



### **What are Occupational Standards (OS)?**

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding



## Contents

1. Introduction and Contacts.....P.1
2. Qualifications Pack.....P.2
3. Glossary of Key Terms .....P.4
4. NOS Units.....P.6

## Introduction

### **Qualifications Pack- Mobile Equipment Operator**

SECTOR: Iron & Steel

SUB-SECTOR: Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling

REFERENCE ID: ISC/Q0015

ALIGNED TO: NCO -2004/NIL

**Title of Job:** The job involves inspection of mobile equipment like Fork Lift truck, Skid-loader/Bob Cat, Pay Loader and JCB, as used in Steel Plant for proper working condition, loading & driving the vehicle for carrying materials from one place to another inside the plant. This job also involves carrying out basic maintenance of the equipment.

**Personal Attributes:** The job requires the candidate to concentrate on the job at hand and complete it without any accidents. Diligence, presence of mind and hardworking are the desired traits for individuals in this role. Understanding the need to take initiative and follow instructions provided by supervisor.



|             |                          |   |                  |            |
|-------------|--------------------------|---|------------------|------------|
| Job Details | Qualifications Pack Code | ISC/Q0015   |                  |            |
|             | Job Role                 | Mobile Equipment Operator   |                  |            |
|             | Credits(NSQF)            | TBD   | Version number   | 1.0        |
|             | Industry                 | Iron & Steel  | Drafted on       | 17/09/2014 |
|             | Sub-sector               | Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling | Last reviewed on | 30/12/2014 |
|             | Occupation               | Driving   | Next review date | 30/12/2015 |



| Job Role                                  | Mobile Equipment Operator   |
|---|---|
| Role Description                          | The job involves inspection (according to a checklist) of mobile equipment like Fork Lift truck, Skid-loader/Bob Cat, Pay Loader and JCB as used in Steel Plant for proper working condition, loading & driving the vehicle for carrying materials from one place to another. This also involves carrying out basic maintenance of the equipment.   |
| NSQF level                                | 3   |
| Minimum Educational Qualifications        | Class X pass<br>Valid Driving License mandatory   |
| Maximum Educational Qualifications        | ITI pass<br>Valid Driving License mandatory   |
| Training<br>(Suggested but not mandatory) | <ul style="list-style-type: none"> <li>• Technical and gallery/hand-held training (mandatory)</li> <li>• Refresher training if absent from works for a period of one year or more before re-employment (mandatory)</li> <li>• Must possess licence for heavy vehicle driving (mandatory)</li> <li>• Basic maintenance and troubleshooting (mandatory)</li> <li>• 2 weeks hands on training (mandatory)</li> <li>• Safety practices (mandatory)</li> </ul> |
| Experience                                | <ul style="list-style-type: none"> <li>• Minimum 1 year of loading, driving &amp; unloading experience with the vehicles for ITI pass, otherwise 1-2 years' experience with Class X pass.</li> <li>• In lieu of minimum qualification the incumbent should have minimum 3-4 years of experience of driving heavy vehicles</li> </ul>  |
| Occupational Standards (OS)               | <p>Compulsory:</p> <p><a href="#">ISC/N0026: Prepare the vehicle</a><br/> <a href="#">ISC/N0027: Perform mobile equipment operations</a><br/> <a href="#">ISC/N0028: Perform basic maintenance and troubleshooting of the mobile equipments</a><br/> <a href="#">ISC/N0008: Use basic health &amp; safety practices at work place</a><br/> <a href="#">ISC/N0009: Work effectively with others</a></p> <p>Optional:</p> <p>N/A</p>                        |
| Performance Criteria                      | As described in the relevant NOS units  |



Definitions

| Keywords /Terms                       | Description  |
|---------------------------------------|--|
| Core Skills/Generic Skills            | Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles. |
| Function                              | Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.                            |
| Job role                              | Job role defines a unique set of functions that together form a unique employment opportunity in an organization.  |
| Knowledge and Understanding           | Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.  |
| National Occupational Standards (NOS) | NOS are Occupational Standards which apply uniquely in the Indian context  |
| Occupation                            | Occupation is a set of job roles, which perform similar/related set of functions in an industry.   |
| Organisational Context                | Organisational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.   |
| Performance Criteria                  | Performance Criteria are statements that together specify the standard of performance required when carrying out a task.   |
| Qualifications Pack(QP)               | Qualifications Pack comprises the set of NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.   |
| Qualifications Pack Code              | Qualifications Pack Code is a unique reference code that identifies a qualifications pack.   |
| Scope                                 | Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.  |
| Sector                                | Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.  |



|                     |   |
|---------------------|---|
| Sub-Sector          | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.                |
| Sub-functions       | Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.                          |
| Technical Knowledge | Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.                    |
| Unit Code           | Unit Code is a unique identifier for a NOS unit, which can be denoted with an 'N'   |
| Unit Title          | Unit Title gives a clear overall statement about what the incumbent should be able to do.                                   |
| Vertical            | Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry. |
| Keywords /Terms     | Description   |
| NOS                 | National Occupational Standard(s)   |
| NSQF                | National Skills Qualifications Framework  |
| OEM                 | Original Equipment Manufacturer   |
| OS                  | Occupational Standard(s)  |
| QP                  | Qualifications Pack   |
| 5 S                 | Technique of maintaining orderliness –Japanese terminology  |
| CP                  | Control Plan  |
| WI                  | Work Instructions   |

Acronyms



ISC/N0026: Prepare the vehicle

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## Overview

This unit is about preparing the mobile equipment (vehicle) for activities that need to be carried out.



