring Steel Tape 15 meters	2	"
26.	Measuring Tape 100' (50 m)	1	"
27.	Wooden straight edges 4' (1.5 m)	16	"
28.	Ladders 2 to 4 m	2	"

1	2	3
33.	Hose pipe	60 metres
34.	G.I. Pipe 12 mm dia	150 Nos.
35.	Cellotax Board	2 Nos.
36.	Spirit level 6" (15 cm)	16 Nos.
37.	Bar bending toll and cutting tool	1 set
38.	Spirit level 12" (30 cms)	4 Nos.
39.	Screw Driver	4 "
40.	Pocket steel tape 6' long (2 m)	16 "
41.	Four fold foot rule 2'0" (60 cm)	16 "
42.	Pick axes	4 "
43.	Crow bars 1.5 meter long	2 "
44.	Scrapers	16 "
45.	Snip straight 10" (25 cm)	4 "
46.	Carpenter tool kit consisting of 16 sets	
	(a) Hand saw	1
	(b) Mortise Chisel	1
	(c) Tenion Saw	1
	(d) Firmer Chisel	1
	(e) Mallet	1
	(f) Carpenter claw hammer	1
	(g) Hand brace with bits	1
	(h) Plane	1
47.	Wheel barrow	3 Nos.
48.	Tubular scaffolding 25 mm dia with coupling and fitting complete	As required
49.	Steel measuring boxes	6 Nos. (0.6 cft. - 3 Nos. 12 cft. - 3 Nos.)
50.	Adjustable props. Steel	24 Nos.
51.	Flat for 4' x 4' x 6' (1. m x 1.5 n x 2 m)	
52.	Bending rods	2 Nos.
53.	Dumpy level with stand & staff	2 "
54.	Spanner Set	1 Set
55.	Steel shuttering 400 sq. / 200 sq. m.	1 "
56.	Hand grinder	1 No

1	2	3
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These grinders comply with relevant DSS/ISS and are tested K.T.C.'s standard grade-I suitable for operation 400/440 volts 3-phase 50 cycles A.C. supply. The swithces provided shall be of Rotary type with ON/OFF action.

Size of grinding wheels (dia. x width x bore)  
6" x 3/4" x 5/8" (152 mm x 19 mm x 16 mm)

**Note :** Dumpy level need not be provided, of the institute has Surveyor or Draughtsman Civil Trade.

1. This list includes for both 1st and 2nd year.
2. Facility for transporting materials and trainee to the work site and back should be Provided by the ITI/establishment concerned.

## SYLLABUS FOR THE TRADE OF MASON (Building Contractor) UNDER APPRENTICESHIP TRAINING SCHEME (ATS)

**Duration - One Year (52 Weeks)**

**Note :**

1. The Practical Training Programme of Apprentices under ATS (Apprentices Training Scheme) should be as per the facilities available in the establishment.
2. Question papers are not set on All India basis for final examination at the end of Shop Floor Training and the examination is conducted at establishment level, based on actual on the job training.

1. During the period of Apprenticeship Training trainees are required to be engaged on site work such as Bridges, Irrigation work, Drainage, Water supply work, stair cases of different kinds, Industrial Buildings, Residential Buildings and over head tanks work in anyone or all the following area of skills i.e. foundation work, brick masonry, stone masonry, plastering, flooring, galzed tiles, Marble work, machine foundation work, drainage septic tank and leak of walls, laying of pipe lines, scaffolding work and calculations quantities of materials required for various items of work and preparation of simple estimates etc. The Related Instruction subjects may be covered in the Basic Training (as per syllabus under CTS-theory, drawing & workshop calculation & science itself and the Apprentices will complete the Practical Training with oral Instruction at the site itself by the employer).
2. However, the Apprentices after completion of training will be sponsored for appearing in NCVT Examination in the subject of Practical and Oral Testing in the R.I. subjects and a National Apprenticeship Certificate may be issued to them.

### **For Ex-ITI/ITC Trainees**

1. After the completion of 01 year (52 weeks) training in ITI/ITC the trainees are given option either to join the building industry as Skilled Workers or to join as apprenticeship Training under the Apprentices ACT, 1961, for a further period of 01 year (52 weeks) after which they will be sponsored for the Apprenticeship Trade Test, by Industry/ Employer.
2. There will be no Related/Instructions Classes for these apprentices during the period of Apprenticeship Training.

masonry, plastering, flooring, glazed tiles, Marble work, machine foundation work, drainage, septic tank and leak of walls, laying of pipe lines, scaffolding work and calculations quantities of materials required for various items of work and preparation of simple estimates etc.

4. At the end of 52 weeks of Apprenticeship Training the apprentices will be trade tested in Practical work and oral examination. There will be no written test on the Related Instruction subject.

**Social Studies.** The syllabus has already been approved and is the same for all the trades.

### **Final Achievement :**

(To be obtained by the trainees after the completion of Apprenticeship Training - 52 weeks)

1. To use brick mason, plasterers and concreters tools, their maintenance.
2. To layout and construct and simple single storied building such as servant quarters, small residential buildings with RCC roof slab, Multi storied flats, Hospitals, Hotels and factory buildings (excluding carpenters, painters, and glazier work and electrification).
3. To layout and construct house drainage system for the above building and connect the same with street sewer (excluding plumber's work)
4. Construct a rubble masonry wall.
5. Construct a fire place with brick.
6. Should be able to layout a stain on the ground.
7. To read understand simple building drawing and make sketches of building parts.
8. To know the purpose of safety precautions and basic knowledge of materials.
9. To calculate quantities of materials required for various items of work related to the trade and prepare simple estimates.