

# GENERATOR MECHANIC



Competency Standards  
National Vocational Certificate Level 1-4

Version 1 - November, 2019

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November, 2019  
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## Introduction

Generators are machines that transform mechanical energy into electrical energy; that can be used to run a variety of electrical appliances for home or commercial use. There are numerous types of Generators; some rely on natural gas, Petrol or Diesel as energy sources. The course provides a comprehensive training on the proper installation, maintenance and inspection of Generators. Students will learn how to select, install, operate, and maintain Generators, as well as how to isolate and repair generator problems.

In order to meet the domestic and worldwide demand for Generator Mechanic, National Vocational and Technical Training Commission (NAVTTTC) in collaboration with TVET Sector Support Programme (TVET-SSP) has developed national vocational qualifications comprising of generic, functional and technical competency standards for Generator Mechanic occupation. To facilitate the process of developing national qualifications for Generator Mechanic, a Qualification Development Committee (QDC) was established under NVQF Operational Manual-1. Competency standards, which are benchmarks for the performance, cover the commercial aspects of a generator mechanic's job. Required skills, underpinning knowledge and attitudes expected of a Generator Mechanic have been incorporated into these competency standards while setting standards for the performance of a Generator Mechanic.

The key components inherent in this system will be focused on to discuss typical problems and solutions. Core program sessions cover topics that include generators/alternators, voltage regulations, governors, engine/generator instrumentation and controls, intro to generator protection, automatic transfer switches, sizing and servicing generator systems. Other seminars include more in-depth coverage of basic electricity, troubleshooting service problems, and multiple generator switchgear and generator controls.

The NAVTTTC endorsed National Competency Standards (NCSs) for Generator Mechanic will provide the basis for further development of Curricula, Assessment materials and instructional materials that will support implementation of competency-based training and assessment at institutional level.

## Purpose of Qualification

In this training program trainee will learn and acquire specialized knowledge and particle skills required to function as a Generator Mechanic both at domestic and commercial levels. Generator Mechanic will be responsible to maintain safety, maintain tools & equipment, identification of faults, diagnose mechanical faults, repair/replace mechanical components, electrical AC Installation, diagnose electrical fault, as per the procedures involved. The specific objectives of developing these qualifications are as under:

- Improve the overall quality of training delivery and setting national benchmarks for training of Generator Mechanic in the country
- Provide flexible pathways and progressions to learners enabling them to receive relevant, up-to-date and recent skills
- Provide basis for competency-based assessment which is recognized and accepted by employers
- Establish a standardized and sustainable system of training for generator mechanic in the country

## Date of Validation

These national qualifications have been validated by the Qualification Validation Committee (QVC) on 25-26 February, 2019, 31<sup>st</sup> August, 2019 in Peshawar & Lahore respectively and will remain currency until August, 2022.

## Date of Review

These national qualifications may be reviewed in August, 2022.

## Code of Qualification

The International Standard Classification of Education (ISCED) is a framework for assembling, compiling, and analyzing cross-nationally comparable statistics on education and training, ISCED codes for these qualifications as assigned as follow:

Qualification Title	Code
National Vocational Certificate Level – 1 Generator Helper	0713E&E18
National Vocational Certificate Level – 2 Assistant Generator Mechanic	0713E&E19

**National Vocational Certificate Level – 3 Junior  
Generator Mechanic**

**0713E&E20**

**National Vocational Certificate Level – 4 Generator  
Mechanic**

**0713E&E21**

### **Qualification Development Committee**

The Qualifications Development Committee consisted of following members:

<b>Sr. No.</b>	<b>Name</b>	<b>Organization</b>
1.	Mr. Izat Ullah	Gul Generators, Peshawar
2.	Mr. Zeeshan Khan	Zeeshan Generators, Peshawar
3.	Mr. Rashid Ali Khan	Rashid Electric, Peshawar
4.	Mr. Abdul Raziq	Rashid Electric, Peshawar
5.	Mr. Umar Farooq Khalil	Shukat Khanum Hospital, Peshawar
6.	Mr. Faham Dil	Energy Solutions (Pvt) Ltd. Islamabad
7.	Mr. Imran Khan	Shirazi Trading, Peshawar
8.	Mr. Muhammad Shafique	Pak-Tech Vocational center, Peshawar
9.	Mr. Asif Khan	Shirazi Trading, Peshawar
10.	Mr. Umair Ahmed Qureshi	VTI, Mirpur AJK TEVTA
11.	Mr. Muhammad Bais	KP TEVTA
12.	Mr. Khurram Shahzad	Government Technical Training Institute Service More Gujrat. PTEVTA
13.	Mr. Arshad Ali	TTB, Peshawar
14.	Engr. Inayat ur Rahman	Ex-Professor TEVTA KPK
15.	Mr. Muhammad Nasir Khan	Ex-DD NAVTTC, DACUM Facilitator



## Qualifications Industry Validation Committee

The Qualifications validation Committee consisted of following members:

Sr. No.	Name	Organization
1.	Mr. Izat Ullah	Gul Generators, Peshawar
2.	Mr. Zeeshan Khan	Zeeshan Generators, Peshawar
3.	Mr. Rashid Ali Khan	Rashid Electric, Peshawar
4.	Mr. Abdul Raziq	Rashid Electric, Peshawar
5.	Mr. Umar Farooq Khalil	Shukat Khanum Hospital, Peshawar
6.	Mr. Faham Dil	Energy Solutions (Pvt) Ltd. Peshawar
7.	Mr. Imran Khan	Shirazi Trading, Peshawar
8.	Mr. Muhammad Shafique	Pak-Tech Vocational center, Peshawar
9.	Mr. Asif Khan	Shirazi Trading, Peshawar
10.	Mr. Arshad Ali	TTB, Peshawar
11.	Muhammad Sadiq	Associate Professor, KP TEVTA, Peshawar
12.	Engr. Inayat ur Rahman	Ex-Professor TEVTA KPK
13.	Mr. Muhammad Nasir Khan	Ex-DD NAVTTC, DACUM Facilitator
14.	Muhammad Asad	GCT Faisalabad --PTEVTA
15.	Muhammad Usman	GCT Sargodha - PTEVTA
16.	Muhammad Mahboob Butt	GCT Sahiwal, PTEVTA
17.	Engr. Sohail Gul	GCT, Peshawar - KP TEVTA

## Entry Requirements

The entry requirement in Level - 1 NVQ is Middle Preferably Matriculation.

## Regulations for the Qualification and Schedule of Units

Not Applicable.

## Summary of Competency Standards

Code	Name of Duty or (Module)	Level	Credit	Category
102200843	Comply with Work Health and Safety Policies	1	03	Generic
041700838	Obey the Workplace Policies and Procedures	1	02	Generic
001100850	Follow Basic Communication Skills (General)	1	05	Generic
061100855	Operate Computer Functions(General)	1	05	Generic
071300616	Identify Tools & Equipment	1	05	Technical
102200844	Comply with Personal Health and Safety Guidelines	2	03	Generic
041700839	Communicate the Workplace Policy and Procedure	2	02	Generic
001100851	Perform Basic Communication (Specific)	2	03	Generic
061100856	Perform Basic Computer Application (Specific)	2	04	Generic
071300620	Identify Mechanical fault	2	06	Technical
071300619	Identify General faults	2	06	Technical
071300623	Identify Electrical fault	2	10	Technical
071300618	Identify Generators and its Components	2	06	Technical
102200846	Apply Work Health and Safety Practices (WHS)	3	02	Generic
041700840	Identify and Implement Workplace Policy and Procedures	3	01	Generic
001100852	Communicate at Workplace	3	01	Generic
061100858	Perform Computer Application Skills	3	01	Generic
041300867	Manage Personal Finances	3	01	Generic
071300622	Carryout Basic Electrical AC Installation	3	10	Technical
071300624	Repair/Replace Electrical Components	3	20	Technical
071300627	Install new generator	3	06	Technical
102200848	Contribute to Work Related Health and Safety (WHS) Initiatives	4	03	Generic

041700841	Analysis Workplace Policy and Procedures	4	03	Generic
001100853	Perform Advanced Communication	4	03	Generic
061100858	Develop Advance Computer Application Skills	4	04	Generic
041300869	Manage Human Resource Services	4	02	Generic
041300860	Develop Entrepreneurial Skills	4	03	Generic
071300625	Perform Electrical Winding	4	27	Technical
071300621	Repair/Replace Mechanical Components	4	27	Technical
071300628	Perform tests as per Specifications	4	06	Technical
071300629	Plan work	4	08	Technical

Packaging of Qualification
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The details of NCSs packaged in this qualification are as under:

National Vocational Certificate Level – 4 in Generator Mechanic	071300629	Plan work
	071300628	Perform tests as per Specifications
	071300621	Repair/Replace Mechanical components
	071300625	Perform Electrical Winding
	041300860	Develop Entrepreneurial Skills
	041300869	Manage Human Resource Services
	061100858	Develop Advance Computer Application skills
	001100853	Perform Advanced Communication
	041700841	Analysis Workplace Policy and Procedures
	102200848	Contribute to Work Related Health and Safety (WHS) Initiatives
		↑
National Vocational Certificate Level – 3 in Generator Mechanic		
	071300627	Install new generator
	071300621	Repair/Replace Mechanical Components
	071300624	Repair/Replace Electrical Components
	071300622	Carryout Basic Electrical AC Installation
	041300867	Manage Personal Finances
	061100858	Perform Computer Application Skills
	001100852	Communicate at Workplace

