

## LAB ASSISTANT GRADE III CHEMIST &amp; METALLURGIST

Sl No.	Topics		No. of Questions
I.	Basic fundamentals of Mechanical Testing i.e. Tensile Testing, Impact Testing, Load Deflection Testing, Bend Test etc.		4 to 8
II.	Basic knowledge of various types of Equipments & Machines used in testing.		3 to 6
III.	Basic knowledge of materials like Steel, Cast-Iron, Non-ferrous Metals, Rubber, Plastics & Composites.		6 to 8
IV.	a)	Estimation of C, Mn, Si, S, P, Cr, Ni & Mo & other elements in Steel & Cast Iron & their effects.	2 to 3
	b)	Testing of Non-ferrous Metals & Alloys.	2 to 4
	c)	Fundamentals of Electroplating & Testing of various Electro-plated coach components.	2 to 5
V.	a)	Painting Schedule in coaches & Paint defects.	2 to 4
	b)	Testing of ROZ Primer, Synthetic Enamels & P.U. Paints.	2 to 4
VI.	Testing of Rubber & Rubber products, L.P. Sheets, Wood, Adhesives, PVC, Rexine, Plywood Foam & FRP items.		3 to 6
VII.	Oils & Lubricants: Testing of Oils & Lubricants, Grease etc.		3 to 5
VIII.	Non-Destructive Testing:		
	a)	Knowledge of X-Rays testing & Gamma Rays Examination of welding and steel castings. Film Developing & fundamentals of Radiography.	2 to 5
	b)	Principles of Ultrasonic Testing.	2 to 4
	c)	Magnaflux & Dye Penetrant Testing.	2 to 3
TOTAL			50