

## 7. TRADE SYLLABUS

<b>SYLLABUS FOR PAINTER (GENERAL) TRADE</b>			
<b>FIRST YEAR</b>			
<b>Duration</b>	<b>Reference Learning Outcome</b>	<b>Professional Skills (Trade Practical) With Indicative Hours</b>	<b>Professional Knowledge (Trade Theory)</b>
Professional Skill 150Hrs;  Professional Knowledge 42Hrs	Make different types of sketching viz., free Hand sketching of different objects, designing of different shapes, size, geometrical shapes of different objects following safety precaution.	<ol style="list-style-type: none"> <li>1. Introduction of trade skills and work application. (02hrs.)</li> <li>2. Safety attitude development of the trainee by educating them to use personal protective equipment (PPE) and Material safety data sheet (MSDS). (05hrs.)</li> <li>3. First-aid method and basic training. (02hrs.)</li> <li>4. Safe disposal of waste materials like- cotton waste, waste paint and waste paint material etc.(02hrs.)</li> <li>5. Hazard and non hazard identification and avoidance. (02hrs.)</li> <li>6. Use of firefighting equipment, like- extinguishers, sand bucket, water etc. (10 hrs.)</li> <li>7. Identification of safety signs, like- Danger, warning, caution and personnel safety .(01hr)</li> <li>8. Importance of trade training. (02hrs.)</li> <li>9. Understand precautions to</li> </ol>	Introduction of the Institution; rules and management (work) Process of an Institution. Knowledge about the facilities; leaves and rules and subjects an syllabus. Introduction of vocational trade, The importance of trade in the industrial Development of the nation Care in Vocational trade. (14hrs)

		<p>be followed while working in the painting jobs. (02hrs.)</p> <p>10. Motivational talk by experts. (05 hrs.)</p> <p>11. 5S training. (02hrs.)</p> <p>12. Draw different sketches and hand writing practice. (15 hrs.)</p>	
		<p>13. Introduction and identification of tools and equipments different for cleaning and painting. (15 hrs.)</p> <p>14. Identification and there assembly and function of trade machineries. (10 hrs.)</p>	<p>Accident and First-Aid: Cost of Accidents; Causes and effects of an accident; First-Aid in case of internal injuries; fracture; wound and electric shock. (07hrs)</p>
		<p>15. Free hands sketching practice of different lines and strokes. (17hrs.)</p> <p>16. Free hands sketching practice of nature forms like- flowers, leaves, trees. (17hrs.)</p> <p>17. Free hands sketching practice of birds and animals. (16hrs.)</p>	<p>Lines- Different types of lines; its uses and specialty. Pencil- Origin of pencil and its introduction. Different types of pencils; uses and its specialty. (14hrs)</p>
		<p>18. Draw geometrical shapes and construct for design. (15 hrs.)</p> <p>19. Draw free hand geometrical forms in perspective. (5hrs.)</p> <p>20. Draw free hand different types of perspective. (5 hrs.)</p>	<p>Colours for drawing and painting: charcoals, oil and dry pestles, water; poster; acrylic; oil colours and reducer medium. (07hrs)</p>
Professional Skill 50Hrs;  Professional Knowledge	Ability to synthesize of free Hand sketching of Human figures, Shading, Use	<p>21. Free hands sketching practice of human figures. (10hrs.)</p> <p>22. Black &amp; white/ colour pencil shading of human figures</p>	<p>Definition and Need of Sketching-Introduction to sketching; its benefits and importance in our culture and traditions as well to the trainees.</p>

14Hrs	graph & figure enlargement.	(Male, female & children). (15hrs.) 23. Graph and figure enlargement with pencil shading. (10hrs.) 24. Draw with shading different tools and equipments of trade. (15hrs.)	Human organs and their proper place; Body structures of Male and Female. (14hrs)
Professional Skill 100 Hrs;  Professional Knowledge 28 Hrs	Identify of paper, colour schemes and compose different types of colour shade Expertise in 2D design.	25. Marking & Cutting different Drawing Paper as per given size. (05hrs.) 26. Draw colour wheel with poster colour. (10 hrs.) 27. Draw & Colour Design in primary, Secondary & Tertiary colours. (10hrs.) 28. Marking & Out line Drawing 2D Design. (05 hrs.) 29. Coloring 2D design in Warm & Cool Colors. (10 hrs.) 30. Make 2D design & Colour in Contrasts colors. (10 hrs.)	Colours & colour knowledge: Definition of colour; colour blindness; tone, colour shade- primary, secondary, tertiary. (14 hrs)
		Make colour shades: 31. Make gray scale in pencil shading (5hrs.) 32. Make gray scale in poster colour (5hrs.) 33. Make different colour scale in poster colour (15 hrs.)	Colour wheel, colours & Different types of colour schemes & colour harmony. (07 hrs)
		34. Make 2D Design in different Composition paint in High key, middle key & low key by poster colour. (20 hrs.) 35. Colour mixing & matching Touch up on Damage posters & photographs. (5 hrs.)	Brush: Different types of Brushes with shapes & sizes. Use & Care of Brushes. (07 hrs)

