Annexure I

Training Delivery Plan

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Program			
Name:	Mechanic/Fitter		
Qualification			
Pack Name			
& Ref. ID	Mechanic/Fitter & R	ef ID: MIN /Q0306	
Version No.	1.0	Version Update Date	26/09/2019
Pre-	Education: Minimum	Class VIII Pass	
requisites to		n Graduate	
Training (if	Experience: 0-1 years	s related experience	
any)			
Training	By the end of this pro	ogram, the participants will be	e able to:
	 Take direction fr for the repair an Assist Mechanic Assist mechanic Assist mechanic Assist mechanic Assist mechanic Assist in changi brake and brake To assist technic To dispose of w Carry out prelim vibration, leak, s Issue spare part and spares requ Follow safety m others (including To assist technic performance beine Carry out Dry a RPM. Fabricate plate, machine and eq Barricade the dr Read work instru- manufacturers. Discuss repetitive 	ork instruction from Fitter / Tecl om Technician and identify rigid d maintenance job on the mack /Fitter to execute preventive main in overhauling of subassembli- ing the seal kit of hydraulic cy- e system. cians in checking of machine b aste material and broken parts hinary & visual checks. Assist pillage, accumulation etc. s after obtaining Technician's a ired for the job to the worksite. easures during operations to g members of the public) is not hicians in checking of all ga- fore handing over and recomma- acetylene and arc welding. O angle, channel etc and to rep- uipment. op zone if welding cutting is be- uctions and standard operating at manual and process docur re issue in any equipment with municate to Operators, Techn	aaintenance schedule. ies like engine, transmission, final drive etc. /linders. Assist in performing the overhaul of efore handing over. at appropriate place. technician in identifying any unusual noise approval and to carry all the tools and tackles ensure that the health and safety of self of at risk. uges, indicators and sensor and machine issioning. perate grinding wheel safely and at correct pair some of the breakdown parts of vehicle eing performed at height. procedures (SOP). ments, check lists given by the Equipment

Facilitator Guide

SI.	Module	Module Session NOS		NOS		Training	
No.	Name	Name	Session Objectives	Reference	Methodology	Tools/Aids	Duration
			 Describe the overview of a 		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	8
1	Introduction	Introducti on to mine	 mine- open cast & u/g mine. Differentiate between the types of mines and know details of the mine he is working in. Restate Mine Organization, time keeping, need for discipline and punctuality 	MIN/Q0313 KA3,KA4,	 Mine Visit to Open Cast and Underground 	 Model of Opencast Mine 3D Video 	8
2	Introduction	Brief - descriptio	Learn about mining cycle of operation, different types of mining method,	MIN/Q0313 KA1,KA2,KA5 ,KA6,KA7, KA8,KA9	 Instructor Led Training Demonstrati on Lecture Mine Visit to 	 Projector Laptop Model of 	8
	_	n about mining cycle	mining machineries etc		Open Cast and Underground	Opencast Mine • Video	8
			 Identify the minimum requirement to become a certified Mechanic/Fitter. 		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	8
3	Introduction	Introducti on to Mechanic /Fitter	 Describe the work area of Mechanic/Fitter. Learn about the role and responsibility of Mechanic/Fitter. Identify the opportunities available for 	Bridge model			
	Mechanical Maintenanc e of Machinery	Performin g Maintena nce	 Mechanic/Fitter. To clean the work area and assist the Technician in conducting daily 	MIN 0313 PC1, PC2, PC3, PC4,	 Instructor Led Training Demonstrati on 	ProjectorLaptop	8
4		Checks	inspection and	PC5, PC6,	Lecture		8

