



## QUALIFICATION FILE

### Jumbo Drill Operator

Short Term Training (STT)  Long Term Training (LTT)  Apprenticeship

Upskilling  Dual/Flexi Qualification  For ToT  For ToA

General  Multi-skill (MS)  Cross Sectoral (CS)  Future Skills  OEM

NCrF/NSQF Level: 4

Submitted By:

Skill Council for Mining Sector (SCMS)

FIMI House, B-311,

Okhla Industrial, Phase-1

New Delhi-110020

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## Section 1: Basic Details

1.	<b>Qualification Name</b>	Jumbo Drill Operator																
2.	<b>Sector/s</b>	Mining																
3.	<b>Type of Qualification:</b> <input type="checkbox"/> New <input checked="" type="checkbox"/> Revised <input checked="" type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	<b>NQR Code &amp; version of existing/previous qualification:</b> 2022/MIN/SCMS/06984 & Version 3.0	<b>Qualification Name of existing/previous version:</b> Jumbo Drill Operator															
4.	<b>a. OEM Name</b> <b>b. Qualification Name</b> <i>(Wherever applicable)</i>	Not Applicable																
5.	<b>National Qualification Register (NQR) Code &amp;Version</b> <i>(Will be issued after NSQC approval)</i>	QG-04-MG-04058-2025-V2-SCMS & Version 4.0	<b>6. NCrF/NSQF Level:</b> 4.0															
7.	<b>Award (Certificate/Diploma/Advance Diploma/ Any Other</b> <i>(Wherever applicable specify multiple entry/exits also &amp; provide details in annexure)</i>	Not Applicable																
8.	<b>Brief Description of the Qualification</b>	A Jumbo Drill operator is responsible for the operation of a single/double/multi boom jumbo drilling rig for underground mine development and installation of roof and side support. Jumbo drill operator requires the knowledge of layout of mine workings, cross-sectional dimensions of working face, drilling and blasting pattern and design, roof and side support plan as per approved SSR (Systematic Support Rule), operation and maintenance module of jumbo drill machine. Individual will be a major contributor in increasing and enhancing the productivity of machine and manpower safety at workplace.																
9.	<b>Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</b>	<b>a. Entry Qualification &amp; Relevant Experience:</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S. No.</th> <th style="width: 60%;">Academic/Skill Qualification (with Specialization - if applicable)</th> <th style="width: 30%;">Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>12th grade Pass (or equivalent)</td> <td style="text-align: center;">-</td> </tr> <tr> <td>2.</td> <td>11th grade pass</td> <td>1.5 year relevant experience in Mining Industry</td> </tr> <tr> <td>3.</td> <td>10th grade pass</td> <td>3 years relevant experience in Mining Industry</td> </tr> <tr> <td>4.</td> <td>Previous relevant Qualification of NSQF Level 3.0:Jack Hammer Operator</td> <td>3 years relevant experience in Mining Industry</td> </tr> </tbody> </table> <b>b. Age:</b> 20 Years		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	12th grade Pass (or equivalent)	-	2.	11th grade pass	1.5 year relevant experience in Mining Industry	3.	10th grade pass	3 years relevant experience in Mining Industry	4.	Previous relevant Qualification of NSQF Level 3.0:Jack Hammer Operator	3 years relevant experience in Mining Industry
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2.	11th grade pass	1.5 year relevant experience in Mining Industry																
3.	10th grade pass	3 years relevant experience in Mining Industry																
4.	Previous relevant Qualification of NSQF Level 3.0:Jack Hammer Operator	3 years relevant experience in Mining Industry																

10.	<b>Credits Assigned to this Qualification, Subject to Assessment</b> (as per National Credit Framework (NCrF))	16	<b>11. Common Cost Norm Category (/II/III)</b> (wherever applicable): I																				
12.	<b>Any Licensing requirements for Undertaking Training on This Qualification</b> (wherever applicable)	Not Applicable																					
13.	<b>Training Duration by Modes of Training Delivery</b> (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1" data-bbox="952 384 2051 600"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>130:00</td> <td>290:00</td> <td>-</td> <td>-</td> <td>420:00</td> </tr> <tr> <td>Online</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)				Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	130:00	290:00	-	-	420:00	Online	-	-	-	-	-
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																		
Classroom (offline)	130:00	290:00	-	-	420:00																		
Online	-	-	-	-	-																		
14.	<b>Aligned to NCO/ISCO Code/s</b> (if no code is available mention the same)	NCO-2015/8111.0100, NCO-2015/8111.0200																					
15.	<b>Progression path after attaining the qualification</b> (Please show Professional and Academic progression)	NSQF Level 5 (Vertical) - Mining Mate/Sirdar																					
16.	<b>Other Indian languages in which the Qualification &amp; Model Curriculum are being submitted</b>	Hindi																					
17.	<b>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:																					
18.	<b>Is the Job Role Amenable to Persons with Disability</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", specify applicable type of Disability:																					
19.	<b>How Participation of Women will be Encouraged</b>	By creating awareness in women and training them																					
20.	<b>Are Greening/ Environment Sustainability Aspects Covered</b> (Specify the NOS/Module which covers it)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MIN/N1702, MIN/N1704																					
21.	<b>Is Qualification Suitable to be Offered in Schools/Colleges</b>	Schools <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																					
22.	<b>Name and Contact Details of Submitting / Awarding Body SPOC</b> (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Mr. Navneet Kumar Email : coo@skillcms.in, scms@skillcms.in Contact No.: +91-11-26814593 Website : https://www.skillcms.in/																					
23.	<b>Final Approval Date by NSQC:</b> 6 May 2025	<b>24. Validity Duration:</b> 6 months	<b>25. Next Review Date:</b> 6 November 2025																				

## Section 2: Module Summary

### NOS/s of Qualifications

(In exceptional cases these could be described as components)

#### Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

*Th.-Theory Pr.-Practical OJT-On the Job Man.-Mandatory Training Rec.-Recommended Proj.-Project*

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Prepare Jumbo drill machine for operation	MIN/N1208 & V2.0	Core	4	5	40:00	110:00	-	-	150:00	30	50	-	20	100	15
2.	Perform Operations on Jumbo Drill	MIN/N1209 & V2.0	Core	4	5	30:00	120:00	-	-	150:00	30	50	-	20	100	25
3.	Perform routine maintenance and troubleshooting on the jumbo drill machine	MIN/N1210 & V2.0	Core	4	3	30:00	60:00	-	-	90:00	30	50	-	20	100	25
4.	Employability Skills (30 Hours)	DGT/VSQ/N0101 & V1.0	Non-Core	2	1	30:00	00:00	00:00	-	30:00	20	30	-	-	50	10
<b>Duration (in Hours) / Total Marks</b>					<b>14</b>	<b>130:00</b>	<b>290:00</b>	<b>-</b>	<b>-</b>	<b>420:00</b>	<b>110</b>	<b>180</b>	<b>-</b>	<b>60</b>	<b>350</b>	<b>75</b>

#### Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Follow Health, Safety, and Environmental guidelines for Underground Metalliferous Mines	MIN/N1702 & V2.0	Core	3.5	2	20:00	40:00	-	-	60:00	30	50	-	20	100	25

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
2.	Follow Health, Safety, and Environmental guidelines for underground coal mines	MIN/N1704 & V2.0	Core	3.5	2	20:00	40:00	-	-	60:00	30	50	-	20	100	25
<b>Duration (in Hours) / Total Marks</b>						<b>40:00</b>	<b>80:00</b>	<b>00:00</b>	<b>-</b>	<b>120:00</b>	<b>60</b>	<b>100</b>	<b>-</b>	<b>40</b>	<b>200</b>	<b>50</b>

Optional NOS/s: Not Applicable

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
<b>Duration (in Hours) / Total Marks</b>																

### Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

**Minimum Pass Percentage – Aggregate at qualification level: 70%** (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

**Minimum Pass Percentage – NOS/Module-wise: Not Applicable%** (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

### Section 3: Training Related

1.	<b>Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)</b>	Class 12 <sup>th</sup> pass with 6 years of relevant experience required in Jumbo Drill Operations. OR ITI (Mechanical Engineering) pass with 6 years of relevant experience required in Jumbo Drill Operations. OR
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		<p>Diploma (Mechanical Engineering) with 5 years of relevant experience required in Jumbo Drill Operations.                  OR                  B-Tech (Mechanical Engineering) with 4 years of relevant experience required in Jumbo Drill Operations.                  OR                  CITS-NCIC (Machinist &amp; Operator, Advance Machine Tool) with 1 year of Relevant experience in mining.                  AND                  Certified for Job role “Jumbo Drill Operator” and Job Role “Trainer (VET and Skills)” with minimum accepted score of 80% in each</p>
2.	<b>Master Trainer’s Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)</b>	<p>Class 12<sup>th</sup> pass with 6 years of relevant experience required in Jumbo Drill Operations.                  OR                  ITI (Mechanical Engineering) pass with 6 years of relevant experience required in Jumbo Drill Operations.                  OR                  Diploma (Mechanical Engineering) with 5 years of relevant experience required in Jumbo Drill Operations.                  OR                  B-Tech (Mechanical Engineering) with 4 years of relevant experience required in Jumbo Drill Operations.                  OR                  CITS-NCIC (Machinist &amp; Operator, Advance Machine Tool) with 1 year of Relevant experience in mining.                  AND                  Certified for Job role “Jumbo Drill Operator” and Job Role “Trainer (VET and Skills)” with minimum accepted score of 90% in each</p>
3.	<b>Tools and Equipment Required for Training</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If “Yes”, details to be provided in Annexure)
4.	<b>In Case of Revised Qualification, Details of Any Upskilling Required for Trainer</b>	None

### Section 4: Assessment Related

1.	<b>Assessor’s Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	<p>Class 12<sup>th</sup> pass with 8 years of Relevant experience required in Jumbo Drill Operations.                  OR                  ITI (Mechanical Engineering) with 8 years of Relevant experience required in Jumbo Drill Operations.                  OR                  Diploma (Mechanical Engineering) with 7 years of relevant experience required in Jumbo Drill Operations.                  OR                  B-Tech (Mechanical Engineering) with 6 years of relevant experience required in Jumbo Drill Operations.                  OR                  CITS-NCIC (Machinist &amp; Operator, Advance Machine Tool) with 1 year Relevant experience in mining.                  AND</p>
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		Certified for Job role “Jumbo Drill Operator” and Job Role “Assessor (VET and Skills)” with minimum accepted score of 80% in each
2.	<b>Proctor’s Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	Class 12 <sup>th</sup> pass with 6 years of relevant experience required in Jumbo Drill Operations. OR ITI (Mechanical Engineering) pass with 6 years of relevant experience required in Jumbo Drill Operations. OR Diploma (Mechanical Engineering) with 5 years of relevant experience required in Jumbo Drill Operations. OR B-Tech (Mechanical Engineering) with 4 years of relevant experience required in Jumbo Drill Operations. OR CITS-NCIC (Machinist & Operator, Advance Machine Tool) with 1 year of Relevant experience in mining. AND Certified for Job role “Jumbo Drill Operator” and Job Role “Trainer (VET and Skills)” with minimum accepted score of 80% in each
3.	<b>Lead Assessor’s/Proctor’s Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	Class 12 <sup>th</sup> pass with 8 years of Relevant experience required in Jumbo Drill Operations. OR ITI (Mechanical Engineering) with 8 years of Relevant experience required in Jumbo Drill Operations. OR Diploma (Mechanical Engineering) with 7 years of relevant experience required in Jumbo Drill Operations. OR B-Tech (Mechanical Engineering) with 6 years of relevant experience required in Jumbo Drill Operations. OR CITS-NCIC (Machinist & Operator, Advance Machine Tool) with 1 year Relevant experience in mining. AND Certified for Job role “Jumbo Drill Operator” and Job Role “Assessor (VET and Skills)” with minimum accepted score of 90% in each
4.	<b>Assessment Mode (Specify the assessment mode)</b>	Tablet based/ Online
5.	<b>Tools and Equipment Required for Assessment</b>	<input checked="" type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

## Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	<b>Latest Skill Gap Study (not older than 2 years) (Yes/No):</b> Yes
2.	<b>Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):</b> No

3.	<b>Government /Industry initiatives/ requirement (Yes/No):</b> Yes
4.	<b>Number of Industry validation provided:</b> 21
5.	<b>Estimated nos. of persons to be trained and employed:</b> 250
6.	<b>Evidence of Concurrence/Consultation with Line Ministry/State Departments:</b> Yes If "No", why:

## Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	<b>Annexure:</b> NCrF/NSQF level justification based on NCrF level/NSQF descriptors (Mandatory)	Attached
2.	<b>Annexure:</b> List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Attached
3.	<b>Annexure:</b> Detailed Assessment Criteria (Mandatory)	Attached
4.	<b>Annexure:</b> Assessment Strategy (Mandatory)	Attached
5.	<b>Annexure:</b> Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning")	Not Applicable
6.	<b>Annexure:</b> Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	Filled
7.	<b>Annexure:</b> Acronym and Glossary (Optional)	Filled
8.	<b>Supporting Document:</b> Model Curriculum (Mandatory – Public view)	Attached
9.	<b>Supporting Document:</b> Career Progression (Mandatory - Public view)	Attached
10.	<b>Supporting Document:</b> Occupational Map (Mandatory)	Attached
11.	<b>Supporting Document:</b> Assessment SOP (Mandatory)	Attached
12.	<b>Any other document you wish to submit:</b>	No

### Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
<b>Professional Theoretical Knowledge/Process</b>	The job process requires the individual to concentrate on the job at hand and complete it efficiently and effectively without any accidents so diligence and hardworking are desired attributes for individuals performing this role. He must also demonstrate strong work ethics, an ability to communicate courteously with coworkers, and must be good with following instructions of Supervisor.	Jumbo Drill Operator is responsible for the operation of a single and /or double boom jumbo drilling rig for underground development mining with the installation of ground support.	4
<b>Professional and Technical Skills/ Expertise/ Professional Knowledge</b>	Specifications and details of single/ double boom jumbo drilling rig and their specific use. Various levers and switches in order to operate the Drill properly. Different types of drill bits and their uses. Different components of drilling machines and their functioning such as assemblies, transmission, instrument panels, control systems, etc. Importance of sensitization towards different genders and persons with disabilities (PWD)	The jumbo drill operator will visually inspect the jumbo drill for any damage and perform servicing as per the Original Equipment Manufacturer (OEM) recommendations. Perform the drilling operations using various leavers and switches, as per the orders from the supervisor. Perform preventive maintenance of the jumbo drill and associated equipment as per the SOP.	4
<b>Employment Readiness &amp; Entrepreneurship Skills &amp; Mind-set/Professional Skill</b>	Check various controls, gauges, warning lamp and other safety devices, hose connections, carriage and superstructure in the drill, etc. Ensure that the drilling site is clear of other mine workers to avoid any accidents. Mark up the faces in accordance with geological, statutory and survey specifications	Provide full attention for production work in given time and make decisions pertaining to the concerned area of work. Detect problems in the jumbo drill equipment and able to resolve them. Also able to make decision in emergency condition.	4
<b>Broad Learning Outcomes/Core Skill</b>	Check that drilling equipment is in safe operating condition. Perform visual checks to detect cracks, wear and tear or any damage that could result in structural weakness. Confident about single/ double boom jumbo drilling rig, Diesel Engines, Electric Motors and compressors. Operation of different assemblies and sub-assemblies such as undercarriage, compressors, hydraulic/pneumatic systems	Records and note down the routine work and observation and comply task list related to safety aspect such as fire-fighting process, handling Explosive safely, drilling, roof dressing, etc. and notify the same to senior. Hence, Communication written and oral, with minimum required clarity, skill of basic arithmetic and algebraic principles are required.	4
<b>Responsibility</b>	This role is responsible for the operation of a single and/ or double boom jumbo drilling rig for underground development mining with installation of ground support. The Jumbo Operator independently performs the drill operation for mineral excavation.	Works independently with single and/ or double boom jumbo drilling rig as per the instruction of supervisor/ Shift In- charge/Mines Manager.	4

**Annexure: Tools and Equipment (Lab Set-Up)**  
(to be as per Industry needs)

List of Tools and Equipment  
**Batch Size: 30**

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Posters for describing different types of Mines and associated operations	Standard	1
2.	Single and/ double boom jumbo drilling rig	Standard	1
3.	Gauges	Standard	1
4.	Warning lamp	Standard	15
5.	Drilling machine	Standard	1
6.	Steel tape 1 meter	Standard	1
7.	Direct reading vernier calliper	Standard	1
8.	Hydraulic jack	Standard	1
9.	Jib crane	Standard	1
10.	Chiselbits/compressed air/ couplings/rods etc.	Standard	1
11.	Diesel Engines	Standard	1
12.	Electric Motors and compressors	Standard	1
13.	Battery charger	Standard	1
14.	Hammer	Standard	1
15.	Signages	Standard	1 set
16.	Helmet	Standard	15
17.	Dust Mask	Standard	15
18.	Safety Goggles	Standard	15