Professional Skill 150 Hrs;  Professional Knowledge 42 Hrs	Create different types of realistic objects viz., bird, animals, realistic human figure with application of colour shades.	36. Draw & colour realistic drawing of Birds. (25 hrs.) 37. Draw & colour realistic drawing of Animals. (25 hrs.)	Drawing instruments- Drawing board; T- square; steel and wooden scale; set square; compass; Colour dish. (14 hrs)
		38. Draw & colour realistic drawing of Human figure. (20hrs.) 39. Mounting & Decorate Painted Pictures. (05hrs.)	Brush- Different types of brushes with shapes and sizes. Uses and care of brush. (07hrs)
		40. Draw Landscape. (05hrs.) 41. Colouring Landscape in water/poster colour. (15 hrs.) 42. Use graph on portrait picture & Enlarge outline drawing on drawing paper. (05 hrs.) 43. Water or poster colouring on enlarged drawing (15 hrs.) 44. Draw & Colour Safety or Related Trade Poster. (10 hrs.)	Drawing paper- Types of drawing papers; its uses and care. (14hrs)
		45. Enlarge & Sketching Cinema Posters. (05 hrs.) 46. Colouring enlarged Cinema Poster. (20 hrs.)	Knife-Uses; different types of Putty knife; Scraper knife; hacking knife; Diamond-glazier; Gilder knife; Shave hook knife; Stencil knife; Chisel knife. (07hrs)
		47. Sketching & coloring gothic letters in English. (10 hrs.) 48. Sketching & coloring gothic letters in Mother Language. (10 hrs.) 49. Sketching & coloring Roman letters. (09hrs.) 50. Do free hand boru Strokes Devnagri. (08hrs.) 51. Sketching & colouring	Lettering- Description; uses of devnagri, Roman, Gothic; Italic and Text writing. Spacing - Mechanic and Optical spacing. (14hrs)
		Professional Skill 50 Hrs;  Professional Knowledge 14 Hrs	Demonstrate with colour shades different types letters (Devanagari, roman, gothic, Text writing/ lettering.) and apply them in

	appropriate place.	Devnagri letters. (08hrs.) 52. Sketching & colouring Text or Italic letters. (05 hrs.)	
Professional Skill 100 Hrs; Professional Knowledge 28 Hrs	Plan and organize the work to make job as per specification applying different types of basic operation. [ <i>Basic fitting operation – marking, Chiselling, Filing, Drilling, Pipe fitting</i> ]	<p><b>CARPENTER WORK:</b></p> <p>53. Marking Practice on wood. (07hrs.)</p> <p>54. Holding &amp; Sawing Practice different size of wood. (10 hrs.)</p> <p>55. Teeth setting &amp; sharpening of different saw. (07hrs.)</p> <p>56. Tennening Half cut on wooden border. (05 hrs.)</p> <p>57. Setting of planers &amp; sharpening on plane blade. (05 hrs.)</p> <p>58. Plane on different wooden surfaces. (06hrs.)</p> <p>59. Chiselling slots on thick wood. (05 hrs.)</p> <p>60. Drilling on wood with different drilling tools (Gimlet, Hand Drill, Portable electrical drilling machine. (05 hrs.)</p> <p>61. Identify &amp; check different types of pipe. (05 hrs.)</p> <p>62. Do pipe cutting &amp; threading (10 hrs.)</p> <p>63. Apply different types of pipe joint/ fitting of different materials &amp; different diameter. (Use PVC pipe) (10 hrs.)</p> <p>64. Make a simple lap joint. (05 hrs.)</p> <p>65. Make a simple mitred half lap joint. (05 hrs.)</p>	<p>Carpenter - safety precaution description, Use hand tools, carpenter tools, types of wood their description &amp; use common defects in timber &amp; their effects.</p> <p>Plumber: Instruction to the trade safety precautions and elementary first aid. Plumber hand tools description on rain water &amp; pipe system including installation of water supply fitting. Description of different types of pipes &amp; their use such as galvanized pipes, PVC pipes.</p> <p>Pipe line leakage &amp; Maintenance. (21 hrs)</p> <p>Equipments for joint, Joints - Types and uses of different types of joints. (07 hrs)</p>