|   |   |
|---|---|
| Unit Code   | ISC/N0026   |
| Unit Title (Task)   | Prepare the vehicle   |
| Description   | This unit is about inspecting & preparing the Vehicle (mobile equipment) for activities that need to be carried out.  |
| Scope   | <p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Understand the job requirements according to the checklist</li> <li>• Conduct pre-operation checks according to a checklist and to ensure that the vehicle is working &amp; is safe to use</li> </ul>   |
| <b>Performance Criteria (PC) w.r.t. the Scope</b>   |   |
| <b>Element</b>  | <b>Performance Criteria</b>   |
| Understand the job requirements according to the checklist                                      | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Interpret and understand the job requirements<br/>PC2. Prepare a work plan to carry out the job</p>   |
| Conduct pre-operation checks according to a check list and to ensure the Vehicle is safe to use | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC3. Check oil levels of engine, transmission, radiator coolant and brake<br/>PC4. Check differential and hydraulic oil levels<br/>PC5. Check the hydraulic hose and ram for leakages<br/>PC6. Check condition of parking brake, main horn, reverse horn, and head light<br/>PC7. Check the various controls, gauges, warning lamp and other safety devices<br/>PC8. Check fan belt tension, electrolyte level and terminal tightness<br/>PC9. Check and adjust driving position, rear and side mirrors, seat belts<br/>PC10. Clean air filter dust bowls<br/>PC11. Drain water and sediment from the fuel tank<br/>PC12. Top up coolant and oil in engine, transmission, etc. if necessary<br/>PC13. Check electrolyte level, terminals, seating arrangements of the battery<br/>PC14. Apply grease to all greasing pins and pivot points<br/>PC15. Ensure the locking bar is in position to prevent the front and rear chassis moving and creating a crushing zone (articulated machines only)<br/>PC16. Keep footplates and steps clean and free from mud, dirt and oil.<br/>PC17. Report defects precisely to the supervisor if beyond scope of his role</p> |
| <b>Element</b>  | <b>Knowledge and Understanding</b>  |
| A. Organisational Context (Knowledge of the Company/ Organisation and its processes)            | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. Job specific documents e.g. daily maintenance checklist &amp; its importance<br/>KA2. Safety policy of the company as applicable to his role<br/>KA3. Emergency plan of the work site<br/>KA4. Risk and impact of not following defined procedures/work instructions</p>  |





|                                    |  |
|------------------------------------|--|
|                                    | KA5. Escalation matrix for reporting identified problems   |
| B. Technical Knowledge             | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. Basic functions and operation of the vehicle (Fork lift, JCB, Skid Loader/Bob cat, Pay loader) &amp; their main sub-parts like parking &amp; service brakes, boom, forks, basket, bucket etc.)</p> <p>KB2. Loading techniques under different conditions</p> <p>KB3. Basic driving rules and techniques, including front &amp; reverse movement and associated safety rules</p>  |
| <b>Skills (S) w.r.t. the scope</b> |  |
| <b>Element</b>                     | <b>Skills</b>  |
| A. Core Skills/Generic Skills      | <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. Effectively explain to supervisors, operators and helpers about equipment operation, process steps and other operational requirements, in English/Hindi/local language (E/H/LL)</p> <p>SA2. Answer the queries raised by the operative team as well as concerned departments</p>  |
| B. Professional Skills             | <p><b>Time Management</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Prioritize and execute tasks within scheduled time limit without breaking any statutory norms.</p> <p><b>Fault Diagnostic and Maintenance</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Check for damage in mobile equipment components (e.g. forks, chain, battery, motors, hydraulic ram, bucket, brakes, horn, lights etc.) and report it for rectification to the appropriate authority, if beyond his ability</p> |





## NOS Version Control

|                     |   |                  |            |
|---------------------|---|------------------|------------|
| NOS Code            | ISC/N0026   |                  |            |
| Credits(NSQF)       | TBD   | Version number   | 1.0        |
| Industry            | Iron and steel  | Drafted on       | 18/09/2014 |
| Industry Sub-sector | Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling | Last reviewed on | 30/12/2014 |
| Occupation          | Driving   | Next review date | 30/12/2015 |





SC/N0027: Perform mobile equipment operations

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## Overview

This unit is about performing operations on the mobile equipment to load, carry and transfer the material as required by the engaging department.



|  |   |
|--|---|
| Unit Code  | ISC/N0027   |
| Unit Title (Task)  | Perform mobile equipment operations   |
| Description  | This unit is about performing operations on the vehicle (mobile equipment) to transfer the material as required by the engaging department.   |
| Scope  | <p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Start &amp; operate the vehicle to lift the specific load (coils, slag, debris, bricks, slabs, zinc/lead/aluminium ingots, spares, equipment etc.) to be transferred</li> <li>• Drive the vehicle safely on the approved route</li> <li>• Discharge the load in correct &amp; safe way at the desired location</li> <li>• Park the vehicle with the arm/fork/boom/basket/bucket in lowered condition</li> </ul>   |
| Performance Criteria (PC) w.r.t. the Scope   |   |
| Element  | Performance Criteria  |
| Start & operate the vehicle to lift the specific load (coils, slag, debris, bricks, slabs, zinc/lead/aluminium ingots, spares, equipment etc.) to be transferred | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Start the engine using the push-button switch and key switch together</p> <p>PC2. Use the priming pump and pre-heater to start the engine in cold weather conditions</p> <p>PC3. Load the material to be transferred safely &amp; correctly, ensuring that it is not damaged or spilt or does not slip/fall off during loading or during journey</p>  |
| Drive the vehicle safely on the approved route   | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC4. Always wear safety belt &amp; helmet while driving</p> <p>PC5. Ensure proper functioning of rear view mirror and audio visual alarm</p> <p>PC6. Not use mobile phones while driving</p> <p>PC7. Look out for pedestrians, people working, stationary objects and hazards such as trenches, potholes, cables, caring for overhead pipes, power lines, confined space etc.</p> <p>PC8. Operate the shifting quadrant device for selecting the correct gear setting</p> <p>PC9. Ensure vehicle load and operating speed are within limits specified by the manufacturer &amp; do not cross the limits specified in the company</p> <p>PC10. Adhere to time limits given by supervisor</p> <p>PC11. Follow the road signs and locally developed signals</p> <p>PC12. Keep a safe distance from a tip edge and use an approved stop block before tipping over an edge</p> <p>PC13. Select &amp; use the right type of brake in different situations during journey</p> |