19.	Ear Plug	Standard	15
20.	Reflective Jacket	Standard	15
21.	Gum Boots/Safety shoes	Standard	15
22.	Fire Extinguisher Cylinders	Standard	1
23.	First Aid Box	Standard	1
24.	Fire Fighting Charts	Standard	1
25.	First Aid Charts	Standard	1
26.	Different types of log book	Standard	1
27.	SSR	Standard	1
28.	EMP	Standard	1
29.	Gloves	Standard	1
30.	Harness	Standard	1
31.	Safety Belt	Standard	5
32.	Fire extinguisher	Standard	1
33.	Types of log book	Standard	1
34.	MCDR	Standard	1
35.	MCR	Standard	1
36.	Company's SOP	Standard	1
37.	Diagrams showing quarries, overhangs, fencing	Standard	1
38.	Samples or charts showing different types of rocks to be encountered	Standard	1
39.	Mines Act	Standard	1

40.	"5-S" Charts	Standard	1
41.	Monthly Maintenance/Defect sheets	Standard	1
42.	Systematic Support Plan (SSP)	Standard	1
43.	Systematic Support Rules (SSR)	Standard	1
44.	Self-rescue apparatus	Standard	1
45.	Line Diagram of Ventilation Circuit	Standard	1
46.	Alcohol based sanitisers	Standard	1
47.	Gas Detector	Standard	1
48.	Safety Lamp	Standard	1
49.	Self-Contained Breathing Apparatus	Standard	1
50.	Diagrams of Armoured face conveyor	Standard	1
51.	Charts of coal mines occupational diseases	Standard	1
52.	CMR	Standard	1
53.	MMR	Standard	1
54.	MRR	Standard	1

#### Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard, Pin Up boards, Demonstration Table
2. LCD Projector
3. Computer/Laptop with Internet
4. Trainer Chair and Table
5. Tables
6. Whiteboard markers

### Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1.	Alxa Chemical	Madan Singh Gujar	Proprietor	PLOT-26, JAYNARAYANPURI, NIWARU ROAD, JHOTWARA, JAIPUR, RAJASTHAN-302012	9829094130	alxachemical@gmail.com	
2.	Caltex Mining Pvt Ltd	Kartik Paul	Executive	8A, Rajmohan Street, 3rd Floor, Kolkata - 700 073	09874388894	caltexminingit@rediffmail.com	
3.	East India Minerals Limited	Pushpak Mishra	GM (Commercial)	6, Waterloo St, Esplanade, Chowringhee North, Bow Barracks, Kolkata, West Bengal 700069	9830059283	pushpak_mishra@hotmail.com	
4.	GS Atwal and Co	Vikram Dewan	Purchase Head	4B, Little Russel St, Kankaria Estates, Park Street area, Kolkata, West Bengal 700071	9830595259	gsengineers@gmail.com	
5.	Integrated Coal and Mining Limited (ICML)	Niladri Topodar	Assistant Manager (HR/IR)	Hindustan Colas, 6, Church Ln, B.B.D. Bagh, Kolkata, West Bengal 700001	9830987657	nilidri.topodar@rpgs.com	
6.	Maheshwari Mining Pvt. Ltd	Jayram Koushik	VP	Shilpangan, Block - LB, Plot-1, Sector-III, Module - 1, 4th Floor, CF Building, Salt Lake, Kolkata - 700098	9810706023	jayaram.koushik@maheshwaree.com	
7.	Amnex	Abhijit Anand	Group Head	Mondeal Heights, Wing-B, 1201/1202/1301, Sarkhej - Gandhinagar	97277 47451	info@amnex.com	

				Hwy, Ahmedabad, Gujarat: 380015			
8.	Jindal Steel & Power	Vivek Gupta	Corporate Head	Jindal Centre 12, Bhikaiji Cama Place, New Delhi - 110 066, INDIA	91 11 26188340- 50	info@jindalsteel.com	
9.	Naaraayani	Khurshid Alam	Managing Partner	A1/3 Umesh Enclave, Main Road, Adityapur, Dist- Saraikela- Kharswan, Jharkhand- 831013	6767351080	info@naaraayani.com	
10.	Mine Magma	M Manjunath Reddy	Proprietor	131, 2nd Floor, 1st Main, 2nd Stage, Kengeri Satellite Town, (Beside Corporation Bank), Bangalore - 560 060	99867 07359	contact@minemagma.com	
11.	JSW Cement	Tinu Sule	Group Head - HR	JSW Centre Bandra Kurla Complex, Near MMRDA Grounds, Bandra East, Mumbai 400 051	1800 266 266 1	info@jswcement.in	
12.	BGR Mining and Infra Ltd	Veepasha Kulkarni	Head BU HR	BGR Mining & Infra Ltd. #8-2-596/R, Road No.10, Banjara Hills, Hyderabad, Telangana, India - 500034	+91 40 23351932	careers@bgrmining.com	

13.	Saurashtra Cement Limited	G.M Trivadi	Gen. Manager (P & HRD)	Saurashtra Cement Limited Off Veraval Kodinar Highway Sidheegram - 362 276 Taluka Sutrapada Distr. Junagadh (Gujarat)	02876 - 268200 / 02876 - 308200 / 286530 - 34	pralhad@mehtagroup.com	
14.	Dalmia Bharat Cement	Avnvs Murthy	Unit Head- Ariyalur unit	Dalmia Bharat Group, 11th & 12th Floor, Hansalaya Building, 15 Barakhamba Road, New Delhi 110001	+91 11 23465100	corpcomm@dalmiabharat.com	
15.	ACC LIMITED	G. Srivastava	HR Head	Adani Corporate House Shantigram, S. G. Highway, Khodiyar, Ahmedabad - 382 421, Gujarat, India	+91 79-2555 5555	acchelp@adani.com	
16.	VPR	K Vijay Kumarj	DGM-HR	D.No.8-2-293/82/A/1259, 3rd Floor,  Plot No.1259, Lakshmi Towers,  Road No.36, Jubilee Hills,  Hyderabad - 500 033  Telangana	040 - 23551862/63	<a href="mailto:info@vprmininginfra.com">info@vprmininginfra.com</a>	
17.	Rungta Mines Limited	G Vidhyanathan	Group Head Mining division	RUNGTA MINES LIMITED is 8A EXPRESS TOWER, 42A SHAKESPEARE SARANI , KOLKATA,	+91 (06553) 226846	INFO@THERUNGTAGROUP.COM	