	 and communicate the same to Mechanic/Fitter. To check gauges, indicators, and sensor are fully functional. Observe any alarm message and report the same to Technician or Operator. Follow all the work instruction from Fitter / Technician related to routine maintenance. Check oil and lubricant level and perform greasing & lubrication in accordance with charts; check and changes oil, oil filters, replaces hoses, belts, water pumps and other parts. Check fain belts, hoses, wiper blades and other safet equipment; check water and ant inflate tires and in filters and ari filters and ther balaes and other drive components. Check taris threes are to check shows as necessary. Check balts, chains and other drive components. Check trank chains and other drive components. Check trank chains and ther drive chains and the	
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	-		•	Take direction		•	Instructor		D · · ·	
	anc			from Technician			Led Training	•	Projector	
	λı			and identify right		•	Demonstrati	٠	Laptop	
	ine			machine spares,			on			
	ach			tools and tackles		•	Lecture			4
	Ň			required for the						
	of			repair and						
	JM IM			maintenance job						
	enance HEMM			on the machines.						
	nte H		٠	To get necessary						
	lair			authorization and		•	Hands on		Daily Report	
	2			approval from			Practical		Sheet	
	nica			Technician and						
	har			mechanic for						
	Mechanical Maintenance of Machinery and HEMM			issuance of the	MIN 0313					
_	2	Taking		spares and other	PC8, PC9					
5		Directions		materials.	1 00, 1 00	<u> </u>				8
						•	Instructor		- • •	
	e of nd						Led Training	٠	Projector	
	nce nce Y a		•	To get the items		•	Demonstrati	٠	Laptop	
	echanic ntenanc hinery HEMM			issued from store			on			
	Mechanical Maintenance of Machinery and HEMM			and carry right		•	Lecture			4
	N Mai Ma	Material		tools and tackles	MIN 0313	•	Hands on			
6	2 -	from		required to attend	PC10		Practical			
6		Store		the breakdown.						8
	f					•	Instructor		D · · ·	
	e e						Led Training	•	Projector	
	and					•	Demonstrati	•	Laptop	
	HE		٠	Assist			on			
	aint			Mechanic/Fitter		•	Lecture			4
	cal Maintenance nery and HEMM			to execute						
	Mechanical Maintenance of Machinery and HEMM			preventive		•	Mine Visit			
	echanie Machi			maintenance		•	Guest			
	sch Ma	Assisting		schedule	MIN 0313	1	Lecture			
	ž	Technicia	•	Assist in installing			20000			
7		n		new machines.	PC11, PC12					8
	- nc	Assisting	•	Assist mechanic in		•	Instructor			
	Mecnanical Maintenanc e of Machinery	in		overhauling of	MIN 0313		Led Training	•	Projector	
	chan nten e of chine	Maintena		subassemblies like		•	Demonstrati	٠	Laptop	
	Иai Иai	nce		engine,	PC13, PC14,		on			
8				transmission, final	PC15	•	Lecture			6

				1	I	I	
			 drive etc. To clean the machine components and assist the Mechanic/Fitterin fitment of the right components. Assist in changing the seal kit of hydraulic cylinders. Assist in performing the overhaul of brake and brake system. 		• Hands on Practical	 Mechanical Tools Spare seals of hydraulic systems 	8
	intenance of nd HEMM		 To assist technicians in checking of machine before handing over. 		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	5
9	Mechanical Maintenance of Machinery and HEMM	Disposing Waste	 To dispose of waste material and broken parts at appropriate place. 	MIN 0313 PC16, PC17	• Hands on Practical	 Mechanical Tools Cleaning tools and equipment 	8
	nery and HEMM		 Basic knowledge of checklist for machine and component condition Manufacturer's 		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	6
10	Mechanical Maintenance of Machinery and HEMM	Lubricatio	 With indication of a guidelines for proper maintenance. Know right lubricants for conveyors, drives, gearboxes, chain and sprocket drives and greasing point of different machines. 	MIN 0313 KB1, KB2, KB3	• Hands on Practical	Manufacturer guides of machines in mining	8
11	Wecnanıcaı Maintenanc e of Machinery	Tools and Equipmen t	 Know the right set of tools and tackles required for 	MIN 0313 KB4, KB5, KB6	 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	6

			 Maintenance. Procedure of acquisitions of tools and tackles from store and return policies. different types of jacks and lifting tackles and their capacity 		• Hands on Practical	 Jacks of different capacity Lifting Mechanism 	8
12	Mechanical Maintenance of Machinery and HEMM	Routine check	 How to operate compressors and another mine machinery with or without load. How to dismount subassemblies like engine, transmission, final drive etc. 	MIN 0313 KB7, KB8	 Instructor Led Training Demonstrati on Lecture Hands on 	 Projector Laptop Compressor Engine 	6 Hr
13	Mechanical Maintenance of Machinery and HEMM	Writing Skills	 Fill the respective maintenance checklist Create small notes or work documents for Fitter or Technician for any machine problem or observation. 	MIN 0313 SA1, SA2, SA3	 Practical Instructor Led Training Demonstratio n Lecture 	 Transmission Projector Laptop 	8
	Mechanical Mainter		 Write requisition to internal customer on the requirement of tools, gauges etc 		 Hands on Practical 		8