		<b>041700840 Identify and Implement Workplace Policy and Procedures</b>
		<b>102200846 Apply Work Health and Safety Practices (WHS)</b>
<b>National Vocational Certificate Level – 2 in Generator Mechanic</b>		↑
		<b>071300618 Identify Generators and its components</b>
		<b>071300623 Identify Electrical fault</b>
		<b>071300619 Identify General faults</b>
		<b>071300620 Identify Mechanical fault</b>
		<b>061100856 Perform Basic Computer Application (Specific)</b>
		<b>001100851 Perform Basic Communication (Specific)</b>
		<b>041700839 Communicate the Workplace Policy and Procedure</b>
		<b>102200844 Comply Personal Health and Safety Guidelines</b>
		↑
<b>National Vocational Certificate Level – 1 in Generator Mechanic</b>		<b>071300616 Identify Tools &amp; Equipment</b>
		<b>061100855 Operate Computer Functions(General)</b>
		<b>001100850 Follow Basic Communication Skills (General)</b>
		<b>041700838 Obey the Workplace Policies and Procedures</b>
		<b>102200843 Comply with Work Health and Safety Policies</b>

## Detail of Competency Standards

### 102200843 Comply with Work Health and Safety Policies

**Overview:** This unit describes the performance outcomes, skills and knowledge required to apply general work health and safety requirements in the workplace. Communicate work and health safety assess at work place. It describes generic work health and safety responsibilities applicable to employees without managerial or supervisory responsibilities.

Competency Units	Performance Criteria
<b>CU1. Work safely at work place</b>	<b>P1.</b> Identify relevant organizational safety policies and procedures <b>P2.</b> Categorize tools and equipment as per requirements <b>P3.</b> Maintain tools and equipment <b>P4.</b> Follow established safety procedures during work activities <b>P5.</b> Identify existing or potential safety issues to designated persons <b>P6.</b> Report work-related incidents and accidents to supervisor <b>P7.</b> Take necessary measures to minimizing risks
<b>CU2. Communicate work health and safety (WHS) assess at work place</b>	<b>P1.</b> Raise work health and safety issues with supervisor. <b>P2.</b> Contribute to workplace meetings and other consultative processes for work health and safety management at the workplace <b>P3.</b> Make suggestions for improving work health and safety practices
<b>CU3. Minimize risks to personal safety at work place</b>	<b>P1.</b> Identify situations that may endanger the personal safety <b>P2.</b> Document the incident regarding personal safety at work place <b>P3.</b> Eliminate workplace hazards regarding personal safety <b>P4.</b> Identify damaged items and equipment for personal safety <b>P5.</b> Notify supervisor regarding damaged items and equipment for personal safety
<b>CU4. Minimize risks to public safety</b>	<b>P1.</b> Identify situations that may endanger the public safety <b>P2.</b> Document the incident at work sites <b>P3.</b> Eliminate workplace hazards at work sites <b>P4.</b> Identify damaged items and equipment related to public safety <b>P5.</b> Notify Situation that may endanger situation for safety measures.

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Identify the commonly used tools and equipment used at workplace.
- K2:** Rights and responsibilities of employers and employees
- K3:** Consultative processes to manage and monitor health and safety issues to enable active participation in maintaining a safe workplace
- K4:** State potential hazards in the workplace
- K5:** State commonly used hazard signs and safety symbols

## Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

Identify health and safety policies to maintain and avoid any unwanted incident.

## 041700838 Obey the Workplace Policies and Procedures

**Overview:** This unit describes the skills and knowledge required to develop and implement a workplace policy & procedures and to modify the policy to suit changed circumstances. It applies to individuals with managerial responsibilities who undertake work developing approaches to create, monitor and improve strategies and policies within workplaces and engage with a range of relevant stakeholders and specialists.

Competency Units	Performance Criteria
<b>CU1. Obey the workplace personal appearance and hygiene</b>	<b>P1.</b> Wear suitable clothes for the workplace and respect local and cultural contexts <b>P2.</b> Meet specific company dress code requirements
<b>CU2. Follow work ethics</b>	<b>P1.</b> Follow company value/ ethics code/ conduct policies and guidelines <b>P2.</b> Use company resources in accordance with company ethical standards <b>P3.</b> Conduct personal behavior and relationships in accord with company policy & procedures <b>P4.</b> Demonstrate ethical behavior with co-workers <b>P5.</b> Report work incident situations or resolve accordingly
<b>CU3. Demonstrate the Work place behaviors</b>	<b>P1.</b> Practice the positive behavior <b>P2.</b> Avoid arguing <b>P3.</b> Adopt flexibility in behavior to accept the resistance
<b>CU4. Communicate workplace policy &amp; procedures</b>	<b>P1.</b> Listen directions carefully <b>P2.</b> Ask relevant questions politely <b>P3.</b> Avoid to use abusive language/ expression <b>P4.</b> Respect co-workers and others
<b>CU5. Review the implementation of workplace policy &amp; procedures</b>	<b>P1.</b> Ensure proper implementation of policies <b>P2.</b> Enlist the gaps for improvement <b>P3.</b> Follow the feedback, if any

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Rules, regulations and SOPs applicable to the organization
- K2:** Turnaround time to achieve target/goal.
- K3:** Operational hierarchal levels in an organization.



### **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

Follow work place policy personal appearances adopting company values/ ethics/ codes and broacher policies for ensuring work place SOP's

## 001100850 Follow Basic Communication Skills (General)

**Overview:** After successful completion of this module you will be able to listen attentively, develop non-verbal communication, and identify communication barriers, interview preparation for job and different communication platforms in the workplace and throughout your career.

This unit of competency is designed to manage the workers and other personnel that can help in improving work quality and quantity through basic communication skills

Competency Units	Performance Criteria
<b>CU1. Adopt Effective listening to Skills</b>	<b>P1.</b> Listen attentively to others to improve communication skills <b>P2.</b> Avoid interrupting while listening others <b>P3.</b> Ask questions to ensure understanding <b>P4.</b> Receive and follow instructions as given by supervisor <b>P5.</b> Give the speaker regular feedback to communicate appropriately
<b>CU2. Develop Nonverbal communication with peers</b>	<b>P1.</b> Maintain eye contact to improve communication <b>P2.</b> Use facial expressions and gestures <b>P3.</b> Use Body language to communicate appropriately <b>P4.</b> Participate within Peers
<b>CU3. Prepare for Interview to get a job</b>	<b>P1.</b> Prepare yourself for interview to employer <b>P2.</b> Follow schedule according to the sequence of interview <b>P3.</b> Use communication techniques used while appearing in interview <b>P4.</b> Provide basic evidence of related skill <b>P5.</b> Respond appropriately to strong client emotional reactions
<b>CU4. Use communication platform at workplace</b>	<b>P1.</b> Convey message using different communication plate forms <ul style="list-style-type: none"> <li>• Face to face</li> <li>• Video chat</li> <li>• Phone calls/messages</li> <li>• Social Media</li> </ul>
<b>CU5. Identify communication barriers to improve interpersonal skills</b>	<b>P1.</b> Identify communication barriers to improve communication skills with each other i.e. <ul style="list-style-type: none"> <li>• Attitudinal barrier</li> <li>• Physical Barrier</li> <li>• Long differences</li> <li>• Conflicting information</li> <li>• Differing status, position /self-expression</li> </ul>

	<b>P2.</b> Use strategies to overcome these barriers in the client-counsellor relationship
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## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Minimizing communication barriers
- K2:** Listening, and responding with an open mind in a more effective way.
- K3:** appropriate communication methods.
- K4:** verbal and non-verbal messages appropriately.
- K5:** Confidence building
- K6:** Body language
- K7:** Appropriate Voice tone
- K8:** Interpersonal skills
- K9:** listening Skills

## Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Find a job through social media resources
  1. Prepare yourself to appear in interview by following points:
    - Effective listening skills
    - Body language
- Work in groups of 3-5 members.
  1. Think of a situation when you tried to communicate with another person. Or when somebody tried to communicate with you, and it failed.
  2. Think about the problems or barriers that interfered with the communication.
    - List the reasons for failure identified by your group.
- Non-verbal communication
 

Have activity cards:

  - Worried
  - Happy
  - Disappointed
  - Laughing
  - Annoying

Participants to draw one of the activity cards. Without speaking, communicate the feeling or emotion on the card to the rest of the group. Have one participant at time get up in front of the group.

## 061100855 Operate Computer Functions (General)

**Overview:** The competency Standard describe skills and knowledge required to setup a computer system, organize files in folders, and shutdown a computer system.

Competency Units	Performance Criteria
<b>CU1. Set up the computer for use</b>	<b>P1.</b> Identify physical components of computer <b>P2.</b> Identify peripheral devices of the computer <b>P3.</b> Connect all components of computer <b>P4.</b> Follow procedures to turn on the computer system
<b>CU2. Organize files in folder</b>	<b>P1.</b> Create folders/subfolders with suitable names <b>P2.</b> Save files in relevant folders. <b>P3.</b> Rename and move folders in different drives. <b>P4.</b> Move folders and files using drag and drop techniques <b>P5.</b> Save folders and files on different media <b>P6.</b> Search for folders/subfolders and files using appropriate tool bars <b>P7.</b> Delete Folder files <b>P8.</b> Restore deleted folder files
<b>CU3. Shut down computer system</b>	<b>P1.</b> Save any work to be retained <b>P2.</b> Close open application programs correctly <b>P3.</b> Shut down computer <b>P4.</b> Switch off any unused peripheral devices <b>P5.</b> Ensure computer safety

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Basic parts of a computer
- K2:** Definition of computer
- K3:** Definition of Drives
- K4:** enlist computer component

### **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Switch on the computer
- Attach Computer component
- Switch on Peripheral devices
- Make a folder in any partition(drive) in hard disk
- Give name to the folder
- Save file in the folder
- delete the folder/File
- Shut down computer

The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments

## 071300616 Identify Tools & Equipment

**Overview:** This Competency Standard covers the skills and knowledge required to arrange tools/equipment, maintain tool box, insulate tools/equipment, calibrate measuring tools and manage proper inventory of used/unused tools/equipment. Trainee will be expected to follow the procedures to maintain the tools/equipment.