		<p>66. Make a simple Dovetail joint. (05 hrs.)</p> <p>67. Joint fitting with nails, screw, glue etc. (10 hrs.)</p>	
<p>Professional Skill 100 Hrs; Professional Knowledge 28 Hrs</p>	<p>Manufacture simple sheet metal items as per drawing and join them by riveting. (like- Screen frame, sign board, &amp; hanging Paintings frame)</p>	<p><b>SHEET METAL WORK:</b></p> <p>68. Marking of straight lines, circles, profiles and various Geometrical shapes and cutting the sheets with snips. (15 hrs.)</p> <p>69. Marking out of simple development (05 hrs.)</p> <p>70. Marking out for flaps for joints (05 hrs.)</p>	<p>Safety precautions to be observed in a sheet metal workshop, sheet and sizes, Shearing machine-description, parts and uses. (07 hrs)</p>
		<p><b>Make various joints:</b></p> <p>71. Hemming, form locked, grooved and knocked up single hem straight and curved edges form double hemming. (15 hrs.)</p> <p>72. Make cylindrical objects with joints. (10 hrs.)</p>	<p>Marking and measuring tools, wing compass, Prick punch, square tools, snips, types and uses. hammers and mallets type-sheet metal tools, Soldering iron, Trammel, Stakes. (07 hrs)</p>
		<p>73. Make simple Square table tray with folding edge and fix handle with riveting. (17 hrs.)</p> <p>74. Make simple triangular tray with folding edge and fix handle with riveting. (08 hrs.)</p> <p>75. Make joint/ fitting for rain water (Use PVC pipe). (10 hrs.)</p> <p>76. Make joint/ fitting for water pipe line (Use GI pipe). (10 hrs.)</p> <p>77. Make joint/ fitting for water</p>	<p>Marking and measuring tools, wing compass, Prick punch, square tools, snips, types and uses. hammers and mallets type-sheet metal tools, Soldering iron, Trammel, Stakes. (14 hrs)</p>

		pipe line (Use PVC pipe). (05 hrs.)	
Professional Skill 125 Hrs;  Professional Knowledge 35 Hrs	Execute different types of Operating System and explore the working on DTP, Corel Draw, Photo shop etc.	<p>78. Operate &amp; familiarise with computer operating system. (05 hrs.)</p> <p>79. Operate paint software &amp; draw freehand sketch &amp; use like as colour bucket, eraser, pencil &amp; all tools.(05 hrs.)</p> <p>80. Draw scenery like realistic in paint software (05 hrs.)</p> <p><b>Photoshop:</b></p> <p>81. Tool handling in photo shop. (05 hrs.)</p> <p>82. Familiarise with all hand. (05 hrs.)</p> <p>83. Make a different layer &amp; create background, artistic text, design, images. (05 hrs.)</p> <p>84. Import photo image from file &amp; scanner, edit photo image. (05hrs.)</p> <p>85. Edit Image adjustment effects. &amp; layer style effects. (05 hrs.)</p> <p>86. Edit special effect on different layer, colours, textures, filter effects. (05 hrs.)</p> <p>87. Edit &amp; Save image in PSD, JPEG &amp; other format. (05 hrs.)</p> <p>88. Create a colour advertise design for festival offer. (15 hrs.)</p> <p>89. Export Design, image,</p>	Standard pipe threads, nominal diameter, wall thickness, schedule number, die & diestock, tubing. (21 hrs)

