

Detailed syllabus for the post of
Junior Instructor - (Mechanic Auto Body Painting) in Industrial Training
Department - Cat No: 320/2024 - Total Marks :100

Module No	Name	Topic	distribution of marks
1	Basic fastening & fitting operation	Micrometres	2
		Micrometre adjustments	1
		Vernier callipers	1
		different types of screws, nuts, studs & bolts, locking devices	2
		Riveting tools	1
		different type of cutting tools	1
		Parts of a file, specification, Grade, shape	1
		Drilling machines	1
		Total	10
2	Basic electricity	Electricity principles	1
		Ohm's law	1
		Voltage, Current, Resistance	3
		Power, Energy	2
		Voltmeter, ammeter	2
		Ohmmeter, Multimeter	1
		Total	10
3	2-stroke and 4 stroke, C.I engine and S.I Engine	Internal & external combustion engines	2
		Classification of IC engines, Principle & working of 2&4-stroke diesel engine	3
		Differentiate between 2-stroke and 4 stroke, C.I engine and S.I Engine	3
		Technical terms used in engine	2
		Engine specification	2
		Classification of body shop	1
		Description of vehicle body and chassis	1
		Total	14
4	Compressor Air system	Basic requirement for compressed air systems	1
		Type of Compressor- construction of Diaphragm compressor, Piston type compressor-single stage and two stage, rotary screw air compressor	2
		Performance of air compressor	1
		Horse power, delivery volume, displacement, Free air delivery,	2
		compressor volumetric efficiency, Air and Fluid Control Equipment,	2
		Distribution system, regulator, lubricator, different type air purification method	1
		Total	9

Mod	Name	Topic	distributio
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5	Refinishing Materials	Primers and sealers	2
		Types of Paints	1
		Composition of paints	1
		Abrasives and Abrasive materials	1
		Body fillers	1
		Ingredient, characteristics and Application of body filler & putties	3
		Total	9
6	Corrosion Protection	Safety and general Precautions	2
		Corrosion	1
		Causes of corrosion	1
		Anticorrosion Materials	1
		Cost and estimate, Direct repair programs, Estimate time	2
		Total	7
7	Refinishing equipment's and Procedures	Spray gun and its parts	4
		Types of Spray guns	3
		Airless spray gun system	1
		Electrostatic Spray gun System	1
		Types of Spray booth	2
		Basic spray coats	1
		Methods of refinishing	2
		Applying single stage paints	1
8	Vehicle surface preparation	Total	15
		Paint removal methods-Mechanical & Chemical	4
		Types of Grit and Numbering	2
		wet sanding and dry sanding	2
		Liquid masking system	1
		Wax and Grease remover	1
9	Colour matching and Customized painting	Total	10
		Introduction to Colour	1
		Primary, Secondary and territory colours	2
		Value, Hue, tint, Chroma, saturation, richness	3
10	Painting defects & Remedies	Total	6
		orange peel, runs and sags, sand scratch swelling, fish-eyes blushing, bleeding, blistering, cracking, Paint wrinkling, chalking etc..	8
		Rubbing compound, Using buffers and polishers	2
		Total	10

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper.

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