Competency Units	Performance Criteria
<b>CU1. Arrange Tools and Equipment</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Interpret job card <b>P3.</b> Prepare list of tools and equipment as per requirement <b>P4.</b> Collect tools and equipment from store
<b>CU2. Maintain Tool Box</b>	<b>P1.</b> Check physical conditions of tools and equipment before use <b>P2.</b> Perform preventive maintenance as per standards <b>P3.</b> Perform corrective maintenance of tools as per requirements <b>P4.</b> Clean tools and equipment after use <b>P5.</b> Place tools and equipment at appropriate place
<b>CU3. Insulate Tools and Equipment</b>	<b>P1.</b> Select insulated tools and equipment <b>P2.</b> Adopt insulated tools and equipment as per standards
<b>CU4. Calibrate measuring tools</b>	<b>P1.</b> Check calibration status of the measuring tools <b>P2.</b> Perform calibration of measuring tools as per standards <b>P3.</b> Record calibration test results
<b>CU5. Manage Inventory of tools and equipment</b>	<b>P1.</b> Check tools and equipment as per record <b>P2.</b> Report for faulty tools and equipment to supervisor <b>P3.</b> Generate demand for deficit tools and equipment <b>P4.</b> Maintain all records of tools and equipment

## Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Define various tools and equipment and their functions
- K2:** Define Job card/work order
- K3:** Describe arrangement of tools/equipment as per job
- K4:** Differentiate between corrective and preventive maintenance

- K5:** Describe arrangements of tools and equipment in tool box
- K6:** Explain storage methods of tools and equipment
- K7:** Define insulation procedure
- K8:** Describe types of insulation
- K9:** Describe methods of insulated tools and equipment
- K10:** Describe types of calibration
- K11:** Describe methods of equipment calibration
- K12:** Explain methods of tools and equipment inventory
- K13:** Elaborate writing of faulty tools and equipment

### **Critical Evidence(s) Required**

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Demonstrate various tools and equipment
- Storage methods of tools and equipment
- Types of insulation
- Use of insulated tools and equipment
- Method of equipment calibration
- Methods of report writing

## 102200844 Comply with Perform Personal Health and Safety Guidelines

**Overview:** This Competency Standard identifies the competencies required to protect/apply occupational Safety, health and Environment at workplace according to the industry's approved guidelines, procedures and interpret environmental rules/regulations. Trainee will be expected to identify and use Personal Protective Equipment (PPE) according to the work place requirements. The underpinning knowledge regarding Observe Occupational Safety and Health (OSH) will be sufficient to provide the basis for the job at workplace.

Competency Units	Performance Criteria
<b>CU1. Identify Personal Hazards at Workplace</b>	<b>P1:</b> Identify risk to personal health <b>P2:</b> Identify hygiene and safety at work place <b>P3:</b> Identify processes <b>P4:</b> Identify tools, equipment and consumable materials that have the potential to cause harm <b>P5:</b> Report, identified risk to Health, hygiene and safety to concerned
<b>CU2. Apply Personal Protective and Safety Equipment (PPE)</b>	<b>P1:</b> List the Personal Protective equipment <b>P2:</b> Select personal protective equipment in terms of type and quantity according to work orders. <b>P3:</b> Wear personal protective equipment according to job requirements. <b>P4:</b> Clean personal protective equipment <b>P5:</b> Stored Personal Protective equipment in proper place after use.
<b>CU3. Comply with Occupational Safety and Health (OSH)</b>	<b>P1:</b> Maintain cleanliness and hygiene as per organizational policy <b>P2:</b> Comply with Health, hygiene and safety precautions before starting work <b>P3:</b> Comply with organizational Health, hygiene and safety guidelines during work <b>P4:</b> Deal with resolvable problems according to prescribed procedures <b>P5:</b> Report un resolvable problems to concerned <b>P6:</b> Place the tools equipment etc. at their prescribed place after completion of work
<b>CU4. Dispose of hazardous Waste/materials from the designated area.</b>	<b>P1:</b> Identify hazardous waste materials which needs to be disposed off <b>P2:</b> Segregate hazardous or non-hazardous waste carefully from the designated area as per approved procedure <b>P3:</b> Use proper disposal hazardous containers for dispose-off hazardous waste as per procedure



	<b>P4:</b> Take necessary precautions like putting masks and gloves while disposing hazardous waste/ materials as per standard operating procedure
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### Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explain safety rules and regulations of organization
- K2:** List Personal protection and safety Equipment
- K3:** Describe meaning of Safety signs and symbols
- K4:** Demonstrate understanding of safety related Standard Operating Procedure/guidelines
- K5:** Describe waste disposal SOPs
- K6:** Explain best practices relating to clean and safe work environment

### Critical Evidence(s) Required

The candidate needs to produce following critical evidence (s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of maintaining personal health and hygiene practices. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

## 041700839 Communicate the Workplace Policy and Procedure

**Overview:** This unit describes the performance outcomes, skills and knowledge required to develop communication skills in the workplace. It covers gathering, conveying and receiving information, along with completing assigned written information under direct supervision.

Competency Units	Performance Criteria
<b>CU1. Identify workplace communication procedures</b>	<p><b>P1.</b> Identify organizational communication requirements and workplace procedures with assistance from relevant authority</p> <p><b>P2.</b> Identify appropriate lines of communication with supervisors and colleagues.</p> <p><b>P3.</b> Seek advice on the communication method/equipment most appropriate for the task</p>
<b>CU2. Communicate at workplace</b>	<p><b>P1.</b> Use effective questioning, and active listening and speaking skills to gather and convey information</p> <p><b>P2.</b> Use appropriate non-verbal behavior at all times</p> <p><b>P3.</b> Encourage, acknowledge and act upon constructive feedback</p>
<b>CU3. Draft Written Information</b>	<p><b>P1.</b> Identify and comply with required range of written materials in accordance with organizational policy and procedures</p> <p><b>P2.</b> Draft and present assigned written information for approval, ensuring it is written clearly, concisely and within designated timeframes.</p> <p><b>P3.</b> Ensure written information meets required standards of style, format and detail.</p> <p><b>P4.</b> Seek assistance and/or feedback to aid communication skills development</p>
<b>CU4. Review Documents</b>	<p><b>P1.</b> Check draft for suitability of tone for audience, purpose, format and communication style</p> <p><b>P2.</b> Check draft for readability, grammar, spelling, sentence and paragraph construction and correct any inaccuracies or gaps in content.</p> <p><b>P3.</b> Check draft for sequencing and structure</p> <p><b>P4.</b> Check draft to ensure it meets organizational requirements</p> <p><b>P5.</b> Ensure draft is proofread, where appropriate, by supervisor or colleague</p>

## Knowledge and Understanding

- K1:** Key provisions of relevant regulations that may affect aspects of business operations, such as privacy laws
- K2:** Organizational policies, plans and procedures.
- K3:** Barriers to communication
- K4:** Communication model
- K5:** Verbal and written communication techniques

## Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to develop communication skills in the workplace. It covers gathering, conveying and receiving information, along with completing assigned written information under direct supervision. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

## 001100851 Perform Basic Communication (Specific)

**Overview:** This unit describes the skills and knowledge required to assist in the development of communication competence by providing information regarding different forms of communication and their appropriate use.

By the end of this program, learners will be able, to communicate more effectively and efficiently by: working in a team, follow supervisor's instructions and develop generic communication work skills at workplace

Competency Units	Performance Criteria
<b>CU1. Communicate in a team to achieve intended outcomes</b>	<b>P1.</b> Treat team members with respect <b>P2.</b> Maintain positive relationships to achieve common organizational goals <b>P3.</b> Get work related information from team <b>P4.</b> Identify interrelated work activities to avoid confusion <b>P5.</b> Adopt communication skills, which are designed in a team. <b>P6.</b> Identify problems in communication with a team <b>P7.</b> Resolve Communication barrier through discussion and mutual agreement
<b>CU2. Follow Supervisor's instructions as per organizational SOPs</b>	<b>P1.</b> Receive the instructions from Supervisor <b>P2.</b> Carry out the instructions of the supervisor <b>P3.</b> Report to the supervisor as per organizational SOPs

<b>CU3. Develop Generic communication skills at workplace</b>	<b>P1.</b> Develop basic reading skills <b>P2.</b> Develop Basic writing Skills <b>P3.</b> Develop basic listening skills
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### Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Basic Learn and understand Types of communication
- K2:** Basic Reading Skills
- K3:** Basic Writing skills
- K4:** Basic Verbal communication skills
- K5:** Basic Problem solving skills
- K6:** Basic Self-Management Skills
- K7:** Basic Technology Skills
- K8:** Basic Interview Skills
- K9:** Basic Workplace dress code
- K10:** Basic The role of team members and functionality of the teams

### Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Make a list of appropriate communication skills with colleagues and supervisors

## 061100856 Perform Basic Computer Application (Specific)

**Overview:** This unit describes the skills and knowledge required to use spreadsheet to prepare a page of document, develops familiarity with Word, Excel, Access, PowerPoint, email, and computer graphics basics.