		<p>photograph from Photoshop to other different format for different software's. &amp; make a print &amp; print file for different printers. (10 hrs.)</p>	
		<p><b>Corel Draw :</b></p> <p>90. Apply select /move /copy /objects, retire skew, size Objects. (05 hrs.)</p> <p>91. Apply Combine, Shape, weld, trim, Align, Group / Ungroup objects. (05 hrs.)</p> <p>92. Add text &amp; Format text, create different heading &amp; Sub-heading. (05 hrs.)</p> <p>93. Draw dimensionally objects, creating special effects for backgrounds &amp; related objects. (10 hrs.)</p> <p>94. Do graphical effects to text. (05 hrs.)</p> <p>95. Creating symbols, logo, special effects. (10 hrs.)</p> <p>96. Make a flex design for marketing offers. Convert &amp; Save to CD/DVD/PD for final printing. (10 hrs.)</p>	<p>Drawing simple geometric objects using Corel Draw Transforming objects, Organizing objects, Working with text, Dimensioning objects Creating special effects. (14 hrs)</p>
<p>Professional Skill 25Hrs;</p> <p>Professional Knowledge 07 Hrs</p>	<p>Produce stencils involving different shapes in ornamental design, text, symbols etc. operations for different medium like papers, cards, tin, foam board,</p>	<p>97. Create ornamental designs for stencils, cut it &amp; make a print. (10 hrs.)</p> <p>98. Draw simple sentence in different lettering, stencil cutting &amp; stencilling. (15 hrs.)</p>	<p>Stencil -Definition and types of stencils. Uses; Care and cleaning of different types of stencils. Instruments and equipments for stencil. (07 hrs)</p>



	observing procedure and check for accuracy.		
Professional Skill 150 Hrs;  Professional Knowledge 42 Hrs	Produce Sign board, Name plate. prepare back ground painting, screen printing, Observe finishing, lettering proportion & evenness	<p>99. Make sign board with background painting. (10 hrs.)</p> <p>100. Make Figure Enlargement for sign board. (10 hrs.)</p> <p>101. Draw and painting letters &amp; design or logo on Sign Board. (10hrs.)</p> <p>102. Paint a name plate on different material (wood/ tin/ acrylic). (10 hrs.)</p>	<p>Advertisement-Sign Board, Banner, Posters, Hoardings, Wall painting, Name plate, Logo, Symbol, Monogram, Digital Flex Board.</p> <p>Graph Making &amp; Enlargement, Need of graph for Enlargement. (14 hrs)</p>
		<p>103. Make a wooden frame with bolting cloth. (10hrs.)</p> <p>104. Create Art work on tracing for screen exposing. (10 hrs.)</p> <p>105. Coating solution &amp; expose screen with ready art work, Develop exposed screen with cold water, touch up pin holes and nonprinting area, taping around inside. (20hrs.)</p> <p>106. Use cromoline film &amp; expose screen with ready art work, Develop exposed screen with cold water, touch up pin holes and nonprinting area, taping around inside. (20hrs.)</p>	<p>Screen Printing - Types, definition and explanation. Origin and development of screen painting.</p> <p>Selection of cloth, instruments, chemicals, cloth fitting, exposing.(14 hrs)</p>
		<p>107. Prepare &amp; registration Pining work on printing table. (05 hrs.)</p> <p>108. Testing of registration with</p>	<p>Screen developing; printing and de-exposing /washing. Types of ink. (14 hrs)</p>

		<p>squeezing ink. (02 hrs.)</p> <p>109. Do single colour printing on selected cards/sheets. (15 hrs.)</p> <p>110. Do multi colour printing on selected cards/sheets. (25 hrs.)</p> <p>111. Decorating used screen with bleach powder or decorating solution, wash &amp; clean. (03 hrs.)</p>	
<p><b>Project Work/ Industrial Visit</b></p> <p><b>Broad areas:</b></p> <ul style="list-style-type: none"> <li>a) Digital Flex Chart ( Safety / Enrolment / Educational)</li> <li>b) Decorative or Advertise painting on wall.</li> <li>c) Make Greeting cards or visiting cards with screen printing.</li> </ul>			

## SYLLABUS FOR PAINTER (GENERAL) TRADE

### SECOND YEAR

Duration	Reference Learning Outcome	Professional Skills (Trade Practical) With Indicative Hours	Professional Knowledge (Trade Theory)
Professional Skill 50 Hrs;  Professional Knowledge 18 Hrs	Develop a craft work and artistic work on radium/ vinyl/ thermocol etc.	<p>112. Make a manually ornamental design on radium or vinyl. (05 hrs.)</p> <p>113. Make a symbol or image design by computer in graphics &amp; cut it with plotter. (10 hrs.)</p> <p>114. Do "Instruction board" on acrylic sheet with help of multi layer radium or vinyl. (13 hrs.)</p> <p>115. Make a lettering/ image/ symbol design for "Instruction board" by computer in graphics, with help of radium or vinyl &amp; cutting it with plotter, pasting on glass/ acrylic/ sun mica or different sheets. (12 hrs.)</p> <p>116. Create a design for wall decoration by computer in graphics &amp; cut it on multi colour vinyl, paste on wall. (10 hrs.)</p>	Different medium paper for plotter cutting. Manual cutting Instruments & their safety/ care/ precautions, proper pasting procedure, pasting techniques, care & precaution. (18 hrs)
Professional Skill 100 Hrs;  Professional Knowledge 36 Hrs	Identify different types of Plywood, MDF & low-quality wood and make wooden surface used various	<p>117. Clean, sanding, knotting, stooping, staining preparation wooden surface properly for polish. (05 hrs.)</p> <p>118. Make &amp; apply putty for varnishing &amp; polishing. (05</p>	Polish paper-Types and uses. Putty - Definition, their material types and uses. Method of mixing & its different system of application. Varnish - Definition; types and