HEMM		 Read the instructions given in the checklist Read the types of lubricants, grease etc. Read the problems 		ר] • ז	Instructor Led Training Demonstratio n Lecture	•	Projector Laptop	6
Mechanical Maintenance of Machinery and HEMM	Reading Skills	reported by the operators Read work instructions and standard operating procedures (SOP). Read internal memos and circulars, safety instructions. Read equipment manual and process documents, check lists given by the Equipment manufacturer s.	MIN 0313 SA4, SA5, SA6, SA7, SA8, SA9		Hands on Practical			8
12 Maintenancal e of Machinery	Oral Communi cation	 Discuss repetitive issue in any equipment with 	MIN 0313 SA10, SA11, SA12, SA13, SA14	⊤] ● 1	Instructor Led Training Demonstratio n Lecture	•	Projector Laptop	6

r	· · ·		1		1	1
		 supervisor. Effectively understand about operational requirements. Answer queries or explain problems related to machine condition to Technicians, Supervisor, Operators and others. Effectively communicate to Operators, Technicians and others about job completion and any observations. Attentively listen and comprehend the information given by 		• Hands on Practical		4
		given by				
Maintenanca Maintenanc e of Machinery	Profession al Skills	 speaker. Decide when to conduct the routine maintenance Decide on 	MIN 0313 & MIN0314 SB1, SB2, SB3, SB4,	 Instructor Led Training Demonstratio n Lecture 	ProjectorLaptop	6

			 types of tools and tackles to be used. Planning of work according to the schedule Planning for cleaning of the equipment. Detect problems in day to day tasks. Report problem that he can't resolve to appropriate authority Identify sources of support that can be availed for problem solving. Analyze repetitive issues and discuss with supervisor/me chanic. Use common sense and make judgments during day to day basis. 	SB5, SB6, SB7, SB8, SB9	• Hands on Practical	• Mechanical Tools	8
17	Breakdown Servicing	Daily inspection and fault reporting	 To clean the work area and broken assemblies; assist the Technician in conducting inspection and check of the machine. Carry out preliminary & 	MIN 0314 PC1, PC2, PC3	 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	6

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			 visual checks. Assist technician in identifying any unusual noise, vibration, leak, spillage, accumulation etc. To check drives, gauges, indicators, and sensor. Observe any alarm message and report the same to Technician or Fitter. 		•	Hands on Practical	•	Mechanical Tool	8
			 To clean the 		•	Instructor			
			machine			Led Training	•	Projector	
			components and assist the		•	Demonstrati	•	Laptop	
			Mechanic/Fitterin		•	on Lecture			6
			fitment of the right						-
18	Breakdown Servicing	Assist in repairing the fault	 components. Issue spare parts after obtaining Technician's approval and to carry all the tools and tackles and spares required for the job to the worksite. To carry out required lubrication, greasing and oil change as required. To assist technicians in checking of all gauges, indicators and sensor and machine performance before handing over and recommissioni ng. 	MIN 0314 PC4, PC5, PC6, PC7	•	Hands on Practical	•	Mechanical Tool	8