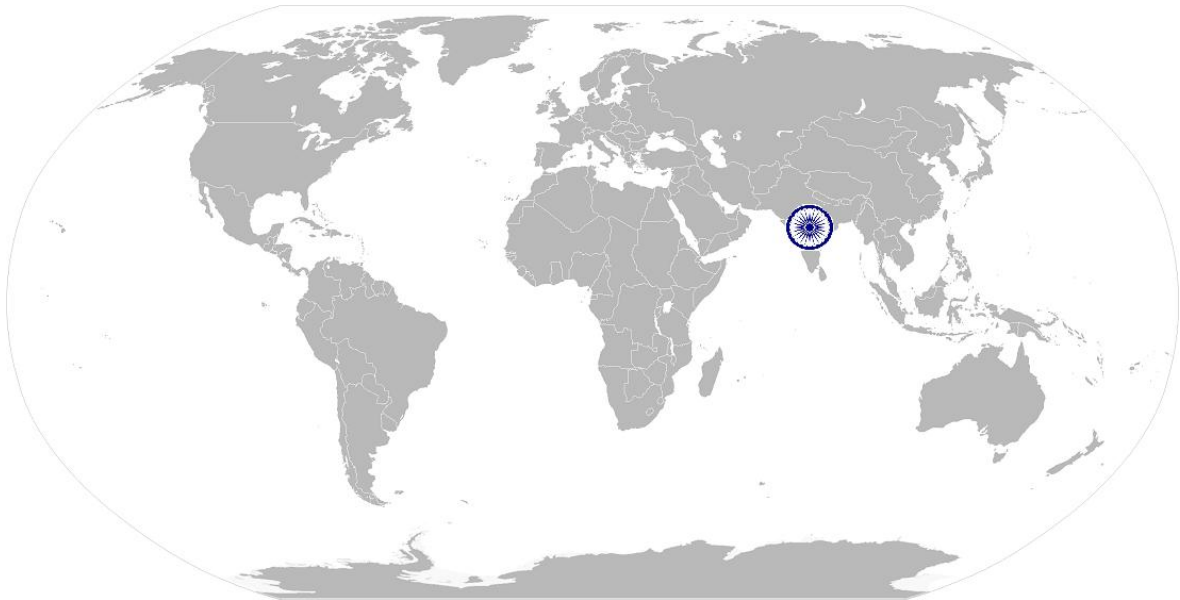
|  |  |
|--|--|
| Discharge the load in correct & safe way at the desired location                     | To be competent, the user/individual on the job must be able to:<br><br>PC14. Discharge the load safely at the position and in the manner designated by the supervisor<br>PC15. Ensure that vehicle is always parked on firm, level ground; with handbrake applied and drive & controls disengaged   |
| Park the vehicle with the arm/fork/boom/basket/bucket in lowered condition           | To be competent, the user/individual on the job must be able to:<br><br>PC16. Put the front accessory (boom, fork, basket/bucket) in lowered condition touching the ground; switch the engine off, apply handbrake and alight from the seat<br>PC17. Ensure that nobody except the authorised driver ever boards, travels on or stands near the Vehicle  |
| <b>Element</b>   | <b>Knowledge and Understanding</b>   |
| A. Organisational Context (Knowledge of the Company/ Organisation and its processes) | The user/individual on the job needs to know and understand:<br><br>KA1. Job specific documents e.g. daily maintenance checklist and importance of the same<br>KA2. Safety policy of the company as applicable to his role<br>KA3. Emergency plan of the specific work site<br>KA4. Risk and impact of not following the defined procedures/work instructions<br>KA5. Escalation matrix for reporting identified problems<br>KA6. Implications of delays in process to the company |
| B. Technical Knowledge   | The user/individual on the job needs to know and understand:<br><br>KB1. Service brakes and parking brakes<br>KB2. Instrument panel, their location and operation<br>KB3. Controls, levers and switches in order to operate the mobile equipment<br>KB4. General safety rules vis-à-vis loading, hauling, stocking and parking<br>KB5: Operation and safety aspects of the equipment, especially of the forks, boom, basket, bucket etc.   |
| <b>Skills (S) w.r.t. the scope</b>   |  |
| <b>Element</b>   | <b>Skills</b>  |
| A. Core Skills/ Generic Skills   | Writing skills and reading Skills  |
|  | The user/ individual on the job needs to know and understand how to:<br><br>SA1. Read & understand all displays and be aware of all standard safety symbols<br>SA2. Construct simple sentence & write technical observations & requisitions in English/Hindi/Local Language  |
|  | Oral Communication (Listening and Speaking skills)   |
|  | The user/individual on the job needs to know and understand how to:  |



|   |  |
|---|--|
|   | SA3. Communicate with supervisors/juniors/colleagues/casual workers in English/Hindi/Local Language<br>SA4. Respond objectively & orally to questions asked of him in English/Hindi/Local Language   |
|   | <b>Integrity</b>   |
|   | The user/individual on the job needs to know and understand how to:<br><br>SA5. Maintain integrity with respect to company property and time<br>SA6. Communicate with people in a polite manner using respectful language<br>SA7. Resolve difficulties in relationships with colleagues amicably |
|   | <b>Motivation</b>  |
|   | The user/individual on the job needs to know and understand how to:<br><br>SA8. Take responsibility for completing one's own work assignment<br>SA9. Take initiative to enhance/learn skills in one's area of work<br>SA10. Reflect and act upon one's learning from experience                  |
|   | <b>B. Professional Skills</b>  |
|   | <b>Time Management</b>   |
|   | The user/individual on the job needs to know and understand how to:<br><br>SB1. Prioritize and execute tasks within scheduled time limit   |
|   | <b>Reliability</b>   |
|   | The user/individual on the job needs to know and understand how to:<br><br>SB2. Avoid absenteeism and maintain quality of work<br>SB3. Work in a disciplined environment and adhere to working norms of the organisation<br>SB4. Be punctual and adhere to timelines                             |
| <b>Analytical Thinking</b>  |  |
| The user/individual on the job needs to know and understand how to:<br><br>SB5. Suggest methods to avoid accidents/errors while operating mobile equipments<br>SB6. Identify possible ways to improve operational efficiency  |  |
| <b>Operations</b>   |  |
| The user/individual on the job needs to know and understand how to:<br><br>SB7. Perform driving operations such as forward, reverse, 'U' turn, tight spot manoeuvre, etc.<br>SB8. Select and use the correct combination of levers to operate the vehicle in different modes. |  |