	techniques, decorate, paint & make an attractive wooden article.	<p>hrs.)</p> <p>119. Apply polish on prepared wooden surface with cotton rags. (05 hrs.)</p> <p>120. Clean, sanding, knotting, stooping, staining preparation wooden surface properly for varnish. (05 hrs.)</p> <p>121. Apply varnish on prepared wooden surface with brush. (05 hrs.)</p> <p>122. Prepare wooden article &amp; apply varnish with spray. (08hrs.)</p> <p>123. Prepare wooden article &amp; apply melamine or PU wooden finish with spray. (08hrs.)</p> <p>124. Make a wooden top with thick layer of melamine polish. (09hrs.)</p>	<p>characteristics of varnish. Process of making of varnish its importance and contains. Polish- Types and uses. Different application methods. (18 hrs)</p>
		<p>125. Prepare wooden surface properly for painting. (05 hrs.)</p> <p>126. Apply wood primer by brush (05 hrs.)</p> <p>127. Make putty for wood finishing. (05 hrs.)</p> <p>128. Apply putty &amp; prepare wooden surface properly. (05hrs.)</p> <p>129. Do paint wooden surface properly with brush (05hrs.)</p>	<p>Paint- Definition; classification and use. Pigment, Binders, Solvent, oil, dryers; additives. Painting- Definition and importance of painting. (09hrs)</p>
		<p>130. Prepare &amp; spray painting on different furniture taking all precautions. (25 hrs.)</p>	<p>Method of wooden surface painting. (09 hrs)</p>
Professional Skill 225 Hrs;	Develop internal and external Building painting by	<p>131. Prepare ceiling surface for lime wash. (05 hrs.)</p> <p>132. Prepare wall surface for</p>	<p>Types, uses of building (wall) paints. Wall primer- Water base / Oil base, types of putty</p>

Professional Knowledge 81 Hrs	using different decorative press.	lime wash. (05 hrs.) 133. Apply POP on wall for lime painting. (03 hrs.) 134. Make & mixing of lime & stainer. (02 hrs.) 135. Apply Lime on ceiling & wall with brush properly. (10 hrs.) 136. Prepare ceiling & wall for distemper painting. (05 hrs.) 137. Make wall putty for distemping. (02 hrs.) 138. Apply wall putty with finish & prepare wall surface. (08 hrs.) 139. Mixing & apply a distemper properly for wall. (10 hrs.)	for wall. Mixing, Preparation process of Lime and Distemper. Other required Equipments- Below lamp, bucket, plum-bob, putty blender, Paint strainer. Types of Trestle, ladder, scaffolding. (18hrs)
		140. Prepare ceiling & wall surface with putty & Apply interior emulsion paint. Use roller & brush. (25 hrs.) 141. Prepare office & work shop interior wall surface with putty, Apply enamel or luster paint. (25 hrs.)	Colour selection for interior wall painting and use of Paints. Effects; Intention; Purpose of colors. Paint mixing and preparation process. Difference between emulsion paint and Oil paint. (18hrs)
		142. Make scaffolding for exterior wall painting. (05hrs.) 143. Clean exterior wall aria with cleaning process & water pressure process (05 hrs.) 144. Prepare exterior wall with white cement for painting. (08 hrs.) 145. Paint the prepared wall by brush with cement paint. (08 hrs.) 146. Prepare exterior wall with	Color selection for exterior wall painting and use of Paints. Method of paint mixing and preparation. Paint used for exterior wall painting. (18hrs)