It applies to individuals who perform a range of routine tasks in the workplace using a fundamental knowledge of spreadsheets, Microsoft office and computer graphics in under direct supervision or with limited responsibility.

Competency Units	Performance Criteria
<b>CU1. Create Word Documents</b>	<b>P1.</b> Open word processing application <b>P2.</b> Create a word document <b>P3.</b> Customize page layout with relevant name setting <b>P4.</b> Set up page in a word document <b>P5.</b> Edit word document as required <b>P6.</b> Use simple formatting tools when creating the document <b>P7.</b> Save word document to directory <b>P8.</b> Insert table in a word document <b>P9.</b> Insert appropriate images into document as necessary <b>P10.</b> Insert header/footer in a word document <b>P11.</b> Insert section break in a word document <b>P12.</b> Set style in word document <b>P13.</b> Select basic Print settings <b>P14.</b> Print the document
<b>CU2. Use internet for Browsing</b>	<b>P1.</b> Use search engines to open website <b>P2.</b> Search data on different topics <b>P3.</b> Refine search to increase relevance of information or content <b>P4.</b> Navigate a website to access the information or content required

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Describing formatting styles and their effect on formatting, readability and appearance of documents
- K2:** Outline purpose, use and function of word-processing software.
- K3:** Editing in MS Word

**K4:** Formatting in MS word

**K5:** Use of different search engines

**K6:** Use of different web pages

#### **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Identify the components of computer
- Follow organizational ergonomic work health and safety (WHS) requirements and practices
- Create, open and retrieve documents using customized basic settings
- Format documents by creating tables and adding text, objects and images
- Save and prints documents.
- Download data through web browser

## 071300618 Identify Generators & Its Components

**Overview:** This Competency Standard covers the skills and knowledge required to identify generator and its engine parts, identify components/attachments, identify capabilities of Generator and Identify basic tools and supplies Trainee will be expected to follow the procedures for identifying the generator and its components.

Competency Units	Performance Criteria
<b>CU1. Identify generator and its engine</b>	<b>P1.</b> Identify petrol engine <b>P2.</b> Identify diesel engine <b>P3.</b> Identify gas engine
<b>CU2. Identify components &amp; attachments</b>	<b>P1.</b> Identify alternator <b>P2.</b> Identify fuel pump <b>P3.</b> Identify water pump <b>P4.</b> Identify radiator <b>P5.</b> Identify turbo charger/inter cooler
<b>CU3. Identify capacity of generator</b>	<b>P1.</b> Check capacity as per manufacturer's specification <b>P2.</b> Ensure proper capacity of generator
<b>CU4. Identify capabilities of generator</b>	<b>P1.</b> Check capability as per manufacturer's specification <b>P2.</b> Ensure proper capability of generator as per rating <b>P3.</b> Report to supervisor as per format
<b>CU5. Identify basic tools and supplies associated with generator</b>	<b>P1.</b> Check standard tools supplied with generators <b>P2.</b> Check spare/consumable materials <b>P3.</b> Adopt manufacturer's specifications of tools and equipment

### Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Describe Petrol engine and its functions
- K2:** Describe Diesel engine and its functions
- K3:** Describe Gas engines and its functions
- K4:** Define alternator

- K5:** Define fuel pump
- K6:** Define water pump
- K7:** Define radiator
- K8:** Define functions of turbo charger/intercooler
- K9:** Define generator capacity
- K10:** Explain specification of different generator sets
- K11:** Describe HP, CC and KW/KVA
- K12:** Explain basic conversion techniques between HP, CC, and KW/KVA
- K13:** Understand calculation to find CC, HP, KW/KVA
- K14:** Know basic tools and supplies
- K15:** Elaborate spare/consumable materials

### **Critical Evidence(s) Required**

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Alternator
- Fuel pump
- Water pump
- Radiator
- Functions of turbo charge
- Basic conversion techniques between HP, CC, and KW/KVA

### **Tools and Equipment Required**

The tools and equipment required for this competency standard are given below:

- Open end spanner set
- Universal pliers
- Socket box
- Allen key set
- Screw driver set (star, flat)
- Hammer set (plastic/rubber)
- Hammer set(steel)
- Combination pliers
- Bench power supply (variable DC)
- Adjustable screw wrench set
- Phase sequence checker



## 071300619 Identify General Faults

**Overview:** This Competency Standard covers the skills and knowledge required to check physical conditions of Generator, take history of faulty generator, check battery, check self-starter, check self-starter, check alternator charger, check control panel, document fault for identifying generator fault.

Competency Units	Performance Criteria
<b>CU1. Check Physical Condition of Generator</b>	<b>P1.</b> Check foundation and balance of generator <b>P2.</b> Check earthing of generator <b>P3.</b> Check canopy and exhaust of generator <b>P4.</b> Check power cable connections and circuit breaker <b>P5.</b> Check leakage of lubricants, coolant and fuel
<b>CU2. Take History of Faulty Generator</b>	<b>P1.</b> Examine log book <b>P2.</b> Seek information from operator <b>P3.</b> Prepare report of the faults
<b>CU3. Check Battery</b>	<b>P1.</b> Check charge of battery <b>P2.</b> Check battery electrolytes and terminals <b>P3.</b> Check battery leads
<b>CU4. Check Self-starter</b>	<b>P1.</b> Check physical condition and connections of self-starter <b>P2.</b> Check battery voltage on self – starter terminals
<b>CU5. Check battery Charger</b>	<b>P1.</b> Check generator belt <b>P2.</b> Check generator wires
<b>CU6. Check Control Panel</b>	<b>P1.</b> Check AC/DC supply <b>P2.</b> Check fuses/breakers <b>P3.</b> Check parameters and wiring
<b>CU7. Document Fault</b>	<b>P4.</b> Note fault in log book <b>P5.</b> Report to supervisor

## Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

**K1:** Define canopy

- K2:** Define methods of physical checking
- K3:** Define log book
- K4:** Explain how to update log book
- K5:** Explain methods of battery charging
- K6:** Understand specific gravity of battery
- K7:** Explain self-starter
- K8:** Explain functions of self-starter
- K9:** Elaborate alternator charger
- K10:** Explain functions of alternator charger
- K11:** Define control panel
- K12:** Explain functions of control panel
- K13:** Explain how to prepare report for faults

### **Critical Evidence(s) Required**

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Self-starter
- Functions of self-starter
- Alternator charger
- Functions of alternator charger
- Control panel

### **Tools and Equipment required**

The tools and equipment required for this competency standard are given below:

- Digital volt meter
- Multimeter
- Watt meter
- Manometer/phase sequence meter
- Power factor meter
- Megger/insulation tester

## 071300623 Identify Electrical Fault

**Overview:** This Competency Standard covers the skills and knowledge required to inspect and service ignition system, inspect and service alternator, inspect and service display panel, inspect and service governor /Actuator System, inspect and service charging system, inspect and service warning system, to diagnose electric fault (s) in generator.

Competency Units	Performance Criteria
<b>CU1. Inspect and service Ignition system</b>	<b>P1.</b> Identify the tools and equipment <b>P2.</b> Check Direct Current (DC) power supply of ignition coil and distributor <b>P3.</b> Check and service High Tension (HT) leads <b>P4.</b> Check and service spark plug
<b>CU2. Inspect and service alternator</b>	<b>P1.</b> Identify the tools and equipment <b>P2.</b> Check DC output voltage <b>P3.</b> Check and service belt <b>P4.</b> Connections of alternator
<b>CU3. Inspect and service display panel</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Check gauges, circuit breakers, relays and wiring as per standard parameters
<b>CU4. Inspect and service governor /Actuator System</b>	<b>P1.</b> Identify the tools and equipment <b>P2.</b> Check and replace actuator card supply <b>P3.</b> Check and replace magnetic pick up <b>P4.</b> Check power supply on actuator/governor
<b>CU5. Inspect and service charging system</b>	<b>P1.</b> Identify the tools and equipment <b>P2.</b> Check battery power leads <b>P3.</b> Check charging circuit of alternator
<b>CU6. Inspect and service warning system</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Check oil sensor <b>P3.</b> Check temperature sensor <b>P4.</b> Check fuel sensor <b>P5.</b> Check over/under load module

## Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Define Ignition coil and Distributor
- K2:** Define High Tension (HT) Leads
- K3:** Explain functions of Spark Plug.
- K4:** Describe DC alternator
- K5:** Know about voltage of Alternator
- K6:** Know about Display Panel / Data Screen
- K7:** Explain types of circuit breakers / Relays
- K8:** Describe Governor / Actuator
- K9:** Describe charging system
- K10:** Describe Warning system

## Critical Evidence(s) Required

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Ignition coil and Distributor
- High Tension (HT) Leads
- Functions of Spark Plug
- Display Panel / Data Screen
- Governor / Actuator
- Charging system

## Tools and Equipment Required

The tools and equipment required for this competency standard are given below:

- Digital volt meter
- Watt meter
- Multimeter
- Power factor meter
- Megger/insulation tester
- Frequency meter
- Bench power supply (variable DC)
- Tachometer

## 071300620 Identify Mechanical faults

**Overview:** This Competency Standard covers the skills and knowledge required to inspect/service lubrication system, inspect/service cooling system, inspect/service air intake system, inspect and service fuel system, inspect and service exhaust system, inspect safety equipment and service cam timing system for identifying mechanical fault in generator. Trainees will be expected to follow the same procedures to diagnose mechanical fault as per company manual and procedure.