SB9. Manoeuvre the blade and rear attachments to achieve various tasks





## NOS Version Control

|                     |   |                  |            |
|---------------------|---|------------------|------------|
| NOS Code            | ISC/N0027   |                  |            |
| Credits(NSQF)       | TBD   | Version number   | 1.0        |
| Industry            | Iron and steel  | Drafted on       | 18/09/2014 |
| Industry Sub-sector | Coke Making, Agglomeration, Iron Making, Steel Making, Hot Roll Mill, Cold Roll Mill, Mechanical Maintenance, Ferro Alloys, Raw Material Handling | Last reviewed on | 30/12/2014 |
| Occupation          | Driving   | Next review date | 30/12/2015 |







ISC/N0028: Perform basic maintenance and troubleshooting on the mobile equipment

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# National Occupational Standards

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## Overview

This unit is about performing routine maintenance and troubleshooting on the Mobile Equipment



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| Unit Code  | ISC/N0028   |
| Unit Title (Task)  | Perform basic maintenance and troubleshooting on the mobile equipment   |
| Description  | This unit is about performing routine maintenance and troubleshooting tasks on the Vehicle / Mobile Equipment.  |
| Scope  | <p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Carry out routine maintenance in accordance with the manufacturer's recommendations and company procedures</li> <li>• Carry out basic diagnostics and Troubleshooting</li> </ul>  |
| <b>Performance Criteria (PC) w.r.t. the Scope</b>  |   |
| <b>Element</b>   | <b>Performance Criteria</b>   |
| Carry out routine maintenance in accordance with the manufacturer's recommendations and company procedures | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Track machine operating hours to assess the right service schedule.<br/>           PC2. Clean air filter dust bowls<br/>           PC3. Clean footplates, pedals and steps free from mud, or dirt.<br/>           PC4. Drain water and sediment /fuel separators<br/>           PC5. Replenish coolants, lubricants and fluids<br/>           PC6. Grease all greasing pins and pivot points<br/>           PC7. Check battery electrolyte levels and condition of the terminals and carrying out minor adjustments if required.<br/>           PC8. Check and maintain the tyre rims, air pressure, wheel nuts and treads.<br/>           PC9. Ensure the machine is on firm and level ground before attempting to carry out any maintenance activity.<br/>           PC10. Ensure the locking bar is in position to prevent the front and rear chassis moving and creating a crushing zone (articulated machines only)<br/>           PC11. Ensure that no maintenance task on the engine is performed when the vehicle is running or still hot</p> |
| Carry out basic diagnostics & Troubleshooting  | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC12. Identify any problem with the normal functioning of the forklift<br/>           PC13. Carry out troubleshooting to ensure completion of given task<br/>           PC14. Assess when the problem is beyond his competence and report the problem to suitably qualified/designated and competent personnel</p>   |
| <b>Element</b>   | <b>Knowledge and Understanding</b>  |
| A. Organisational Context (Knowledge of the Company/   | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. Types of documentation in organization e.g. daily maintenance checklist and importance of the same</p>  |

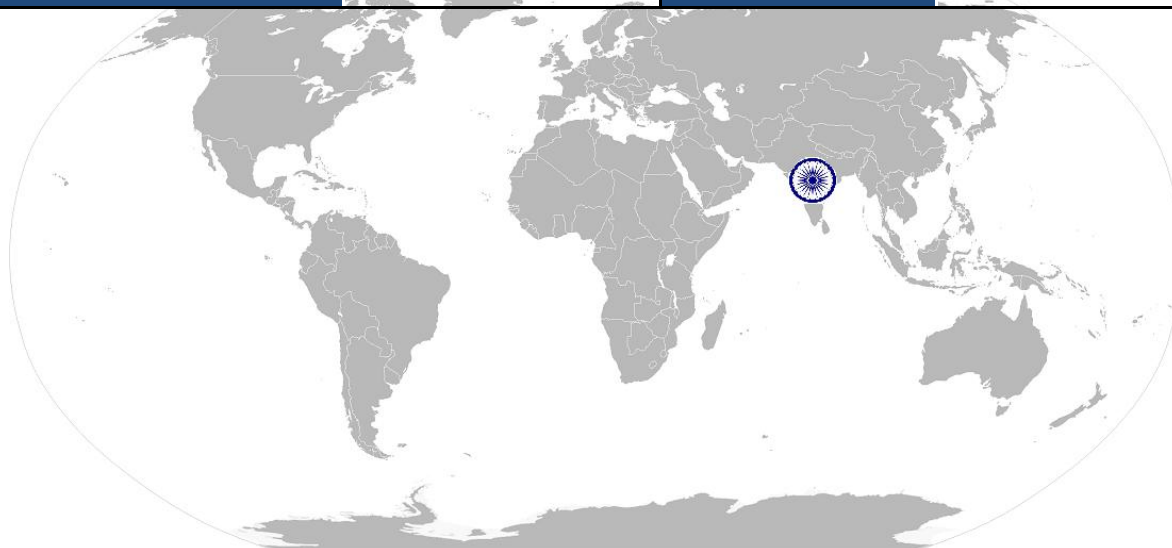


|                                    |   |
|------------------------------------|---|
| Organisation and its processes)    | KA2. Risk and impact of not following defined procedures/work instructions<br>KA3. Rules and regulations of the mill /steel plant as per standard operating procedure (SOP)<br>KA4. Risk and impact of not following company's SOP<br>KA5. Escalation matrix for reporting identified problems  |
| B. Technical Knowledge             | The user/individual on the job needs to know and understand:<br><br>KB1. Controls and switches needed to operate the vehicle properly<br>KB2. Basic mechanism & various functions of the different components of the vehicle & issues of vehicle stability<br>KB3. Technical response to emergencies e.g. fire, explosion etc.<br>KB4. Faults in running engine   |
| <b>Skills (S) w.r.t. the scope</b> |   |
| <b>Element</b>                     | <b>Skills</b>   |
| A. Core Skills/<br>Generic Skills  | Oral Communication (Listening and Speaking skills)<br><br>The user/individual on the job needs to know and understand how to:<br><br>SA1. Communicate with supervisors/juniors/colleagues/casual workers in English/Hindi/Local language (E/H/LL) <br>SA2. Respond objectively & orally to questions asked of him in E/H/LL<br>SA3. Discuss task lists, schedules, and work-loads with the team members   |
| B. Professional Skills             | Reliability<br><br>The user/individual on the job needs to know and understand how to:<br><br>SB1. Avoid absenteeism and maintain quality of work<br>SB2. Work in a disciplined environment & adhere to working norms of the organisation<br>SB3. Be punctual and adhere to timelines<br><br>Time Management<br><br>The user/individual on the job needs to know and understand how to:<br><br>SB4. Prioritize and execute tasks within the scheduled time limits<br>SB5. Carry out all maintenance work in the given time limit and focus on critical activities first |