		<p>exterior priming for painting. (10 hrs.)</p> <p>147. Paint the prepared wall by brush with emulsion paint. (10hrs.)</p> <p>148. Decorate the projection with dark shade apply special shades of emulsion colour. (04 hrs.)</p>	
		<p>149. Decorate the wall with design roller/ stamp/ stencil. (25 hrs.)</p> <p>150. Prepare wall &amp; create texture, use different medium, colour&amp; make a different textures. (25 hrs.)</p>	<p>Difference between brush painting and Roller painting. Types of Roller and preparation of texture for wall painting. (18hrs)</p>
		<p>151. Prepare wall &amp; design wall paper pasting on wall (10 hrs.)</p> <p>152. Find the defect on wall before painting and remove it. (08 hrs.)</p> <p>153. Find the defect on wall after painting and remove it. (07 hrs.)</p>	<p>Wall defects and defects removal process of wall painting. (9hrs)</p>
<p>Professional Skill 100Hrs;</p> <p>Professional Knowledge 36Hrs</p>	<p>Choose different pipes as per safety aspect and apply line painting with colour code.</p>	<p>154. Prepare &amp; paint by brush windows, grill, doors, safety doors, gate etc. (20 hrs.)</p> <p>155. Paint a ceiling and wall with dip-feed roller / pad or airless spray. (20 hrs.)</p>	<p>Building Painting estimate &amp; costing. (18hrs)</p>
		<p>156. Paint the GI pipe, take all precautions while painting. (08 hrs.)</p> <p>157. Paint the sanitary pipe, take all precautions while painting. (08 hrs.)</p> <p>158. Paint the MS square &amp; round</p>	<p>Intention and effects of pipe line painting, Colour Codes of pipe line painting. ISI colour code.(18hrs)</p>

		<p>pipe, take all precautions while painting. (09 hrs.)</p> <p>159. Paint deferent pipe line with colour code as per ISI. (15 hrs.)</p> <p>160. Demonstrate knowledge of safety procedures in Industrial pipe line painting (Demo by video &amp; charts). (10 hrs.)</p> <p>161. Identify colour code wise– Pipe lines, different types of valves. (10 hrs.)</p>	
Professional Skill 125Hrs;  Professional Knowledge 45Hrs	Process of cleaning and painting on metal surface for preventive coat.	<p>162. Scrap thecorrode metal surface. (08 hrs.)</p> <p>163. Clean the metal surface by wire brush or orbital wire brush. (08 hrs.)</p> <p>164. Burn the old paint from metal surface by blow lamp or gas flame. (08 hrs.)</p> <p>165. Do dry sanding with help of emery paper/cloth (06 hrs.)</p> <p>166. Apply wet sanding on old painted object. (06 hrs.)</p> <p>167. Clean the metal surface by Sander machine. (06 hrs.)</p> <p>168. Level different metal surface by portable hand grinder. (08 hrs.)</p>	Corrosion- Definition and classification. Reasons for rusting and effect of climate. Different anti-rusting process. (18hrs)
		<p>169. Apply degreasing process on metal surface. (05 hrs.)</p> <p>170. Apply de-rusting or pickling process on corrode metal. (06 hrs.)</p> <p>171. Treated phosphating on metal surface with all pre-treatment process. (08 hrs.)</p>	Metal surface - types and selection of sanding paper (polish paper). Metal surface cleaning- Mechanical and chemical cleaning. (Dry/ wet Sanding, scraping, wire brushing, orbital wire brushing, paint burning, sand

		<p>172. Demonstrate practical of Different types of, Industrial Pt system by video. (06 hrs.)</p> <p>173. Make a proper thin metal primer for brush application. (02 hrs.)</p> <p>174. Prepare metal surface &amp; apply ready primer on metal surface by brush. (05 hrs.)</p> <p>175. Apply enamel / polyester putty or filler on primed surface. (08 hrs.)</p> <p>176. Apply enamel paint on primed metal surface. (10 hrs.)</p> <p>177. Prepare and paint metallic article by brush. (15 hrs.)</p> <p>178. Prepare &amp; colour making for deep painting. (01 hr)</p> <p>179. Prepare article for deep painting. (04 hrs.)</p> <p>180. Demonstrate practical of Electro coat Deeping process &amp; conveyor system by video. (05 hrs.)</p>	<p>and shot- blasting, pickling and phosphating). (09hrs)</p> <p>Metal Primer - Types, Purpose, application and use. Types of surface. Types of solvent or reducers / thinner/ automotive paints (Enamel, NC, Stoving, PU, Epoxy, rubber base sound deadener paint, metallic, pearl, water base automotive paint), lacquer. (09hrs)</p> <p>Types of painting process- Traditional and modern technology. Ex.- Brushing, Deeping, barreling, Aerosol, roller coating, suction spray, vertical spray, pressure vessel, spray airless, electrostatic, powder coating etc. (09hrs)</p>
<p>Professional Skill 25Hrs;</p> <p>Professional Knowledge 09Hrs</p>	<p>Identify, replace and assemble different pneumatics and paint gun. [Different components– Compressor, Pressure Gauge, Filter Regulator, Valve for hose]</p>	<p>181. Identify pneumatic components – Compressor, pressure gauge, Filter-Regulator-Lubricator (FRL) unit, and Different types of valves and actuators. (05 hrs.)</p> <p>182. Demonstrate knowledge of safety procedures in spray systems and personal Protective Equipment (PPE) (orally &amp; video). (05 hrs.)</p> <p>183. Maintenance,</p>	<p>Spray Gun - Principles of spray painting, spray gun accessories and their function different types of spray guns. Holding of spray gun and stroke adjustment. Types of spray painting method. Air compressor for Painting Process. Required instruments for spray painting. (09hrs)</p>