Competency Units	Performance Criteria
<b>CU1. Inspect and service lubrication system</b>	<b>P1.</b> Locate lubricant parts <b>P2.</b> Check oil level of engine <b>P3.</b> Maintain oil level <b>P4.</b> Identify leakage and report to supervisor
<b>CU2. Inspect and service cooling system</b>	<b>P1.</b> Adopt appropriate safety measures <b>P2.</b> Ensure unobstructed air flow of radiator <b>P3.</b> Maintain coolant level <b>P4.</b> Replace fan belts and hose pipe
<b>CU3. Inspect and service air intake system</b>	<b>P1.</b> Locate components to be inspected <b>P2.</b> Check air service indicator <b>P3.</b> Select appropriate tools/equipment <b>P4.</b> Clean primary air filter <b>P5.</b> Replace intake hoses and clamps
<b>CU4. Inspect and service fuel system</b>	<b>P1.</b> Locate components to be inspected <b>P2.</b> Identify fuel gauges and level indicators <b>P3.</b> Select appropriate tools <b>P4.</b> Perform basic maintenance such as cleaning of fuel stain/fuel tank <b>P5.</b> Identify service need defect and hazardous condition through visuals/physical inception <b>P6.</b> Report fuel leakage and faults
<b>CU5. Inspect and service exhaust system</b>	<b>P1.</b> Locate components to be inspected <b>P2.</b> Check silencer shield <b>P3.</b> Check blockage & leakage of silencer <b>P4.</b> Dismantle silencer <b>P5.</b> Reinstall silencer

<b>CU6. Inspect safety sensors</b>	<b>P1.</b> Check and clean heat sensor <b>P2.</b> Check oil pressure sensor <b>P3.</b> Check and clean air sensor <b>P4.</b> Check and clean RPM sensor
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### Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Define lubricant
- K2:** Describe types of lubricants
- K3:** Describe uses of lubricants regarding weather conditions
- K4:** Define coolant
- K5:** Define functions of radiator
- K6:** Define antifreeze solution
- K7:** Describe intake components of air intake system
- K8:** Describe methods to check service indicator
- K9:** Define different types of fuel
- K10:** Define of types of fuel gauges
- K11:** Define Carbon Monoxide Ratio (COR)
- K12:** Define silencer
- K13:** Define safety equipment /sensors
- K14:** Explain types of safety equipment/sensors

### Critical Evidence(s) Required

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Lubricants
- Types of lubricants
- Uses of lubricants regarding weather conditions
- Coolant
- Antifreeze solution
- Intake components of air intake system
- Types of fuel gauges

## **Tools and Equipment Required**

The tools and equipment required for this competency standard are given below:

- Timing light
- Engine analyzer
- Cylinder leakage tester
- Fuel injection test device
- Cooling system pressure system
- Pressure gauge (oil)
- Glow plug analyzer
- Cylinder leakage tester
- Spencer set

## 102200846 Apply Work Health and Safety Practices (WHS)

**Overview:** This unit describes the skills to work with safety and participate in hazard assessment activities, follow emergency procedures and participate OHS practices in process.

Competency Units	Performance Criteria
<b>CU1. Implement safe work practices at work place</b>	<p><b>P1.</b> Implement relevant rules and procedures of WHS at work place.</p> <p><b>P2.</b> Comply with duty of care requirements</p> <p><b>P3.</b> Use personal protective equipment according to safe work practices</p> <p><b>P4.</b> Contribute to WHS consultative activities</p> <p><b>P5.</b> Raise WHS issues with relevant personnel</p>
<b>CU2. Participate in hazard assessment activities a work place</b>	<p><b>P1.</b> Identify hazards or WHS issues in the workplace to relevant personnel</p> <p><b>P2.</b> Assess and control risks according to own level of responsibility, in line with workplace procedures</p> <p><b>P3.</b> Report hazards or WHS issues in the workplace to relevant personnel</p> <p><b>P4.</b> Document risk control actions as required</p>
<b>CU3. Follow emergency procedures at workplace</b>	<p><b>P1.</b> Report emergencies or incidents promptly to relevant personnel</p> <p><b>P2.</b> Deal with emergencies in line with own level of responsibility</p> <p><b>P3.</b> Implement evacuation procedures as required</p>
<b>CU4. Participate in OHS consultative processes</b>	<p><b>P1.</b> Contribute to workplace meetings, inspections or other consultative activities</p> <p><b>P2.</b> Raise OHS (Occupational Health and Safety) issues with designated persons in accordance with organizational procedures</p> <p><b>P3.</b> Take actions to eliminate workplace hazards or to reduce risks</p>

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Outline the WHS rights and responsibilities that apply to own role
- K2:** Explain the term duty of care
- K3:** Describe typical health and safety roles in the workplace



- K4:** List and describe common safety signs and symbols
- K5:** Explain procedures for reporting hazards, risks, incidents and accidents
- K6:** Identify and describe common hazards and major causes of accidents relevant to the workplace
- K7:** Explain what the term risk control means
- K8:** List and describe potential emergency situations and how to respond to them

#### **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

Demonstrate evidences of the Health and safety Processes to avoid any incident.

## 041700840 Identify and Implement Workplace Policy and Procedures

**Overview:** This unit describes the skills and knowledge required to develop and implement a workplace policy & procedures and to modify the policy to suit changed circumstances. It applies to individuals with managerial responsibilities who undertake work developing approaches to create, monitor and improve strategies and policies within workplaces and engage with a range of relevant stakeholders and specialists.

Competency Units	Performance Criteria
<b>CU1. Identify workplace policy &amp; procedures</b>	<p><b>P1.</b> Identify the workplace policy &amp; procedures</p> <p><b>P2.</b> Apply appropriate strategies that can be used to measure whether your workplace health and safety obligations are being met.</p> <p><b>P3.</b> Assure the policies are realistic, resources and personnel to implement</p> <p><b>P4.</b> Implement the policy &amp; procedures that reflects the organizations commitments</p> <p><b>P5.</b> Ensure the appropriate methods of implementation, outcomes and performance indicators</p>
<b>CU2. Implement workplace policy &amp; procedures</b>	<p><b>P1.</b> Apply and assign responsibility for recording systems to track continuous improvements in policy &amp; procedures</p> <p><b>P2.</b> Implement strategies for continuous improvement in effective and efficient information</p>
<b>CU3. Communicate workplace policy &amp; procedures</b>	<p><b>P1.</b> Communicate procedures to help implement workplace policy</p> <p><b>P2.</b> Inform those involved in implementing the policy about expected outcomes, activities to be undertaken and assigned responsibilities</p>
<b>CU4. Review the implementation of workplace policy &amp; procedures</b>	<p><b>P1.</b> Identify the trends that may require remedial actions</p> <p><b>P2.</b> Record the trends that may require remedial actions.</p> <p><b>P3.</b> Ensure policy and procedures as required are made for continuous improvement of performance</p>

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Legislation, regulations and codes of practice applicable to the organization
- K2:** internal and external sources of information and organizational policy & procedures
- K3:** Typical barriers to implementing policies and procedures in an organization.

## Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

Identify evidences of the ability to implement work place policy and procedures. briefly identify work place procedures to avoid incident.

## 001100852 Communicate at Workplace

**Overview:** This unit describes the performance outcomes, skills and knowledge required to develop communication skills in the workplace. It covers gathering, conveying and receiving information, along with completing assigned written information under direct supervision.

Competency Units	Performance Criteria
<b>CU1. Communicate within the organization</b>	<p><b>P1.</b> Communicate within a department</p> <p><b>P2.</b> Communicate with other departments.</p> <p><b>P3.</b> Use various media to communicate effectively</p> <p><b>P4.</b> Communicate orally and written</p>
<b>CU2. Communicate outside the organization</b>	<p><b>P1.</b> Deal with vendors</p> <p><b>P2.</b> Deal with clients/customers</p> <p><b>P3.</b> Interact with other organisations</p> <p><b>P4.</b> Use various media to communicate effectively</p> <p><b>P5.</b> Work with people of different cultures / backgrounds</p>
<b>CU3. Communicate effectively in workgroup</b>	<p><b>P1.</b> Assess the issues to provide relevant suggestion to group members</p> <p><b>P2.</b> Resolve the issues/ problems /conflicts within the group</p> <p><b>P3.</b> Arrange group working sessions to increase the level of participation in the group processes</p> <p><b>P4.</b> Communicate messages to group members clearly to ensure interpretation is valid</p> <p><b>P5.</b> Communicate style /manner to reflect professional standards/ awareness of appropriate cultural practices</p> <p><b>P6.</b> Act upon constructive feedback</p>
<b>CU4. Communicate in writing</b>	<p><b>P1.</b> Identify relevant procedures for written information</p> <p><b>P2.</b> Use strategies to ensure correct communication in writing.</p> <ul style="list-style-type: none"> <li>• correct composition</li> <li>• clarity</li> <li>• comprehensiveness</li> <li>• accuracy</li> <li>• appropriateness</li> </ul> <p><b>P3.</b> Draft assigned written information for approval, ensuring it is written within designated timeframes</p> <p><b>P4.</b> Ensure written information meets required standards of style, format and detail</p> <p><b>P5.</b> Seek assistance / feedback to aid communication skills development</p>

## **Knowledge and Understanding**

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Importance of intra and inter organizational communication
- K2:** Basics of business communication
- K3:** Defining Modes of communication
- K4:** Effective communication in workgroup
- K5:** Communicating through writing
- K6:** The importance of teamwork

## **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

In your current position, what types of written communication do you use most often? (List them all).

