

**SKVV : SYLLABUS FOR TRADE IN VOCATION TRAINING
CERTIFICATE PROGRAM**

TRADE : BUILDING MAINTENANCE

DURATION: SIX MONTHS

FIRST SEMESTER

S No.	PRACTICAL	TRADE THEORY	Engg. Drawing	Workshop Cal. & Science.
VTC BM-101	Introduction to Training To make the trainees familiar with workshop discipline layout of the shop tools and equipments safety precautions.	Introduction to trade, scope of training, its importance and safety precaution.	Properties of lines, angles, triangles circles, Drawing as language of communication. Different types of lines and symbols used in building drawings.	Volume and surface-areas of simple geometrical solids as cubes and prisms.
VTC BM-102	Mortar & Concrete To prepare mortar and concrete of given mix.	Different types of bricks, cements ,lime, aggregate and tiles. Concept of water cement ratio workability and curing. Tools & plants required for preparation, transporting and placing of mortar and concrete. Factor affecting strength of mortar and concrete.	Simple isometric Scaled drawings, Isometric views of simple objects such as cubes, square and rectangular prisms and pyramids. Code of practice for General Engineering, Drawing as published by ISI to be understood and followed. National building code.	Menstruation applied to area of brick works – requirements of volume and its application to simple excavations area of damp proof course. Estimate of bricks.
VTC BM-103	Stone Masonry and Brick Masonry To raise a brick wall of half, full and one & half with English or Flemish bond to a height of 1.0m, on spread footing. To repair and finish cracks in old brickwork and stone Masonry. Pointing Knowledge required.	Defect in stone Masonry and their repair. Methods of laying bricks in walls. Precaution to be taken in Construction of Walls. Methods of fixing new work with old Work (tooting, racking back and block bonding) Defects in brickwork, Maintenance of brick Masonry construction. Merit and demerit of brick Masonry Work.	-Do	Site problems involving multiplication division common fraction addition subtraction. Application of fractions to site problems. Estimation of the bricks.

VTC BM-104	<p>To construct Floors of various types of an area of 1.00mx1.00m. To repair a given defective floor. Maintenance of hurt tiles.</p> <p>R.C.C. Structure To make R.C.C. or brick lintel of any span after making proper arrangement of centring.</p> <p>To repair cracks in various types of roofs to stop leakage.</p> <p>To repair the Mangalore tile roof covering. Repair of old damage structure reinforcement.</p>	<p>Method of using concrete for repair work and concrete grouting.</p> <p>Causes of defects in Brick, cement concrete, terrazzo and Mosaic, marble and stone floors and their remedial measures.</p> <p>Repair of old floors. Methods of cleaning, cutting and polishing of mosaic, terrazzo and Marble floors/granite (Materials and tools required).</p> <p>Laying, repair and Maintenance of PVC and linoleum floor / wooden flooring. Knowledge regarding flat tiles & maintenance of ceramic tiles</p> <p>Different types of lintel.</p> <p>Tools required to lay RCC & R.B.C. roofs.</p> <p>Method of lay on R.C.C & R.B.C. (Including knowledge for bending and binding and placement of bars).</p> <p>Repair of cracks in R.C.C. roofs Methods, tools and materials required. Knowledge regarding roof and lintel and Chemical treatment.</p>	<p>Free hand sketching of simple solids such as cubes, rectangular blocks, cylinders and the views of these objects when viewed perpendicular to their surface or axes.</p> <p>Free hand sketching of bricks-queen closer bats, half bats, half queen closers-king closer.</p> <p>-Do</p>	<p>Decimal addition, subtraction, multiplication and division, conversion of decimal to common fractions and vice-versa site problems. Conversion of metric system</p> <p>Square root finding square root of perfect square whole numbers decimals.</p> <p>-Do</p>
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VTC BM-105	<p>Surface Finishing To plaster a given brick surface of area 1mx1m To repair a defective plaster surface. Plinth</p> <p>Protection. To do pointing on old brick masonry work.</p>	<p>Tools required for Plastering. Methods of cement and lime plastering. Preparation of surface for plastering.</p> <p>Application of plaster coats. Curing of plaster.</p> <p>Defects in plaster work and their preparations. Repair of defective plaster. Repair of damp surface of wall / ceiling</p> <p>Tools and material required for pointing. Operation involved pointing of masonry works. Repair of old pointing.</p>	<p>Preparation of free hand sketches in plan and elevation 4 ½ ft. wall straight and junction.</p> <p>Preparation of free hand sketches of rattrap bond, diagonal-bond, herring bond basket bond and other ornamental panels.</p>	<p>Metric systemmetric weights and measurements units-conversion factors-problem.</p> <p>Ratio and proportion – problems on the above such as finding out quantities of material for various mixes of mortar-concrete.</p>
VTC BM-106	<p>Painting</p> <p>Painting of wood/ steel work. White washing / distempering colour washing / cement pointing. To practice/ white washing / distempering/colour Washing/ cement painting of area of 2mx2m. TO repair wooden workout door/ window/ ventilators/ other Wooden structures. To replace broken glass panes, acrylic emulsion over plaster of parish.</p> <p>To replace broken glazed tiles. The students should be encouraged to affect repair work in the institution building under the guidance of the teacher; quality of work should be the main objective.</p>	<p>Knowledge about painting different types of washing. i.e. water base, oil base primer applying with surface preparation before painting. Brush / Spray / roller used in painting. Texture painting. Preparation of wall surface with putty</p> <p>Knowledge of timber different type of fitting, knowledge of other type of doors and windows and different types of joints.</p>	<p>Drawing of simple geometrical problems involving lines squares and polygons. Problems involving circles, tangents application to arches, mouldings.</p>	<p>Menstruation areas and perimeters of rectangles, square and triangles. Problems on perimeter and areas of polygons such as pentagon hexagon -octagon.</p>