				West Bengal, India - 700017.		
18.	Elixir Engineering	H P Rajesh Rao	HR General Manager	6, 1st Floor, SFHS Shopping Area, Nandini Layout, Bangalore - 560 096.	91-8023196645	info@elixirengineering.com/elixireng@gmail.com
19.	Shyam Metallic	Birendra Kumar	Assistant General Manager	Tower 7th Floor, Trinity, 83, E Topsia Rd, Kolkata, West Bengal 700046	1800 202 2233	contact@shyamgroup.com
20.	Sainik Mining and Allied Services Ltd.	Lokendra Sethi	Plant Head	7th Floor, Corporate Tower, Ambience Mall NH-8, Gurgaon - 122001, Haryana	+91 124-2719000	info@sainikmining.com
21.	Thriveni Sainik	Swathi Sinha	Corporate Communication & HR Head	Barwadih Coal Mining Project, Langatu, Barkagaon, Hazaribag - 825311, Jharkhand, India	91 6546-223115	info@thrivenisainik.com

### Annexure: Training & Employment Details

#### Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025-26	50	50	20	20	Not applicable	Not Applicable
2026-27	100	100	40	40	Not applicable	Not Applicable
2027-28	100	100	40	40	Not applicable	Not Applicable

Data to be provided year-wise for next 3 years

**Training, Assessment, Certification, and Placement Data for previous versions of qualifications:**

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
3.0	2022-23	0	0	0	Not available	Not available	Not available	Not available	Not available	Not applicable	Not Applicable	Not applicable	Not Applicable
3.0	2023-24	0	0	0	Not available	Not available	Not available	Not available	Not available	Not applicable	Not Applicable	Not applicable	Not Applicable
3.0	2024-25	2	2	2	Not available	Not available	Not available	Not available	Not available	Not applicable	Not Applicable	Not applicable	Not Applicable

*Applicable for revised qualifications only, data to be provided year-wise for past 3 years.*

**List Schemes in which the previous version of Qualification was implemented:**

1. Industry funded (NON-PMKVY)
- 2.

**Content availability for previous versions of qualifications:**

Participant Handbook     Facilitator Guide     Digital Content     Qualification Handbook     Any Other:

**Languages in which Content is available:** English and Hindi

## Annexure: Blended Learning

**Blended Learning Estimated Ratio & Recommended Tools:**

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	<input checked="" type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge	<ul style="list-style-type: none"> <li>• Books/ e-books</li> <li>• Presentations</li> <li>• Reference Material</li> <li>• Audio / Video Modules</li> </ul>	Only Offline. Online only on exceptional cases.
2	<input checked="" type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	<ul style="list-style-type: none"> <li>• Self-Learning Videos</li> <li>• Broadcasts</li> <li>• Mobile Learning</li> <li>• Curated Digital content</li> </ul>	Only Offline. Online only on exceptional cases.

3	<input checked="" type="checkbox"/> Showing Practical Demonstrations to the learners	<ul style="list-style-type: none"> <li>• Video Content</li> <li>• E-Resource library</li> <li>• AR/ VR/ XR</li> </ul>	Only Offline
4	<input checked="" type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	<ul style="list-style-type: none"> <li>• Training tools (tools list attached)</li> <li>• Video Play</li> <li>• Presentations</li> </ul>	Only Offline
5	<input checked="" type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice	<ul style="list-style-type: none"> <li>• Online Question Bank</li> <li>• Mobile Quick test app</li> <li>• MCQ based tests</li> </ul>	Only Offline. Online only on exceptional cases.
6	<input checked="" type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations	<ul style="list-style-type: none"> <li>• Assessment engine for Essays</li> <li>• Up-loadable file examinations</li> <li>• Mock test sessions</li> </ul>	Tablet based/Online
7	<input checked="" type="checkbox"/> On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	<ul style="list-style-type: none"> <li>• Online tests</li> <li>• Offline assessments</li> </ul>	Only Offline

### Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>MIN/N1208: Prepare Jumbo drill machine for operation</b>	<i>Conduct pre-operation checks to ensure jumbo drilling rig is safe to use</i>	<b>30</b>	<b>50</b>	-	<b>20</b>
	PC1. prioritize and schedule work required by the department	1	2	-	1
	PC2. perform minor repairs, such as changing striker bars, couplings, water tubes and hose clamps	1	3	-	1
	PC3. check various controls, gauges, warning lamp and other safety devices, to ensure drilling equipment is in safe operating condition	2	3	-	2
	PC4. ensure that crown blocks are mounted Securely	2	3	-	2
	PC5. check all hose connections are in order, in case of a compress air drill	2	3	-	2
	PC6. perform visual checks to detect cracks, wear and tear or any damage that could result in structural weakness	2	3	-	1
	PC7. apply grease to all greasing pins and pivot Points	2	3	-	1
	PC8. check under carriage and superstructure in the drill	2	3	-	1
	PC9. clear the drilling site of other mine workers to avoid any accidents	2	3	-	1