## 061100858 Perform Computer Application Skills

**Overview:** This unit describes the skills and knowledge required to use spreadsheet applications, prepare in page documents, develops familiarity with Word, Excel, Access, PowerPoint, email, and computer graphics basics.

It applies to individuals who perform a range of routine tasks in the workplace using a fundamental knowledge of spreadsheets, Microsoft office and computer graphics in under direct supervision or with limited responsibility.

Competency Units	Performance Criteria
<b>CU1. Prepare In-page documents as per required information</b>	<b>P1.</b> Set keyboard preferences according to information requirements <b>P2.</b> Layout Page according to information requirements <b>P3.</b> Toggle between Languages <b>P4.</b> Identify the usage of tool bar <b>P5.</b> Insert Columns as per requirement <b>P6.</b> Print the document
<b>CU2. Prepare Spreadsheets as per required information</b>	<b>P1.</b> Create workbook according to information requirements <b>P2.</b> Insert sheet according to information requirements <b>P3.</b> Enter basic formulae / functions using cell referencing when required <b>P4.</b> Correct formulas when error messages occur <b>P5.</b> Use a range of common tools during spreadsheet development <b>P6.</b> Edit columns and rows within the spreadsheet Filter data <b>P7.</b> Save the spreadsheet to a folder on a storage device <b>P8.</b> Format spreadsheet using formatting features as required <b>P9.</b> Incorporate object and chart in spreadsheet <b>P10.</b> Print spreadsheet
<b>CU3. Use MS Office as per required information</b>	<b>P1.</b> Use Microsoft Word for documentation <b>P2.</b> Use Microsoft Excel for documentation <b>P3.</b> Use Microsoft PowerPoint for presentation <b>P4.</b> Perform OneNote <b>P5.</b> Perform Outlook for emails <b>P6.</b> Perform Publisher applications
<b>CU4. Perform computer graphics in basic applications</b>	<b>P1.</b> Perform graphic fundamentals in basic applications <b>P2.</b> Draw Points and lines to make images <b>P3.</b> Draw Dots in space to make images

	<p><b>P4.</b> Draw lightening blot Shapes to make images</p> <p><b>P5.</b> Enlarge circles and rectangles to block in forms</p>
<b>CU5. Create Email account for communications</b>	<p><b>P1.</b> Make email account for communications</p> <p><b>P2.</b> . Compose text of an email message according to organizational guidelines as required</p> <p><b>P3.</b> Create an automatic signature for the user</p> <p><b>P4.</b> Attach files to email message where required</p> <p><b>P5.</b> Send email message</p> <p><b>P6.</b> Reply to / forward a received message using available features</p> <p><b>P7.</b> Save an attachment to the relevant folder</p> <p><b>P8.</b> Save email message using available settings</p> <p><b>P9.</b> Adjust email accounts to restrict and quarantine possible email security problems</p> <ul style="list-style-type: none"> <li>• Print email message as per requirements</li> </ul>

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** List basic technical terminology related to reading help files and prompts
- K2:** Explain the effect of formatting and appearance on the readability and usability of spreadsheets
- K3:** Outline log-in procedures relating to accessing a personal computer (PC)
- K4:** Describe the purpose, use and function of spreadsheet applications.
- K5:** Understand **MS Word** to create documents, flyers, publications
- K6:** Understand **MS PowerPoint** to create presentations
- K7:** Understand **MS Excel** to store, organize, and manipulate data
- K8:** Understand **OneNote** to organize data you collect including handwritten notes, drawings, screen captures, audio clips, and more
- K9:** Understand of **Publisher** to create extensive publications, posters, flyers, menus
- K10:** Understand **Outlook** to manage email and calendars, to do lists, and contacts

### **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Create spreadsheets
- Customize basic settings
- Format spreadsheets
- Apply basic formulas
- Insert objects and charts in spreadsheets
- Save and print spreadsheets.



## 041300867 Manage Personal Finances

**Overview:** This unit of competency describes the outcomes required to manage develop, implement and monitor a personal budget in order to plan regular savings and manage debt effectively.

Competency Units	Performance Criteria
<b>CU1. Develop a personal budget</b>	<p><b>P1.</b> Calculate current living expenses using available information to prepare a personal budget.</p> <p><b>P2.</b> Keep a record of all income and expenses for a short period of time to help estimate ongoing expenses.</p> <p><b>P3.</b> Subtract total expenses from total income to determine a surplus or deficit budget for the specified period.</p> <p><b>P4.</b> Find reasons for a deficit budget and ways to reduce expenditure identified.</p> <p><b>P5.</b> Identify ways to increase income</p>
<b>CU2. Develop long term personal budget</b>	<p><b>P1.</b> Analyze income and expenditure and set long term personal financial goals.</p> <p><b>P2.</b> Develop a long-term budget based on the outcomes of short-term budgeting.</p> <p><b>P3.</b> Identify obstacles that might affect the business</p> <p><b>P4.</b> Formulate a regular savings plan based on budget</p>
<b>CU3. Identify ways to maximize future finances</b>	<p><b>P1.</b> Determine sources to maximize personal income,</p> <p><b>P2.</b> Get further education or training to maintain or improve future income.</p> <p><b>P3.</b> Identify the need for debt to finance living and other expenses,</p> <p><b>P4.</b> Determine the appropriate levels of debt and repayment.</p> <p><b>P5.</b> Consolidate existing debt, where possible, to minimize interest costs and fees.</p> <p><b>P6.</b> Seek professional money management services.</p>

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explain the abilities to plan and organize to keep records and monitor a personal budget
- K2:** Describe abilities to set and review goals
- K3:** Explain basic financial management and record keeping to enable development and management of a personal budget

- K4:** Describe benefits of financial goal setting and personal budgeting to enable effective management of personal finances
- K5:** Outline numeracy skills to compare income and expenditure

#### **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

Demonstrates competency to provide evidence of the ability to manage personal finances. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

## 071300622 Carryout Basic Electrical AC Installation

### Overview:

This Competency Standard covers the skills and knowledge required to lay cables, perform single & three phase connections, basic electric wiring and wiring test for carrying out basic electrical Air Condition (AC) installation. The trainee will be required to follow company guidelines as well as the procedure for carrying out basic electrical AC installation.

Competency Units	Performance Criteria
<b>CU1. Lay cables</b>	<b>P1.</b> Interpret electrical drawing/document <b>P2.</b> Identify cables <b>P3.</b> Lay cables <b>P4.</b> Perform earthing
<b>CU2. Perform single-phase Connection</b>	<b>P1.</b> Select cable gauge <b>P2.</b> Select cables colors <b>P3.</b> Connect cables <b>P4.</b> Insulate Joints
<b>CU3. Perform three phase Connection</b>	<b>P1.</b> Select cable Gauge <b>P2.</b> Select cables colors <b>P3.</b> Connect cables <b>P4.</b> Insulate Joints
<b>CU4. Perform Basic Electrical wiring</b>	<b>P1.</b> Measure cables as per requirement <b>P2.</b> Connect cables <b>P3.</b> Perform joints <b>P4.</b> Insulate Joints
<b>CU5. Conduct wiring Test</b>	<b>P1.</b> Operate multi-meter for voltage and current <b>P2.</b> Perform continuity test <b>P3.</b> Perform polarity test <b>P4.</b> Perform earthing test <b>P5.</b> Perform insulation test <b>P6.</b> Record test results

### Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

**K3:** Define color of cables

- K1:** Explain types of cables
- K2:** Define gauges of cables
- K4:** Define single phase connection
- K5:** Explain types of joints
- K6:** Define conductor and insulator
- K7:** Define three phase connection
- K8:** Know about cable gauging
- K9:** Describe color code of cables / phase sequence
- K10:** Explain methods of Wiring
- K11:** Explain types of wiring
- K12:** Define types of connections
- K13:** Define types of wiring tests
- K14:** Describe various wiring test

### **Critical Evidence(s) Required**

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Gauges of Cables
- Color of Cables
- Single phase connection
- Three phase connection
- Color code of cables / Phase sequence
- Cable gauging
- Types of wiring
- Types of connections

### **Tools and Equipment Required**

The tools and equipment required for this competency standard are given below:

- Wires (3/29, 7/29,7/36, 7/44, /7/52,7/64)
- Wire single conductor
- Wire flexible
- Flexible pipes
- Circuit breaker
- Soldering wire
- Soldering paste
- Tool box (23 pieces)
- Screw driver set (star, flat)
- Relays

## 071300624 Repair/Replace Electrical Components

**Overview:** This Competency Standard identifies the competencies required skills and knowledge to repair self- starter, replace faulty parts, replace governor, replace cooling fan motor and inspect warning system. Trainees will be expected to follow the same procedures to repair/replace generator electrical parts as built in company manual.