## NOS Version Control

|                     |   |                  |            |
|---------------------|---|------------------|------------|
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| Credits(NSQF)       | TBD   | Version number   | 1.0        |
| Industry            | Iron and steel  | Drafted on       | 18/09/2014 |
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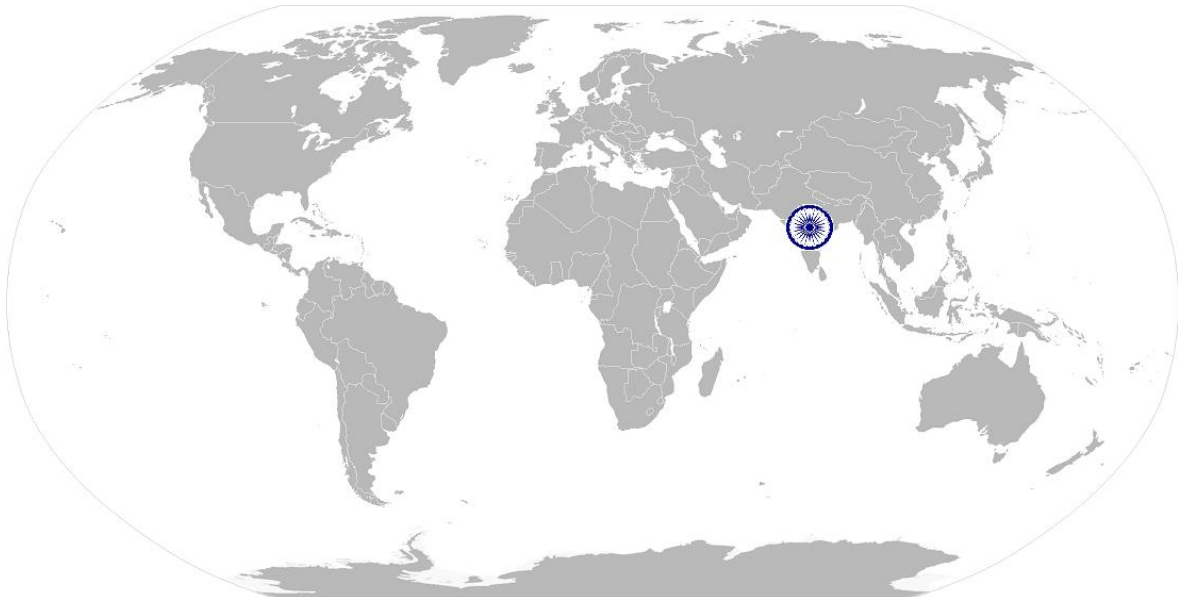




ISC/N0008: Use basic health and safety practices at the workplace

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# National Occupational Standards



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## Overview

This unit covers health, safety and security at the workplace. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment.



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|--|---|
| Unit Code                                  | ISC/N0008   |
| Unit Title (Task)                          | Use basic health and safety practices at the work place   |
| Description                                | <p>This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace. It covers responsibilities towards self, others, assets and the environment.</p> <p>It includes understanding of risks and hazards in the workplace, along with common techniques to minimize risk, deal with accidents, emergencies, etc.</p>   |
| Scope                                      | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Health and safety procedures</li> <li>• Fire safety procedures</li> <li>• Emergencies, rescue and first aid procedures</li> </ul>  |
| Performance Criteria (PC) w.r.t. the Scope |   |
| Element                                    | Performance Criteria  |
| Health and safety procedures               | <p>The user/individual on the job should be able to:</p> <p>PC1. Use protective clothing/equipment for specific tasks and work conditions</p> <p>Protective clothing includes:</p> <ul style="list-style-type: none"> <li>• Leather or asbestos gloves</li> <li>• Flame proof aprons</li> <li>• Flame proof overalls buttoned to neck</li> <li>• Cuff less (without folds) trousers</li> <li>• Reinforced footwear</li> <li>• Helmets/hard hats</li> <li>• Cap and shoulder covers</li> <li>• Ear defenders/plugs</li> <li>• Safety boots</li> <li>• Knee pads</li> <li>• Particle masks</li> <li>• Glasses/gloves/visors</li> </ul> <p>Equipment includes:</p> <ul style="list-style-type: none"> <li>• Hand shields</li> <li>• Machine guards</li> <li>• Residual current devices</li> <li>• Shields</li> <li>• Dust sheets</li> <li>• Respirator</li> </ul> <p>PC2. State the name and location of people responsible for health and safety in the workplace</p> |





Various areas are listed below:

- On chemical containers
- Equipment
- Packages
- Inside buildings
- Open areas, public places etc.

PC3. State the names and location of documents that refer to health and safety in the workplace

PC4. Identify job-site hazardous work and state possible causes of risk or accident in the workplace

Hazards include:

- Working with electrical and thermal tools and equipment
- Sharp edged and heavy tools
- Heated metals
- Oxyfuel and gas cylinders
- Welding radiation
- Surfaces: sharp, slippery, uneven, chipped, broken, etc.
- Substances: chemicals, gas, oxy-fuel, fumes, dust, etc.
- Physical: working at heights, large and heavy objects and machines, sharp and piercing objects, tools and machines, intense light, loud noise, obstructions in corridors, by doors, blind turns, noise, over stacked shelves and packages, etc.
- Electrical: power supply and points, loose and naked cables and wires, electrical machines and appliances, etc.