VTC BM-107	<p>Painting of Iron and steel Works</p> <p>Practice of painting on different steel structures and other surfaces of plasters.</p>	<p>Methods of painting new steel work.</p> <p>Methods of repairing and painting old iron steel work.</p>	-do-	-do-
VTC BM-108	<p>False ceiling wall panelling and wall papering.</p> <p>False ceiling wall and wallpapering & construction and repairing.</p> <p>Mode of Measurement.</p>	<p>Tools and materials required for false ceiling wall panelling and wallpapering.</p> <p>Process for placing wallpaper method of wall panelling and false ceiling with different materials in old and new walls. Knowledge of false ceiling</p>	<p>Drawing, architectural mouldings, such as ovalocaveto, torus, Scotia cyma recta, and cyma reverse.</p>	<p>Problems on perimeter and areas of polygons such as pentagonhexagonoctagon.</p>
VTC BM-109	<p>Damp Proofing.</p> <p>Construction of course for damp proofing.</p>	<p>Surface of dampness.</p> <p>Effect of dampness.</p> <p>Precautions to be taken to prevent dampness.</p> <p>Methods of damp proofing basements, ground floors, plinth and walls. Special damp proofing arrangement in bathroom W.C.and kitchen. Damp proofing for flat and pitched roofs and windowsills.</p> <p>Methods for laying damp proof course in existing buildings.</p> <p>Knowledge, reason and subsequent remedial measure. Knowledge required to different type of damp proofing material bonding agents.</p>	<p>Construction of ellipse by different methods.</p>	<p>Volume and surface-areas of simple geometrical solids as cubes and prisms.</p>
VTC BM-110	<p>Varnishing and polishing</p> <p>Practice on varnishing and polishing coats in different methods.</p>	<p>Tool required for varnishing and polishing coats.</p> <p>Process of varnishing and polishing- preparation of surface, knotting and priming- Application of varnish coats. Methods of polishing on metal surfaces.</p>	--	--

VTC BM-111	Glazing Work Practice on cutting and fixing glasses and replacement.	Replacement and cleaning of glazing work. Tools required. Methods of cutting glass and fixing glass as desired. Materials required for cleaning old glass panes and method of cleaning.	--	--
VTC BM-112	Vitrified tiled work. Practice on method of cleaning of china clay.	Method of cleaning of china clay glazed tiles and materials required for cleaning.	--	--
VTC BM-113	Anti termite Treatment in Building. Practice on application	Method of Anti termite Treatment for walls. Anti termite Treatment for wood work in Building.	--	--
VTC BM-114	Sanitary and drainage works. Cutting of pipes to required length and also thread on a given piece of pipes. Jointing G.I.pipes, plastic pipes by suitable methods. Jointing of sewerage pipes cast- iron and stoneware. Exercises involving the fitting of various pipe fittings and also involving the fitting of various sewerage fittings. Student should be attached in batches to work with a plumber who is executing work locally or in Government public health work. Installation and maintenance of Water pumps. Prepare Layout Plan (from modification point of view) of concealed and open type Water line (G.I) of a bathroom. Visit to New Construction area.	Brief idea of inspection chamber, manhole, intercepting chamber ventilating pipes, soak pit, septic tank and different type of fittings and specials. Gradient followed in house sewers, connection of house sewer with municipal service. Measurement, inspection and quality control parameters. Problem and remedies.	--	--