Competency Units	Performance Criteria
<b>CU1. Repair Self-Starter</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Check the self-starter relay <b>P3.</b> Check self- starter switch contacts (cut-out) <b>P4.</b> Check starter point loose connections <b>P5.</b> Check self- starter armature <b>P6.</b> Check stator field coil for short circuit <b>P7.</b> Check drive system of self-gear <b>P8.</b> Check self- starter bushes
<b>CU2. Replace faulty parts of main alternator</b>	<b>P1.</b> Select tools and equipment <b>P2.</b> Replace carbon-bushes <b>P3.</b> Replace self-exciter divots <b>P4.</b> Replace Automatic Voltage Regulator (AVR) <b>P5.</b> Replace alternator terminal block (connection plate)
<b>CU3. Change gauges on display panel</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Replace temperature gauge <b>P3.</b> Replace oil pressure gauge <b>P4.</b> Replace AC Ampere meter <b>P5.</b> Replace DC charging gauge <b>P6.</b> Replace revolution per minute (RPM) meter <b>P7.</b> Replace AC volt meter <b>P8.</b> Replace frequency meter <b>P9.</b> Replace hour meter
<b>CU4. Repair/ replace governor</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Remove fuel pipe lines <b>P3.</b> Remove timing plate <b>P4.</b> Remove fuel injection pump gear <b>P5.</b> Repair Governor <b>P6.</b> Install Governor

<b>CU5. Replace warning sensors</b>	<b>P1.</b> Select tools and equipment <b>P2.</b> Remove and replace temperature sensors <b>P3.</b> Remove and replace oil pressure sensors <b>P4.</b> Remove and replace fuel sensors
<b>CU6. Replace main alternator bearings</b>	<b>P1.</b> Arrange tools and equipment <b>P2.</b> Dismantle main alternator <b>P3.</b> Pull out the bearings <b>P4.</b> Install bearings
<b>CU7. Change Spark plugs</b>	<b>P1.</b> Arrange tools and equipment <b>P2.</b> Remove the spark plug cables <b>P3.</b> Remove spark plugs <b>P4.</b> Clean spark plugs <b>P5.</b> Install spark plugs

### Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Describe solenoid switch
- K2:** Define Armature and stator
- K3:** Define Carbon bushes
- K4:** Define Commutator
- K5:** Describe Main Alternator
- K6:** Describe AVR
- K7:** List various parts of alternator
- K8:** Describe different types of gauges
- K9:** Define oil pressure gauge
- K10:** Describe electrical components of Governor
- K11:** Define sensors
- K12:** Explain types of sensors
- K13:** Describe the functions of sensors
- K14:** Explain use of proper tools/equipment
- K15:** Describe alternator electric connections
- K16:** Describe types of sparkplug connections
- K17:** Understand High voltage of spark plug

### **Critical Evidence(s) Required**

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Identify tools and equipment
- Solenoid switch
- Adjust armature
- Adjust carbon bushes
- Dismantle main alternator
- Count electrically components of Governor
- Perform sparkplug connections

### **Tools and Equipment Required**

The tools and equipment required for this competency standard are given below:

- Digital volt meter
- Watt meter
- Multimeter
- Power factor meter
- Frequency meter
- Bench power supply (variable DC)
- Screw driver set (star, flat)
- Soldering wire
- Nose pliers
- Soldering paste
- Wire flexible

Tool box (23 pieces)

## 071300627 Install New Generator

**Overview:** This Competency Standard covers installation of small and large capacity generator sets, maintain supply in accordance with the requirements of industry regulations and established procedures. It encompasses the operation, connection and disconnection as well as assessing load assuring the appropriateness of all generators for the required outcome. The trainee will be required to perform installation of generator set as per procedure and instructions given in manual.

Competency Units	Performance Criteria
<b>CU1. Adopt manufacture procedure</b>	<b>P1.</b> Identify Gross weight of the generator <b>P2.</b> Identify foundation holes of generator as per Manufacturer <b>P3.</b> Ensure holes in concrete base
<b>CU2. Interpret foundation drawing</b>	<b>P1.</b> Measure distance between foundation holes <b>P2.</b> Measure diameters of foundation holes <b>P3.</b> Compare diameters of foundation bolts as per specification
<b>CU3. Hoist generator</b>	<b>P1.</b> Locate loading hooks of generator <b>P2.</b> Secure ropes and balance generator <b>P3.</b> Place generator on concrete foundation with chain pulley
<b>CU4. Level generator</b>	<b>P1.</b> Put foundation bolts in foundation holes <b>P2.</b> Level generator length and width wise <b>P3.</b> Fill holes in base with concrete
<b>CU5. Distribute electrical load</b>	<b>P1.</b> Estimate total electrical load <b>P2.</b> Distribute load on each phase equally
<b>CU6. Install change over switch</b>	<b>P1.</b> Mount change over switch/ATS on wall <b>P2.</b> Connect load side with changeover switch <b>P3.</b> Connect generator output with changeover switch <b>P4.</b> Connect external power source with changeover switch
<b>CU7. Connect earthing</b>	<b>P1.</b> Arrange tools and equipment <b>P5.</b> Ensure earthing as per standards <b>P6.</b> Connect earth cable with generator body



## Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Describe foundation drawing
- K2:** Know about the measurement of holes and round bolts
- K3:** Know about the steel ropes/cotton ropes
- K4:** Know about the balancing
- K5:** Know about the leveling
- K6:** Knowledge about the load calculation
- K7:** Define change over switch/ATS
- K8:** Explain types of change over switch/ATS
- K9:** Know about the earthing materials
- K10:** Describe procedure of earthing construction and installation

## Critical Evidence(s) Required

- leveling
- Perform earthing
- Calculate electric load
- Change over switch/alternate transfer switch

## Tools and Equipment Required

The tools and equipment required for this competency standard are given below:

- Torque wrench
- Combination spanner set
- Hammer set(steel)
- Screw driver set (star, flat)
- Tool box (23 pieces)
- Relays
- Battery
- Hand drill machine
- Personal Protective Equipment

## 102200848 Contribute to Work Related Health and Safety (WHS) Initiatives

**Overview:** This unit describes the skills and knowledge required to manage the identification, review, development, implementation and evaluation of effective participation and consultation processes as an integral part of managing work health and safety (WHS).

Competency Units	Performance Criteria
<b>CU1. Contribute to initiate work-related health and safety measures</b>	<p><b>P1.</b> compile database on work-related health and safety</p> <p><b>P2.</b> Identify measures that address legal obligations.</p> <p><b>P3.</b> Consult with individuals/ parties to formulate measures and initiatives</p> <p><b>P4.</b> Consult with individuals/parties to identify factors impacting on work-related health and safety</p> <p><b>P5.</b> Participate in consultative meetings.</p>
<b>CU2. Contribute to establish work-related health and safety measures</b>	<p><b>P1.</b> Assist in planning of work-related health and safety measures</p> <p><b>P2.</b> Contribute to the development of work-related health and safety measures</p> <p><b>P3.</b> Identify to implement work-related health and safety measures i.e.</p> <ul style="list-style-type: none"> <li>• resourcing requirements,</li> <li>• timelines</li> <li>• responsibilities</li> </ul> <p><b>P4.</b> Assist to implement work-related health and safety measures and initiatives i.e.</p> <ul style="list-style-type: none"> <li>• scheduling</li> <li>• liaison</li> <li>• administering resources</li> <li>• communication</li> </ul>
<b>CU3. Contribute to ensure legal requirements of WHS measures</b>	<p><b>P1.</b> Identify WHS legal requirements</p> <p><b>P2.</b> Apply knowledge of all aspects of WHS measures to</p> <ul style="list-style-type: none"> <li>• Consultation</li> <li>• workplace policies</li> <li>• participation processes</li> </ul> <p><b>P3.</b> Ensure, WHS measures are in accordance with legal requirements</p>
<b>CU4. Contribute to review WHS measures</b>	<p><b>P1.</b> Develop effective practices to review work-related health and safety measures</p>

	<p><b>P2.</b> Assist individuals and parties related to WHS measures in following activities</p> <ul style="list-style-type: none"> <li>• preparing reports</li> <li>• communicating review</li> <li>• evaluating outcomes</li> </ul>
<b>CU5. Evaluate the organization's WHS system</b>	<p><b>P1.</b> Assess ongoing compliance with OHS (Occupational Health and safety)</p> <p><b>P2.</b> Take feedback from concerned persons regarding WHS measures.</p> <p><b>P3.</b> Assess the overall effectiveness of WHS management practices</p> <p><b>P4.</b> Assist the development process of WHS measures in following ways</p> <ul style="list-style-type: none"> <li>• Suggest amendments</li> <li>• Document amendments</li> <li>• Implement amendments</li> </ul> <p><b>P5.</b> Take feedback from concerned persons regarding WHS measures.</p> <p><b>P6.</b> Communicate improvements in WHS Measures</p>

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explain the application of relevant mandatory health monitoring, including biological monitoring, to help secure work health and safety
- K2:** Explain the difference between work-related health and safety measures and initiatives designed to meet specific legislative requirements and obligations, and those designed to support non-statutory health promotion programs, and give examples of each
- K3:** List factors that impact on work-related health and safety and their potential effects
- K4:** Identify internal and external sources of WHS information and data, and how to access them
- K5:** Outline organizational WHS and other relevant policies, procedures, processes and systems, including human resources
- K6:** Summarize relevant WHS legislation, other legislation (such as privacy and workers compensation) and common law rights and duties specific to work-related health and safety measures and initiatives

**K7:** Describe work-related health and safety measures and initiatives that either address specific legislative requirements and obligations, or support non-statutory health prevention programs, including:

- The factors impacting on worker health and safety that they address
- Effectiveness
- Costs and benefits
- Criteria for decisions regarding their implementation in a specific workplace
- How they should be implemented.

#### **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to contribute work-related health and safety measures and initiatives. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

## 041700841 Comply with Workplace Policy and Procedures

**Overview:** This unit describes the skills and knowledge required to implement a workplace policy & procedures and to modify the policy to suit changed circumstances. It applies to individuals with managerial responsibilities who undertake work developing approaches to create, monitor and improve strategies and policies within workplaces and engage with a range of relevant stakeholders and specialists.