PC5. Carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role

Safe working practices include:

- Using protective clothing and equipment
- Putting up and reading safety signs
- Handle tools in the correct manner and store and maintain them properly
- Keep work area clear of clutter, spillage and unsafe object lying casually
- While working with electricity take all electrical precautions like insulated clothing, adequate equipment insulation, use of control equipment, dry work area, switch off the power supply when not required, etc.
- Safe lifting and carrying practices
- Use equipment that is working properly and is well maintained
- Take due measures for safety while working in confined places, trenches or at heights, etc. Including safety harness, fall arrestors etc.

Methods are:

- Training in health and safety procedures
- Using health and safety procedures
- Use of equipment and working practices (such as safe carrying procedures)
- Safety notices, advice
- Instruction from colleagues and supervisors





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|                               | <p>PC6. State location of general health and safety equipment in the workplace<br/>PC7. Inspect for faults, set up and safely use steps and ladders in general use</p> <p>Faults :</p> <ul style="list-style-type: none"> <li>• Corrosion of metal components</li> <li>• Deterioration</li> <li>• Splits and cracks timber components</li> <li>• Imbalance</li> <li>• Loose rungs</li> <li>• Nuts or bolts, etc.</li> </ul> <p>Set up:</p> <ul style="list-style-type: none"> <li>• Firm/level base</li> <li>• Clip/lash down</li> <li>• Leaning at the correct angle, etc.</li> </ul> <p>PC8. Work safely in and around trenches, elevated places and confined areas<br/>PC9. Lift heavy objects safely using correct procedures<br/>PC10. Apply good housekeeping practices at all times. Good housekeeping practices:</p> <ul style="list-style-type: none"> <li>• Clean/tidy work areas</li> <li>• Removal/disposal of waste products</li> <li>• Protect surfaces</li> </ul> <p>PC11. Identify common hazard signs displayed in various areas<br/>PC12. Retrieve and/or point out documents that refer to health and safety in the workplace</p> |
| <p>Fire safety procedures</p> | <p>The user/individual on the job should be able to:</p> <p>PC13. Use the various appropriate fire extinguishers on different types of fires correctly.</p> <p>Fire extinguishers:</p> <ul style="list-style-type: none"> <li>• Sand</li> <li>• Water</li> <li>• Foam</li> <li>• Co2</li> <li>• Dry powder</li> </ul> <p>Fires:</p> <ul style="list-style-type: none"> <li>• Class A: Ordinary solid combustibles, e.g. wood, paper, cloth, plastic, charcoal etc.</li> <li>• Class B: Flammable liquids and gases, e.g. gasoline, propane, diesel fuel, tar, cooking oil and similar substances</li> <li>• Class C: Electrical equipment e.g. appliances, wiring, breaker panels etc. (these categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no longer receiving electricity)</li> <li>• Class D: Combustible metals such as magnesium, titanium, and sodium (these fires burn at extremely high temperatures and require special suppression agents)</li> </ul> <p>Causes of fires:</p> <ul style="list-style-type: none"> <li>• Heating of metal</li> </ul>                           |



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|   | <ul style="list-style-type: none"> <li>• Spontaneous ignition</li> <li>• Sparking,</li> <li>• Electrical heating</li> <li>• Loose fires (e.g. Smoking, welding, etc.)</li> <li>• Chemical fires, etc.</li> </ul> <p>PC14. Demonstrate rescue techniques applied during fire hazard<br/>           PC15. Demonstrate good housekeeping in order to prevent fire hazards<br/>           PC16. Demonstrate the correct use of a fire extinguisher</p>   |
| <p>Emergencies, rescue and first-aid procedures</p> | <p>The user/individual on the job should be able to:</p> <p>PC17. Demonstrate how to free a person from electrocution<br/>           PC18. Administer appropriate first aid to victims as required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.<br/>           PC19. Demonstrate basic techniques of bandaging<br/>           PC20. Respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments. Few general health and safety equipment are mentioned below :</p> <ul style="list-style-type: none"> <li>• Fire extinguishers</li> <li>• First aid equipment</li> <li>• Safety instruments and clothing</li> <li>• Safety installations, e.g. Fire exits, exhaust fans etc.</li> </ul> <p>PC21. Perform and organize loss minimization or rescue activity during an accident in real or simulated environments<br/>           PC22. Administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases<br/>           PC23. Demonstrate the artificial respiration and the CPR Process<br/>           PC24. Participate in emergency procedures. Emergency procedures are:</p> <ul style="list-style-type: none"> <li>• Raising alarm</li> <li>• Safe/efficient evacuation</li> <li>• Correct means of escape</li> <li>• Correct assembly point</li> <li>• Roll call</li> <li>• Correct return to work</li> </ul> <p>PC25. Complete a written accident/incident report or dictate a report to another person, and send report to person responsible<br/>           Incident Report should capture:</p> <ul style="list-style-type: none"> <li>• Name</li> <li>• Date/time of incident</li> <li>• Date/time of report,</li> <li>• Location</li> <li>• Environment conditions</li> <li>• Persons involved</li> <li>• Sequence of events</li> <li>• Injuries sustained</li> <li>• Damage sustained</li> <li>• Actions taken</li> <li>• Witnesses</li> </ul> |