		troubleshooting, and safety aspects of pneumatic and Painting instruments (The practical for this component may be demonstrated by video) (15 hrs.)	
Professional Skill 25 Hrs;  Professional Knowledge 09 Hrs	Perform Spray Painting technique. (Spray Gun / hose handling, air & paint pressure controlling,)	184. Knowledge & Inspect spray gun holding and stroke adjustment, Paint adjustment, air adjustment techniques. (15 hrs.)  185. Spraying practice on the surface like as edges, corner, square, round & curved area. (10 hrs.)	Description of spray painting plant. Types of booth, description of booth, care and maintenance of spray booth. (09hrs)
Professional Skill 25 Hrs;  Professional Knowledge 09 Hrs	Operate the system of spray booths, Oven, cleaning & their maintenance, application of sealant component on metallic joints.	186. Operate, maintenance, troubleshooting, and safety aspects of paint spray booth. (08 hrs.)  187. Operate, and safety aspects of Oven Setting, temperature & timing. (08 hrs.)  188. Apply sealant on metallic joints. (09 hrs.)	Types of oven for painting. Description of oven and its care.  Sealant - Definition and description. Purpose of sealant application - edge protection; prevention of water leakage. (Hiding the metal joint/clinch). (09hrs)
Professional Skill 50 Hrs;  Professional Knowledge 18 Hrs	Perform aspect ratio mixing of paint, hardner& solvent. Measure Viscosity of paint. Operate the Spray painting system.	189. Paint preparation & mixing for spray painting. (05 hrs.)  190. Practice to Measure the viscosity of paint. (10 hrs.)  191. Spray Painting practice on ornamental objects, with deferent types of paints. (10 hrs.)	Paint viscosity - importance, method of the paint viscosity. Paint preparation & mixing for different application. (09hrs)
		192. Spraying metallic primer on metal surface. (05 hrs.)  193. Apply Car patch, Putty, Filler on metallic surface & prepare it. (10 hrs.)	Introduction and uses of Pressure feed. (09hrs)

		<p>194. Spraying Surfacer on primed or putty finish surface. (05 hrs.)</p> <p>195. Spraying finish Top Coat on prepared job. (05 hrs.)</p> <p>* Use enamel/ N.C. paints. (Or latest paints.)</p>	
<p>Professional Skill 100 Hrs;</p> <p>Professional Knowledge 36 Hrs</p>	<p>Identify and apply of spray painting in Home appliances, Agricultural equipment's, Machines, Automotive Bodies etc.</p>	<p>196. Prepare the surface of home appliances (ex- fan, cooler, fridge, washing machine etc.). (07 hrs.)</p> <p>197. Priming &amp; surfacing on home appliances. (09 hrs.)</p> <p>198. Apply finish undercoat &amp; top coat on home appliances. (09 hrs.)</p> <p>* Use enamel/ N.C./ P.U. paints-Solid/ Metallic/ Pearl/.</p>	<p>Airless and Electrostatic Spray painting. (09hrs)</p>
		<p>199. Prepare the surface of machine (ex- lath, drilling, grinding, compressor, suing machine etc.). (07 hrs.)</p> <p>200. Priming &amp; surfacing on machine. (09 hrs.)</p> <p>201. Apply finish undercoat &amp; top coat on machine. (09 hrs.)</p> <p>* Use Enamel/ Epoxy/N.C./ P.U. /paints. (Or latest paints.)</p>	<p>Process of article and machine painting. (09hrs)</p>
		<p>202. Prepare the Tow wheeler body and spares surface. (07 hrs.)</p> <p>203. Priming &amp; surfacing the Tow wheeler body and spares surface. (09 hrs.)</p> <p>204. Apply finish undercoat &amp; top coat on Tow wheeler body and spares surface. (09 hrs.)</p>	<p>Car: Process of repainting. (Removal of dent, car patch, putty process, metal primer, surface, paint) Spray painting. Types of paint defects &amp; its remedies. Importance of polishing, removal defects by polishing. (18hrs)</p>