Mechanic/Fitter

19	Breakdown Servicing	Assist in simple gas cutting, welding, grinding, chipping, brazing etc.	 Carry out Dry acetylene and arc welding. Operate grinding wheel safely and at correct RPM. Fabricate plate, angle, channel etc. and to repair some of the breakdown parts of vehicle, machine and equipment. Barricade the drop zone if welding cutting is being performed at height. 	MIN 0314 PC8, PC9, PC10	 Instructor Led Training Demonstrati on Lecture Hands on Practical 	 Projector Laptop Dry Acetylene gas welding machine Arc Welding Machine Grinding Machine Steel Plates Chipping Hammer, Chisel 	8
20	Breakdown Servicing	Basic Maintena nce	 Basic knowledge of checklist for machine and component condition Manufacturer's guidelines for proper maintenance. 	MIN 0314 KB1, KB2	 Instructor Led Training Demonstrati on Lecture Hands on Practical 	 Projector Laptop Mine Machinery Mechanical Tool 	3
21	Breakdown Servicing	Lubrication	 Know right lubricants for conveyors, drives, gearboxes, chain 	MIN 0314	 Instructor Led Training Demonstrati on Lecture 	 Projector Laptop Lubricants Machine with conveyor, belts, gear box and chain- sprockets Mechanical 	3
	Breakdowi		and sprocket drives and greasing point of different machines	КВЗ	 Hands on Practical 	 Mechanical Tool kit Lubricants Machine with conveyor, belts, gear box and chain- sprockets 	8

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	Servicing	Tools and	 Know the right set of tools and tackles required for Maintenance. Procedure of acquisitions of 		 Instructor Led Training Demonstrati on Lecture 	 Projector Laptop Jack and lifting tools Mechanical Toolkit 	3
22	Breakdown Servicing	Equipmen t	 tools and tackles from store and return policies. Different types of jacks and lifting tackles and their capacity 	MIN 0314 KB4, KB5, KB6	 Hands on Practical 	 Cleaning Tools and Equipment Jack and lifting tools Mechanical Toolkit 	8
23	Breakdown Servicing	Compress or and Machiner y Servicing	 How to operate compressors and another mine machinery with or without load. 	MIN 0314 KB7	 Instructor Led Training Demonstrati on Lecture Problem Solving 	 Projector Laptop Compressor HEMM Maintenance Toolkit 	3
24	Breakdown Servicing	Reading and Writing Skills	 Fill the respective maintenance checklist. Create small 	MIN 0314 SA1, SA2, SA3, SA4, SA5,	 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	3

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			 notes or work documents for Fitter or Technician for any machine problem or observation. Write requisition to internal customer on the requirement of tools, gauges etc. The Read the instructions given in the checklist. Read the types of lubricants, grease etc. Read the types of lubricants, grease etc. Read the problems reported by the operators. Read work instructions and standard operating procedures (SOP). Read internal memos and circulars, safety instructions. Read equipment manual and process documents, check lists given by the Equipment manufacturers. 	SA6, SA7, SA8, SA9,	• Hands on Practical	Logbook	8
25	Breakdown Servicing	Oral Communi cation	 Discuss repetitive issue in any equipment with supervisor. Effectively understand about 	MIN 0314 SA10, SA11, SA12, SA13, SA14	 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	3

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			 operational requirements. Answer queries or explain problems related to machine condition to Technicians, Supervisor, Operators and others. Effectively communicate to Operators, Technicians and others about job completion and any observations. Attentively listen with full attention and comprehend the information given by 				
26	Safety Comply Workplace	Safety Guidelines	 speaker. Comply with safety, health, security and environment related 		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	8
	Health & S with V	Guidelines	regulations/gui delines at the work site.	MIN/N 0901 PC2	 Hands on Practical 	 PPE Health and Safety Guide 	8
27	Health & Safety Comply with	Personal Protective Equipmen t	 Use Personal Protective Equipment (PPE) and other safety 	MIN/N 0901 PC1, PC3, PC4	 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	3

			 gear such as seat belt, body protection, respiratory protection, eye protection, ear protection and hand protection. Follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at rick. 		• Hands on Practical	 PPE Health and Safety Guide 	
28	Health & Safety Comply with Workplace	Worksite Safety	 not at risk. Carry out operations as per the manufacturer's and worksite related health and safety guidelines. Follow the manufacturer's instructions for care and safe operation of the equipment 	MIN/N 0901 PC5	 Instructor Led Training Demonstrati on Lecture Hands on Practical 	 Projector Laptop Health and Safety Guide 	8 3
29	Health & Safety Comply with	Hazardous Material Handling	 Handle the transport, storage and disposal of hazardous 	MIN/N 0901 PC6	 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	3