	PC10. follow the manufacturer's instructions which apply to the care and safe operation of the drill	2	3	-	1
	PC11. keep footplates and steps clean and free from mud, dirt and oil	1	3	-	1
	PC12. conduct prestart check including oil level, coolant level, air pressure, air leakages, etc.	2	3	-	1
	PC13. check earthing of drill machine and other safety aspects such as fire, etc.	2	3	-	1
	PC14. ensure working area is safe for personnel and equipment to perform work such as ensuring electrical installations and other services are clear of the drilling area	2	3	-	1
	PC15. check ground conditions at the face and implement ground control measures, according to site requirements	2	3	-	1
	PC16. record all activities in maintenance logbook before starting the drill	1	3	-	1
	PC17. inform supervisor of problems that are beyond scope of his role	2	3	-	1
	<b>Total Marks</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>
	<i>Performing operation</i>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>
<b>MIN/N1209: Perform Operations on Jumbo Drill</b>	PC1. follow plans to determine location, spacing, depth and angle of holes	2	3	-	1
	PC2. assess ground conditions at the work area, sounding, scaling and washing-down face	2	3	-	1
	PC3. implement ground control according SSR	2	2	-	2
	PC4. mark up the faces in accordance with geological, statutory and survey specifications	1	2	-	1
	PC5. start and stop the Jumbo Drill machine safely	1	2	-	1
	PC6. drill a number of drive drill patterns using a mechanised hydraulic or electric Jumbo drill to suit conditions of the drive	2	3	-	1
	PC7. install the ground support except cable bolts and shotcrete	1	3	-	1
	PC8. install the mine services when required	1	3	-	1
	PC9. ensure all necessary precautions are adhered to before towing the drill to a distant site	1	3	-	1
	PC10. ensure that the OEM prescribed limit for angles of inclination are followed during setting up of drill	1	3	-	1
	PC11. complete daily reports on equipment and workplace and submit written and verbal reports to the supervisor	1	3	-	1
	PC12. work with technical and supervisory staff in quality and safety initiatives	1	3	-	1
	PC13. place guards at all entrances to the blast and blast according to project standards and remove the guards after blastings	2	3	-	1
	PC14. assist with other aspects of the operation such as mine services, long hole drill, loading/mucking, when required	2	2	-	1
	PC15. check for Audio Video (AV) alarm	2	2	-	1
	PC16. reduce downtime and wastages	2	2	-	1
	PC17. communicate with hand signals and coded sounds of horns	2	2	-	1
	PC18. demonstrate caution against hazards of machine in operation	2	3	-	1
	PC19. use life line extended from the base as the team proceeds	2	3	-	1

	<b>Total Marks</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>
<b>MIN/N1210: Perform routine maintenance and troubleshooting on the jumbo drill machine</b>	<i>Routine maintenance in accordance with the manufacturer's recommendations and company procedures</i>	<b>22</b>	<b>35</b>	<b>-</b>	<b>15</b>
	PC1. track machine operating hours (drilling hours and engine hours) to assess the right service schedule	2	4	-	2
	PC2. clean air filter dust bowls	2	3	-	2
	PC3. clean footplates, pedals and steps free from mud, dirt, ice and snow	2	3	-	2
	PC4. drain water and sediment /fuel separators	2	3	-	2
	PC5. replenish coolants, lubricants and fluids	2	3	-	1
	PC6. grease all greasing pins and pivot points	2	3	-	1
	PC7. check battery levels and condition of the terminals and carrying out minor adjustments if required	2	4	-	1
	PC8. check and maintain the tyre rims, air pressure, wheel nuts and treads.	2	3	-	1
	PC9. check structural safety of the machine	2	3	-	1
	PC10. complete timely and legibly daily/weekly maintenance sheets	2	3	-	1
	PC11. perform routine inspections on equipment	2	3	-	1
	<i>Troubleshooting</i>	<b>8</b>	<b>15</b>	<b>-</b>	<b>5</b>
	PC12. ensure the machine is on firm and level ground before attempting to carry out any maintenance activity.	2	3	-	1
	PC13. ensure that no maintenance task on the engine is performed when running or still hot.	2	3	-	1
	PC14. ensure proper Lock out and Tag out scenario to avoid any untoward incident triggered due to unknowingly operation of machine / system under maintenance	2	3	-	1
	PC15. complete timely and legibly defect sheets as provided by the company	1	3	-	1
PC16. prepare communication materials, manuals and other written materials related to technical issues, programs or systems	1	3	-	1	
<b>Total Marks</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>	
<b>DGT/VSQ/N0101: Employability Skills (30 Hours)</b>	<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>
	PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
	<i>Constitutional values – Citizenship</i>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
	<i>Becoming a Professional in the 21st Century</i>	<b>1</b>	<b>3</b>	<b>-</b>	<b>-</b>
	PC3. explain 21st Century Skills such as Self- Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
	<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	<b>-</b>	<b>-</b>
	PC4. speak with others using some basic English phrases or sentences	-	-	-	-
	<i>Communication Skills</i>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>
	PC5. follow good manners while communicating with others	-	-	-	-