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|   | <ul style="list-style-type: none"> <li>• Supervisor/manager notified</li> </ul> <p>Documents:</p> <ul style="list-style-type: none"> <li>• Fire notices</li> <li>• Accident reports</li> <li>• Safety instructions for equipment and procedures</li> <li>• Company notices and documents</li> <li>• Legal documents (e.g. Government notices)</li> </ul> <p>Job titles:</p> <ul style="list-style-type: none"> <li>• Health and safety officer</li> <li>• First aid officer</li> <li>• Fire officer</li> </ul> <p>PC26. Demonstrate correct method to move injured people and others during an emergency</p>   |
| <b>Element</b>  | <b>Knowledge and Understanding</b>   |
| <p>A. Organisational Context<br/>(Knowledge of the Company/ Organisation and its processes)</p> | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. State the names (and job titles if applicable), and describe where to find, all the people responsible for health and safety in a workplace</p> <p>KA2. State the names and location of documents that refer to health and safety in the workplace</p>   |
| <p>B. Technical Knowledge</p>   | <p>The user/individual on the job needs to know and understand:</p> <p>KB3. Meaning of “hazards” and “risks”</p> <p>KB4. Health and safety hazards commonly present in the work environment and related precautions</p> <p>KB5. Possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible</p> <p>KB6. Activities and causes of risk and accident</p> <p>KB7. Methods of accident prevention</p> <p>KB8. Safe working practices when working with tools and machines</p> <p>KB9. Safe working practices while working at various hazardous sites</p> <p>KB10. Where to find all the general health and safety equipment in the workplace</p> <p>KB11. Various dangers associated with the use of electrical equipment</p> <p>KB12. Preventative and remedial actions to be taken in the case of exposure to toxic materials</p> <ul style="list-style-type: none"> <li>• Exposure: ingested, contact with skin, inhaled</li> <li>• Preventative action: ventilation, masks, protective clothing/equipment</li> <li>• Remedial action: immediate first aid, report to supervisor</li> <li>• Materials: solvents, flux, lead</li> </ul> <p>KB13. Importance of using protective clothing/equipment while working</p> <p>KB14. Precautionary activities to prevent the fire accident</p> <p>Activities and causes:</p> <ul style="list-style-type: none"> <li>• Physical actions</li> <li>• Reading</li> <li>• Listening to and giving instructions</li> </ul> |



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|   | <ul style="list-style-type: none"> <li>• Inattention</li> <li>• Sickness and incapacity (e.g. Drunkenness)</li> <li>• Health hazards (e.g. Untreated injuries and contagious illness)</li> </ul> <p>KB15. Various causes of fire<br/>           KB16. Techniques of using the different fire extinguishers<br/>           KB17. Different methods of extinguishing fire<br/>           KB18. Rescue techniques applied during a fire hazard<br/>           KB19. Various types of safety signs and what they mean<br/>           KB20. Appropriate basic first aid treatment relevant to the condition e.g. Shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries<br/>           KB21. Content of written accident report<br/>           KB22. Potential injuries and ill health associated with incorrect manual handling<br/>           KB23. Safe lifting and carrying practices<br/>           KB24. Personal safety, health and dignity issues relating to the movement of a person by others<br/>           KB25. Potential impact to a person who is moved incorrectly</p> |
| <b>Skills (S) w.r.t. the scope</b>        |   |
| <b>Element</b>                            | <b>Skills</b>   |
| <b>A. Core Skills/<br/>Generic Skills</b> | <b>Reading and Writing Skills</b>   |
|   | The user/individual on the job needs to know and understand how to:<br>SA1. Read and comprehend basic content to read labels, charts, signage's<br>SA2. Read and comprehend basic English to read manuals of operations<br>SA3. Read and write an accident/incident report in local language or English   |
|   | <b>Oral Communication (Listening and Speaking skills)</b>   |
|   | The user/individual on the job needs to know and understand how to:<br>SA4. Question co-workers appropriately in order to clarify instructions and other issues<br>SA5. Give clear instructions to co-workers, subordinates others  |
|   | <b>Decision Making</b>  |
|   | The user/individual on the job needs to know and understand how to:<br>SA6. Make appropriate decisions pertaining to the concerned area of work with respect to intended work objective, span of authority, responsibility, laid down procedure and guidelines  |
| <b>B. Professional Skills</b>             | <b>Plan and Organize</b>  |
|   | The user/individual on the job needs to know and understand:<br>SB1. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity   |

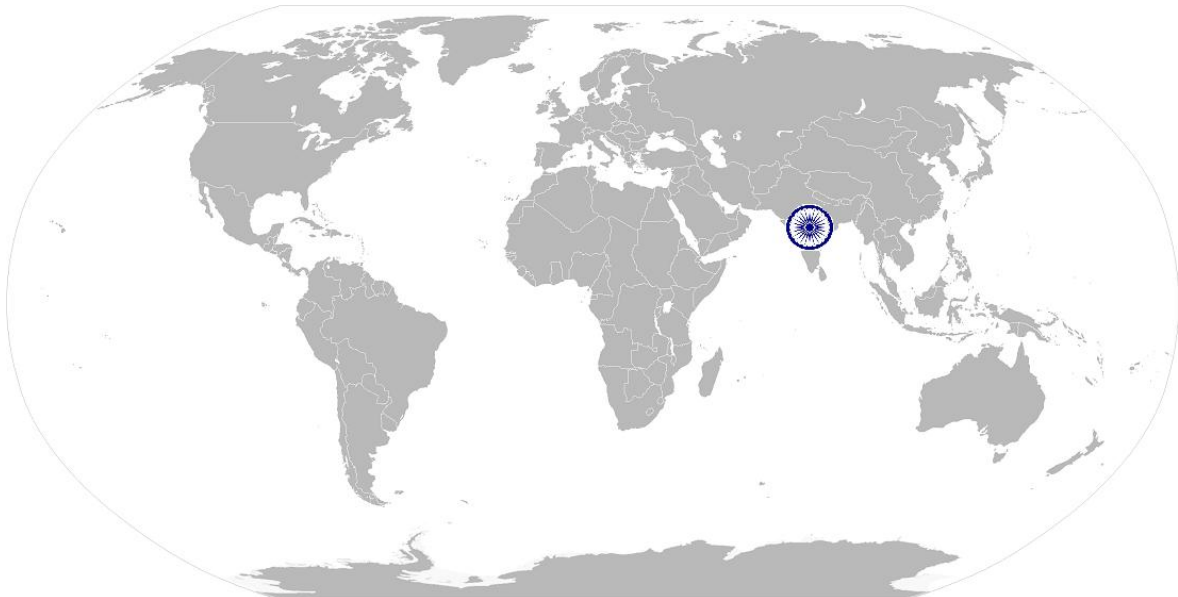


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|  | <b>Working with others</b>  |
|  | The user/individual on the job needs to know and understand how to:<br><br>SB2. Remain congenial while discussing and debating issues with co-workers<br>SB3. Follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice<br>SB4. Ask for, provide and receive required assistance where possible to ensure achievement of work related objectives<br>SB5. Thank co-workers for any assistance received<br>SB6. Offer appropriate respect based on mutuality and respect for fellow workmanship and authority |
|  | <b>Problem Solving</b>  |
|  | The user/individual on the job needs to know and understand how to:<br><br>SB7. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s)<br>SB8. Identify immediate or temporary solutions to resolve delays<br>SB9. Identify sources of support that can be availed of for problem solving for various kind of problems<br>SB10. Seek appropriate assistance from other sources to resolve problems<br>SB11. Report problems that you cannot resolve to appropriate authority                                |
|  | <b>Analytical Thinking</b>  |
|  | The user/individual on the job needs to know and understand how to:<br><br>SB12. Identify cause and effect relations in their area of work<br>SB13. Use cause and effect relations to anticipate potential problems and their solution  |