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			 materials and waste in compliance with worksite health, safety and environmental guidelines. Follow safety regulations and procedures with regard to worksite hazards and risks. 		• Hands on Practical	• Health and Safety Guide	8
			Operate		Instructor		
	gce		various grades of fire		Led TrainingDemonstrat	-	
	-kpla		extinguishers,		on		
	Noi		as applicable.		Lecture		3
30	Health & Safety Comply with Workplace	Fire Extinguish er	 Knowledge of different types of fire extinguisher and its application Location of fire extinguisher ,fire hydrants and emergency assembly points. 	MIN/N 0901 PC7,PC11, KA3, KB5	• Hands on Practical	• Fire Extinguisher	8
	/ith		 Health, safety and environment policy of the 		 Instructor Led Training Demonstrat on Lecture 	-	3
31	Health & Safety Comply with Workplace	Health and Safety Policy	 company. Reporting and documentation procedure of HSE and security matters. 	MIN/N 0901 PC8, KA1, KA4, KB1	 Hands on Practical 	 Health and Safety Policy 	8
32	Health & Safety Comply with	Emergenc y Plan	 Respond promptly and appropriately to an accident/ incident or 	MIN/N 0901 PC9,PC10,KA 2	 Instructor Led Training Demonstrat on Lecture 	-	3

			emergency				
			situation, within limits of your role and responsibility. Record and report details related to operations, incidents or accidents, as applicable Contact details of all key personnel to contact in case of emergency.		• Hands on Practical	 Emergency Plan 	8
33	Health & Safety Comply with Workplace	Case study	constants		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	3
	неа Сс		 Case study- major/minor accident 	Bridge module	 Hands on Practical 		8
	Health & Safety Comply with Workplace		 Working of Personal Protective Equipment and 		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	2
34	Heal Coi	PPE Case Study	fire extinguishers • Case study	MIN/N 0901 KB5	 Hands on Practical 	 Fire Extinguisher 	8
	omply with ce		Knowledge of emergency response		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	3
35	Health & Safety Comply with Workplace	Ergonomi cs	 plan of the worksite. Awareness on health risks that may exist at worksite. Knowledge of ergonomics. 	MIN/N 0901 KB2, KB3, KB4	 Hands on Practical 	 Emergency Escape Plan 	8
	Safety vith		 Support in administering basic first aid and report to concerned team 		 Instructor Led Training Demonstrati on Lecture 	ProjectorLaptop	2
36	Health & Safety Comply with	First-Aid	members, as required, in case of an accident	MIN/N 0901 PC8	 Hands on Practical 	• First Aid Kit	8

	Comply with		 Conduct or ask for tool box talk before start of any job. 		•	Instructor Led Training Demonstrati on Lecture	 Projector Laptop	2
37	Health & Safety	First Aid Kit and Toolbox		MIN/N 0901 PC5	•	Hands on Practical	• Toolbox	8

38	Entrepreneurship and Softskills	 Perso nal Streng ths & Value Syste ms Digital Litera 		Explain the meaning of health list common health issues Discuss tips to prevent common health issues Explain the meaning of hygiene Understand the purpose of Swacch Bharat Abhiyan Recall the functions of basic computer keys Discuss the main applications of basic computer keys Discuss the main applications of MS Office Discuss the benefits of Microsoft Outlook Discuss the benefits of ecommerce for retailers and customers Discuss how the Digital India campaign will help boost e-commerce in India Explain how you will sell a product or service on an e-commerce platform Discuss the help bonefits of e-commerce in India Explain how you will sell a product or service on an e-commerce platform Discuss the help bonst e-commerce platform Prevent Platform Pl	 Instructor Led Training Demonstrati on 	Handbook, White board, marker, computer system, projector, PPTs	
			•				
		Litera		need for CRM			
		cy: A	•	Discuss the			
		Recap		benefits of 91			
		Mone		CRM			
		У	•	Discuss the			

39	Digital Literacy	Digital Literacy	 Discuss the functions of Windows 7 or Windows 8 Discuss the functions of Microsoft Office Describe the basics of computers Know how to use internet and world wide web Understand the computer security and privacy concepts 	Self-study	Computer system, internet connection, note book	20 Hr
40		Practice sessions	8 Practice session under trainer guidance on Mechanical Maintenance and repair	Hands on Practical under guidance of instructor	All used in previous sessions	64 Hr