	PC6. work with others in a team	-	-	-	-
	<i>Diversity &amp; Inclusion</i>	1	1	-	-
	PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
	PC8. report any issues related to sexual harassment	-	-	-	-
	<i>Financial and Legal Literacy</i>	3	4	-	-
	PC9. use various financial products and services safely and securely	-	-	-	-
	PC10. calculate income, expenses, savings etc.	-	-	-	-
	PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
	<i>Essential Digital Skills</i>	4	6	-	-
	PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
	PC13. use internet and social media platforms securely and safely	-	-	-	-
	<i>Entrepreneurship</i>	3	5	-	-
	PC14. identify and assess opportunities for potential business	-	-	-	-
	PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
	<i>Customer Service</i>	2	2	-	-
	PC16. identify different types of customers	-	-	-	-
	PC17. identify customer needs and address them appropriately	-	-	-	-
	PC18. follow appropriate hygiene and grooming standards	-	-	-	-
	<i>Getting ready for apprenticeship &amp; Jobs</i>	1	3	-	-
	PC19. create a basic biodata	-	-	-	-
	PC20. search for suitable jobs and apply	-	-	-	-
	PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
	<b>Total Marks</b>	<b>20</b>	<b>30</b>	-	-
<b>MIN/N1702: Follow Health, Safety and Environmental guidelines for Underground Metalliferous Mines</b>	<i>Follow work-site health and safety measures</i>	<b>24</b>	<b>42</b>	-	<b>17</b>
	PC1. undertake "The Take-5 (Personal Risk Assessment)" before commencement of any work	-	2	-	2
	PC2. comply with safety, health and security – related regulations/guidelines at the mine e.g. follow Standard Operating Procedure (SOP) for material handling in underground (U/G) mine	1	3	-	-
	PC3. operate various types of fire extinguishers to control different types of fire at a worksite when required	1	4	-	1
	PC4. check that roof supporting is as per Systematic Support Plan (SSP) and approved Systematic Support Rules (SSR) while undertaking work in an area	1	1	-	-
	PC5. take precaution against occupational health hazards (like dust, water, mine gases etc.) due to U/G working environment	1	2	-	1
	PC6. use self-rescue apparatus, appropriately when Required	-	4	-	1
	PC7. follow appropriate emergency response procedure during emergency such as fire, water inrush, fall of ground etc.	1	2	-	1
	PC8. follow precautions against U/G electrical Appliances	2	2	-	2
	PC9. follow appropriate Standard Operating Procedure while working near any isolated and sealed off area of the mine	2	2	-	1
	PC10. follow appropriate safety practices while traveling on U/G haul roads, incase of post blast fumes and misfire	2	4	-	-

	PC11. follow the manufacturer's instructions for care and safe operation of mine machinery and equipment	1	2	-	1
	PC12. identify the working ventilation district from line diagram of ventilation circuit to direct air to the working face	1	1	-	-
	PC13. follow Safety Management Plan (SMP) and Emergency Management Plan (EMP)	1	-	-	-
	PC14. follow gas detecting alarm signal on leakage of inflammable gases and laid out procedure to ensure safety	1	2	-	1
	PC15. follow process for reporting any unsafe act/condition in work area to the concerned person	-	2	-	1
	PC16. use underground mine communication System	-	1	-	-
	PC17. ensure positive isolation near the work place if applicable	1	1	-	1
	PC18. use appropriate PPE as per the requirement	2	4	-	2
	PC19. maintain hand hygiene by washing hands with alcohol based sanitisers/soap	1	1	-	1
	PC20. disinfect the machine/tools before and after work/task	1	1	-	-
	PC21. maintain hygiene at the work site	1	1	-	1
	PC22. report any symptoms of illness to the shift- incharge	1	-	-	-
	PC23. identify six directional hazards at workplace and take decisions accordingly	2	-	-	-
	<i>Follow environmental guidelines</i>	<b>6</b>	<b>8</b>	-	<b>3</b>
	PC24. identify the environmental impact of mining related operations and follow steps to reduce those impact	1	2	-	-
	PC25. follow the mineral conservation practices in U/G mining operations to achieve optimum ore or mineral recovery	-	1	-	-
	PC26. ensure that the stowing practices produce minimum disturbance to the surface	1	1	-	-
	PC27. ensure that the subgrade ore is carried out to surface and stacked separately at the earmarked place	1	-	-	1
	PC28. ensure the productivity of the machine for material/fuel conservation	1	1	-	-
	PC29. follow the process for collecting, storing and disposing of the hazardous material and waste (like used oil, lubricant, battery, etc.) in compliance with worksite guidelines	1	1	-	1
	PC30. follow the "5-S" practice at work site like cleaning oil from ground (to avoid soil from getting damaged), etc.	1	2	-	1
	<b>Total Marks</b>	<b>30</b>	<b>50</b>	-	<b>20</b>
<b>MIN/N1704: Follow Health, Safety, and Environmental guidelines for underground coal mines</b>	<i>Follow work-site health and safety measures</i>	<b>24</b>	<b>43</b>	-	<b>14</b>
	PC1. follow preventive measures against firedamp, whitedamp, blackdamp etc.	1	1	-	-
	PC2. use the flame safety lamp for detecting the methane gas as per Standard Operating Procedure (SOP)	-	1	-	-
	PC3. undertake "The Take-5 (Personal Risk Assessment)" before commencement of any work	1	1	-	1
	PC4. comply with safety, health and security-related regulations/guidelines at the mine e.g. SOP for material handling in underground (U/G) mine	1	1	-	1
	PC5. ensure that oil, grease, canvas or other inflammable material are stored in fire-proof receptacle	-	1	-	-
	PC6. ensure that every instrument, apparatus and equipment are DGMS approved before these are used	1	1	-	-