## NOS Version Control

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|---------------------|-----------------|------------------|------------|
| NOS Code            | ISC/N0008       |                  |            |
| Credits(NSQF)       | TBD             | Version number   | 1.0        |
| Industry            | Iron and steel  | Drafted on       | 23/07/2014 |
| Industry Sub-sector | All departments | Last reviewed on | 30/12/2014 |
| Occupation          | Driving         | Next review date | 30/12/2015 |







ISC/N0009: Work effectively with others

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# National Occupational Standards



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## **Overview**

This unit covers basic practices that improve effectiveness of working with others in an organisational set-up.





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| Unit Code   | ISC/N0009   |
| Unit Title (Task)   | Work effectively with others  |
| Description   | This unit covers basic etiquette and competencies that a candidate is required to possess and demonstrate in their behaviour and interactions with others at the workplace.   |
| Scope   | This unit/task covers the following: <ul style="list-style-type: none"> <li>• Ensure appropriate communication with superiors, peers and others as applicable at work place</li> <li>• Demonstrate appropriate behaviour and etiquette at work place</li> </ul>   |
| Performance Criteria (PC) w.r.t. the Scope  |   |
| Element   | Performance Criteria  |
| Ensure appropriate communication with superiors, peers and others as applicable at work place | The user/individual on the job should be able to: <p>PC1. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required</p> <p>PC2. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt</p> <p>PC3. Provide information to others clearly, at a pace and in a manner that helps them to understand</p>   |
| Demonstrate appropriate behaviour and etiquette at work place                                 | The user/individual on the job should be able to: <p>PC4. Display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible</p> <p>PC5. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks</p> <p>PC6. Display appropriate communication etiquette while working</p> <p>PC7. Display active listening skills while interacting with others at work</p> <p>PC8. Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism</p> <p>PC9. Demonstrate responsible and disciplined behaviours at the workplace</p> <p>PC10. Escalate grievances and problems to</p> |
| Element   | Knowledge and Understanding   |
| A. Organisational Context (Knowledge of the Company/ Organisation and its processes)          | The user/individual on the job needs to know and understand: <p>KA1. Legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. Reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA3. Relevant people and their responsibilities within the work area</p> <p>KA4. Escalation matrix and procedures for reporting work and employment related issues</p>   |



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| <p>B. Technical Knowledge</p>             | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. Various categories of people that one is required to communicate and co-ordinate with in the organization<br/> KB2. Importance of effective communication in the workplace<br/> KB3. Importance of teamwork in organizational and individual success<br/> KB4. Various components of effective communication<br/> KB5. Key elements of active listening<br/> KB6. Value and importance of active listening and assertive communication<br/> KB7. Barriers to effective communication<br/> KB8. Importance of tone and pitch in effective communication<br/> KB9. Importance of avoiding casual expletives and unpleasant terms while communicating professional circles<br/> KB10. How poor communication practices can disturb people, environment and cause problems for the employee, the employer and the customer<br/> KB11. Importance of ethics for professional success –<br/> KB12. Importance of discipline for professional success<br/> KB13. What constitutes disciplined behaviour for a working professional<br/> KB14. Common reasons for interpersonal conflict<br/> KB15. Importance of developing effective working relationships for professional success<br/> KB16. Expressing and addressing grievances appropriately and effectively<br/> KB17. Importance and ways of managing interpersonal conflict effectively</p> |
| <p><b>Skills (S) w.r.t. the scope</b></p> |   |
| <p><b>Element</b></p>                     | <p><b>Skills</b></p>  |
| <p>A. Core Skills/<br/>Generic Skills</p> | <p><b>Reading and Writing Skills</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. Read and comprehend basic content to read labels, charts, signage's<br/> SA2. Read and comprehend basic English to read manuals of operations<br/> SA3. Read and write an accident/incident report in local language or English</p> <p><b>Oral Communication (Listening and Speaking skills)</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. Question co-workers appropriately in order to clarify instructions and other issues<br/> SA5. Provide clear instructions to co-workers, subordinates others</p> <p><b>Decision Making</b></p>   |
|   | <p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Make appropriate decisions pertaining to the concerned area of work with respect to intended work objective, span of authority, responsibility, laid down</p>  |



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|   | procedure and guidelines   |
| B. Professional Skills  | <b>Plan and Organize</b>   |
|   | The user/individual on the job needs to know and understand:   |
|   | SB1. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity  |
|   | <b>Working with others</b>   |
|   | The user/individual on the job needs to know and understand how to:  |
|   | SB2. Remain congenial while discussing and debating issues with co-workers<br>SB3. Follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice<br>SB4. Ask for, provide and receive required assistance where possible to ensure achievement of work related objectives<br>SB5. Thank co-workers for any assistance received<br>SB6. Offer appropriate respect based on mutuality and respect for fellow workmanship and authority |
| <b>Problem Solving</b>  |  |
| The user/individual on the job needs to know and understand how to:   |  |
| SB7. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s)<br>SB8. Identify immediate or temporary solutions to resolve delays<br>SB9. Identify sources of support that can be availed of for problem solving for various kind of problems<br>SB10. Seek appropriate assistance from other sources to resolve problems<br>SB11. Report problems that you cannot resolve to appropriate authority |  |
| <b>Analytical Thinking</b>  |  |
| The user/individual on the job needs to know and understand how to:   |  |
| SB12. Identify cause and effect relations in their area of work<br>SB13. Use cause and effect relations to anticipate potential problems and their solution   |  |



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| Industry Sub-sector | All departments | Last reviewed on | 30/12/2014 |
| Occupation          | Driving         | Next review date | 30/12/2015 |