		<p>Use Automotive paints. Apply Graphic sticker on painted surface properly &amp; apply lacquer coat evenly. Use Enamel/ N.C./ P.U. paints/- Solid/ Metallic. (Or latest paints.)</p> <p>205. Identify the parts of Electrostatic gun assembly &amp; operate it carefully. (08 hrs.)</p> <p>206. Identify the parts of Airless gun assembly &amp; operate it carefully. (08 hrs.)</p> <p>207. Demonstrate practical of Different types of Spray painting, Industrial Painting system by video. (09 hrs.)</p>	
<p>Professional Skill 100 Hrs;  Professional Knowledge 36 Hrs</p>	<p>Removal of dents &amp; recover the damaged accidental area. Repaint &amp; recovering damaged area.</p>	<p>208. Disassemble essential damage parts, inspect &amp; mark denting area. Choose &amp; decide process tools for denting. (10 hrs.)</p> <p>209. Removed dent on marked area, apply essential method. (18 hrs.)</p> <p>210. Do sanding or burn on denting area &amp; apply primer &amp; surface. Apply putty layer on necessary area evenly. (16 hrs.)</p> <p>211. Use wet sanding, level denting surface area, apply thin coat of surface. (06 hrs.)</p> <p>212. Masking on unwanted area properly. (07 hrs.)</p> <p>213. Match the shade Overlay proper equally on unmask area. (07 hrs.)</p> <p>214. Unmasked the mask area</p>	<p>Removal of defects by polishing. Removal dented area on the different surface, types of denting process. (27hrs)</p>

		<p>carefully &amp; checkout properly &amp; touch-up it by necessary process. (05 hrs.)</p> <p>215. Apply final coat rub and wax properly &amp; matched it. (06 hrs.)</p>	
		<p>216. Demonstrate knowledge of Paint defects &amp; its remedies. (video). (05 hrs.)</p> <p>217. Check &amp; Find out different paint defects (run down, sagging, pin hole, orange peel, oil &amp; water spot, over/dry spray, uncover shade variation etc.). (05 hrs.)</p> <p>218. Mark the defected area, Decide Techniques &amp; apply remedies properly. Make finished surface. (15 hrs.)</p>	Types of paint defects & its remedies. Importance of polishing, removal defects by polishing. (09hrs)
Professional Skill 25 Hrs;  Professional Knowledge 09 Hrs	Finish special effects for Modern furniture.	219. Process Finish special effects on different furniture & different surface. (like as-colour gradations, malty tones applying, different textures, etc.). (25 hrs.)	Furniture making is a multiple skills, using different applications on one object like Painting, Polishing, Varnishing, Waxing, staining, PU coating textures creating etc. (09hrs)
Professional Skill 25 Hrs;  Professional Knowledge 09 Hrs	Identify different types of powder coating and apply the Powder coating technique in appropriate place.	<p>220. Prepare &amp; Clean the metallic article in chemical (degreasing, de-rusting, activation, phospheting, passivation &amp; water rainssing as required etc.) (08 hrs.)</p> <p>221. Proceed powder coating on cleaned article &amp; bake it in oven in appropriate temperature &amp; timing. (17 hrs.)</p>	Operating system of Powder coating technique. Chemical cleaning process, Types of coating powders. (09hrs)

Professional Skill 25 Hrs;  Professional Knowledge 09 Hrs	Integrate quality testing for various Paints & Painted films.	222. Demonstrate knowledge of Paint defects & its remedies. (video). (10 hrs.) 223. Test the quality of paints & Painted surfaces by various method & instruments. (15 hrs.)	Different types of paints & painted surface testing equipments, Types of testing methods. Use & care. (09hrs)
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**Industrial Visit / Project Work**

**Broad areas:**

- a) Make a Sample of different painting types of defects on metal plates.
- b) Decorate small furniture or article.
- c) Paint & decorate kids Toys by spray.(ex-small cars, doll, etc.)
- d) Powder coating article like as gate lamp assembly, keychain, metallic toys.