PC7. ensure that Armoured face conveyor (AFC) and chocks must be kept in a straight line for every cycle of operations and tightened up to the setting pressure while keeping it in full contact with the roof, applicable for longwall mining	3	3	-	-
PC8. provide first aid to an injured person	1	2	-	1
PC9. follow safety precautions against spontaneous heating of the coal	1	1	-	-
PC10. operate various types of fire extinguishers to control different types of fire at worksite, if required	-	2	-	-
PC11. ensure that no person is traveling/working/staying under unsupported roof	1	-	-	-
PC12. check that roof supporting is as per Systematic Support Plan (SSP) and approved Systematic Support Rules (SSR) while undertaking work in an area	-	2	-	1
PC13. take precaution against occupational health hazards (like dust, water, mine gases etc.) due to U/G working environment	-	1	-	1
PC14. use self-rescue apparatus appropriately when Required	-	2	-	-
PC15. follow Safety Management Plan (SMP) and Emergency Management Plan (EMP)	1	2	-	1
PC16. follow precautions against U/G electrical Appliances	2	2	-	1
PC17. take proper care against damage and accidents while loading, transporting, dismantling and erecting of roof supports	1	2	-	-
PC18. follow appropriate SOP while working near any isolated and sealed off area of the mine	1	1	-	1
PC19. ensure that the roof and the sidewalls of the mine face (or newly exposed area of the mines) have been scaled/dressed properly	1	1	-	-
PC20. take relevant safety precautions during depillaring operation in UCM	-	2	-	1
PC21. follow appropriate safety practices while traveling on U/G haul roads, incase of post blast fumes and misfire	1	1	-	-
PC22. follow the manufacturer's instructions for care and safe operation of mine machinery and equipment	-	1	-	1
PC23. identify the working ventilation district from line diagram of ventilation circuit to direct air to the working face	-	1	-	1
PC24. follow laid out SOP in case of alarm signal for leakage of inflammable gases	1	1	-	-
PC25. follow the process of reporting any unsafe act/condition in the working area to the concerned person	-	1	-	1
PC26. use underground mine communication System	-	1	-	-
PC27. ensure positive isolation near the work place if applicable	1	1	-	-
PC28. use appropriate Personal Protective Equipment (PPE) as per the requirement	2	2	-	1
PC29. maintain hand hygiene by washing hands with alcohol based sanitisers/soap	-	1	-	-
PC30. disinfect the machine/tools before and after work/task	1	1	-	-
PC31. maintain hygiene at the work site	1	1	-	-
PC32. report any symptoms of illness to the shift- incharge	1	1	-	-
PC33. identify six directional hazards at workplace and take decisions accordingly	-	1	-	1
<i>Follow environmental guidelines</i>	<b>6</b>	<b>7</b>	-	<b>6</b>
PC34. identify the environmental impact of mining related operations and follow steps to reduce those impact	1	1	-	1
PC35. follow the mineral conservation practices in U/G mining operations to achieve optimum ore or mineral recovery	1	1	-	1

	PC36. ensure that the stowing practices produce minimum disturbance to the surface	1	1	-	-
	PC37. ensure that the subgrade coal is carried out to surface and stacked separately at the earmarked place	1	1	-	1
	PC38. ensure the productivity of the machine for material/fuel conservation	1	1	-	1
	PC39. follow the process for collecting, storing and disposing of the hazardous material and waste (like used oil, lubricant, battery, etc.) in compliance with worksite guidelines	-	1	-	1
	PC40. follow the "5-S" practice at work site like cleaning oil from ground (to avoid soil from getting damaged), etc.	1	1	-	1
	<b>Total Marks</b>	<b>30</b>	<b>50</b>	<b>-</b>	<b>20</b>
	<b>Grand Total</b>	<b>170</b>	<b>280</b>	<b>-</b>	<b>100</b>

### Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

*Mention the detailed assessment strategy in the provided template.*

#### Assessment system Overview: -

Assessment will be carried out by SCMS affiliated assessment partners. Based on the results of assessment, SCMS certifies the learners. Candidates have to pass online theoretical assessment which is approved by SCMS.

The assessment will have both theory and practical components in 30:70 ratio.

While theory assessment is summative and an online written exam; practical will involve demonstrations of applications and presentations of procedures and other components. Practical assessment will also be summative in nature.

#### Testing Environment: -

Training partner has to share the batch start date and end date, number of trainees and the job role.

Assessment is fixed for a day after the end date of training. It could be next day or later. Assessment will be conducted at the training venue.

Question bank of theory and practical will be prepared by assessment agency and approved by SCMS. From this set of questions, assessment agency will prepare the question paper. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on theoretical knowledge of the subject.

The theory and practical assessments will be carried out on same day. If numbers of candidates are many, more assessors and venue will be organized on same day of the assessment.

Assessment			
Assessment Type	Formative or Summative	Strategies	Examples
Theory	Summative	Written Examination	Knowledge of facts related to the job role and functions. Understanding of principles and concepts related to the job role and functions
Practical	Summative	Structured tasks	Presentation
Viva	Summative	Questioning and Probing	Mock interview on topics

### Assessment Quality Assurance framework

Only certified assessor can be assigned for conducting assessment. Provision of 100 % video recording with clear audio to be maintained and the same is to be submitted to SCMS.

The training partner will intimate the time of arrival of the assessor and time of leaving the venue.

### Methods of Validation: -

Unless the trainee is registered, the person cannot undergo assessment. To further ensure that the person registered is the person appearing for assessment, id verification will be carried out. Aadhar card number is required of registering the candidate for training. This will form the basis of further verification during the assessment. Assessor conducts the assessment in accordance with the assessment guidelines and question bank as per the job role. The assessor carries tablet with the loaded questions. This tablet is geo tagged and so it is monitored to check their arrival and completion of assessment. Video of the practical session is prepared and submitted to SCMS. Random spot checks/audit is conducted by SCMS assigned persons to check the quality of assessment. Assessment agency will be responsible to put details in SIP.

SCMS will also validate the data and result received from the assessment agency.

### Method of assessment documentation and access

The assessment agency will upload the result of assessment in the portal. The data will not be accessible for change by the assessment agency after the upload. The assessment data will be validated by SCMS assessment team. After upload, only SCMS can access this data. SCMS approves the results within a week and uploads on SIP.

### Annexure: Acronym and Glossary

#### Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

#### Glossary

Term	Description
<b>National Occupational Standards (NOS)</b>	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
<b>Qualification</b>	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
<b>Qualification File</b>	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.

<b>Sector</b>	A grouping of professional activities on the basis of their main economic function, product, service or technology.
<b>Long Term Training</b>	Long-term skilling means any vocational training program undertaken for a year and above.

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