Competency Units	Performance Criteria
<b>CU1. Manage work timeframes</b>	<p><b>P1.</b> Complete work tasks within deadlines in according to order of priority</p> <p><b>P2.</b> Supervisors are informed of any delays in work times or projects</p>
<b>CU2. Manage to convene meeting</b>	<p><b>P1.</b> Develop agenda in line with meeting purpose</p> <p><b>P2.</b> Select participants and notify them accordingly</p> <p><b>P3.</b> Carryout meeting arrangements according to the time</p> <p><b>P4.</b> Record the minutes of the meeting</p>
<b>CU3. Decision making at workplace</b>	<p><b>P1.</b> Identify the problem, challenge or opportunity</p> <p><b>P2.</b> Generate an array of possible solutions or responses</p> <p><b>P3.</b> Evaluate the costs and benefits associated with each option</p> <p><b>P4.</b> Assess the impact of the decision and modify the course of action as needed</p>
<b>CU4. Set and meet own work priorities at instant</b>	<p><b>P1.</b> Take initiative to prioritize and facilitate competing demands to achieve organizational goals and objectives</p> <p><b>P2.</b> Use technology efficiently and effectively to manage work priorities and commitments</p> <p><b>P3.</b> Maintain appropriate work-life balance</p>
<b>CU5. Develop and maintain professional competence</b>	<p><b>P1.</b> Assess personal knowledge and skills against competency</p> <p><b>P2.</b> Participate in networks to enhance personal knowledge, skills and work relationships</p> <p><b>P3.</b> Seek feedback from employees, clients and colleagues to develop and improve competence</p>
<b>CU6. Follow and implement work safety requirements</b>	<p><b>P1.</b> Identify and report emergency incidents</p> <p><b>P2.</b> Practice organizational policy and procedures for responding to emergency incidents</p> <p><b>P3.</b> Identify and implement workplace procedures and work instructions for controlling risks</p>

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

**K1:** Healthy work life balance

**K2:** Meeting terminologies, structures and arrangements

**K3:** Relevant organizational procedures and policies regarding meetings, chairing and minutes.

**K4:** Barriers to implement policies and procedures in an organization and possible strategies to address them.

## Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to understand workplace policy and procedures. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments

## 001100853 Perform Advanced Communication

**Overview:** This unit describes the performance outcomes, skills and knowledge required to develop communication skills used professionally. It covers plan and organise work and conduct trainings at workplace, along with demonstrating professional skills independently.

Competency Units	Performance Criteria
<b>CU1. Demonstrate professional skills</b>	<p><b>P1.</b> Use different modes of communication to communicate</p> <ul style="list-style-type: none"> <li>• Speaking</li> <li>• Reading</li> <li>• Writing</li> <li>• Listening</li> <li>• Presentation</li> <li>• visual representation etc.</li> </ul> <p><b>P2.</b> Develop CV Skills according requirements</p> <p><b>P3.</b> Upgrade professional skills by attending trainings, webinars, conferences etc.</p> <p><b>P4.</b> Perform Continuous professional development as required at workplace</p> <p><b>P5.</b> Develop interview skills</p>
<b>CU2. Plan and Organize work</b>	<p><b>P1.</b> Identify task requirements.</p> <p><b>P2.</b> Plan steps to complete tasks.</p> <p><b>P3.</b> Review planning and organizing process.</p> <p><b>P4.</b> Organize work.</p>
<b>CU3. Provide trainings at workplace</b>	<p><b>P1.</b> Assess the need for training</p> <p><b>P2.</b> Prepare trainees for the learning experience</p> <p><b>P3.</b> Present training session</p> <p><b>P4.</b> Support trainees in managing their own learning</p> <p><b>P5.</b> Facilitate group learning</p> <p><b>P6.</b> Provide opportunity for practice</p> <p><b>P7.</b> Provide feedback on progress on trainees</p> <p><b>P8.</b> Review delivery experience</p>

## **Knowledge and Understanding**

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explaining the training skills
- K2:** Identification of the professional skills
- K3:** Describing the advanced language skills
- K4:** Understanding of the assessment and trainees feedback methods
- K5:** Direct and indirect communication methods
- K6:** Explaining the need of the training type at the work place
- K7:**

## **Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Job sheet
- Office emails and coordination reports
- Feedback proforma



## 061100858 Develop Advance Computer Application Skills

**Overview:** This unit provides an overview of Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards, i.e. Data Entry, Power Point Presentation and managing data base and graphics for Design

It applies to individuals employed in a range of work environments who need to be able to present a set range of data in a simple and direct forms

Competency Units	Performance Criteria
<b>CU1. Manage Information System to complete a task</b>	<p><b>P1.</b> Perform Data Entry in MS office</p> <p><b>P2.</b> Manage File/folder in MS office</p> <p><b>P3.</b> Perform Scanning of document</p> <p><b>P4.</b> Maintain Office Record in drives</p> <p><b>P5.</b> Perform Printing of document</p> <p><b>P6.</b> Search required Files/Folders</p> <p><b>P7.</b> Convert Files in required format.</p> <p><b>P8.</b> Manage sizes of Files/Folders</p> <ul style="list-style-type: none"> <li>• Compress</li> <li>• Zip /unzip</li> </ul>
<b>CU2. Prepare Presentation using computers</b>	<p><b>P1.</b> Prepare presentation as per requirements, i.e.</p> <ul style="list-style-type: none"> <li>• Open blank presentation and add text / graphics</li> <li>• Create a simple design for a presentation</li> <li>• Apply existing styles within a presentation</li> <li>• Use presentation template and slides to create a presentation</li> <li>• Use various tools to improve the look of the presentation</li> <li>• Save presentation to the appropriate storage device and folder with required name</li> </ul> <p><b>P2.</b> Customize basic settings to meet user requirements</p> <p><b>P3.</b> Format presentation as require</p> <ul style="list-style-type: none"> <li>• Develop organizational charts</li> <li>• Add objects and manipulate to meet presentation purposes</li> <li>• Modify slide layout, including text and colors, to meet presentation requirements</li> <li>• Save presentation in another format</li> <li>• Save to storage device and close presentation</li> </ul> <p><b>P4.</b> Add slide show effect into presentation as required to enhance the presentation</p>

	<ul style="list-style-type: none"> <li>• Incorporate pre-set Animation</li> <li>• Apply Multimedia effects</li> <li>• Record Narration</li> <li>• Apply hyperlink</li> <li>• Apply video</li> <li>• Rehearse Timings</li> <li>• Test presentation for overall effect</li> </ul> <p><b>P5.</b> Print the presentation</p> <ul style="list-style-type: none"> <li>• Select appropriate print format for presentation</li> <li>• Select preferred slide orientation</li> <li>• Add notes and slide numbers</li> <li>• Preview slides and run spell check before presentation</li> <li>• Print selected slides and submit presentation to appropriate person for feedback</li> </ul> <p><b>P6.</b> Practice verbal presentation</p> <p><b>P7.</b> Practice presentation through AV Aids</p>
<b>CU3. Use Microsoft Access to manage database</b>	<p><b>P1.</b> Collect the data using a standard data base package.</p> <p><b>P2.</b> Start access to manage database i.e.</p> <ul style="list-style-type: none"> <li>• identify problem statement of Data</li> <li>• Develop a table with fields /attributes according to database usage/ user requirements</li> <li>• Create a primary key and establish an index for each table</li> <li>• Modify table layout and field attributes as required</li> <li>• Create a relationship between the two tables</li> <li>• Add data in a table according to information requirements</li> <li>• Add records as required</li> <li>• delete records as required</li> <li>• Save database to storage area</li> <li>• close down database to storage area</li> <li>• Apply criteria in the following Query</li> <li>• SQL view of Query</li> <li>• Wildcards of query</li> <li>• Query Criteria</li> </ul> <p><b>P3.</b> Customize basic settings:</p> <ul style="list-style-type: none"> <li>• Adjust page layout to meet user requirements</li> <li>• Open and view different toolbars</li> </ul>

	<ul style="list-style-type: none"> <li>• Format font as appropriate for the purpose of the database entries</li> <li>• Create reports</li> <li>• Design reports to present data in a logical sequence</li> <li>• Modify reports to include or exclude additional requirements</li> <li>• Distribute reports to appropriate person in a suitable format</li> </ul> <p><b>P4.</b> Create forms</p> <ul style="list-style-type: none"> <li>• Use a wizard to create a simple form</li> <li>• Open existing database and modify records through a simple form</li> <li>• Rearrange objects within the form to accommodate information requirements</li> </ul>
<b>CU4. Develop graphics for Design</b>	<p><b>P1.</b> Develop graphic design concepts based on a thorough understanding of the communication need</p> <p><b>P2.</b> Use design techniques confidently to produce designs</p> <p><b>P3.</b> Integrate design tools skillfully to produce designs</p> <p><b>P4.</b> Evaluate the success of completed designs to meet objectives</p> <p><b>P5.</b> evaluate feedback from client / peers</p>

## Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** List basic technical terminology to read help files and prompts
- K2:** Outline the different types of formal and informal presentations
- K3:** Explain Power point presentation
- K4:** Segregation of Data
- K5:** Define the relation among data
- K6:** Define criteria in the query
- K7:** Creates and modify reports and forms.
- K8:** Outline basic database design principles
- K9:** Current graphic design software

**K10:** Discuss features of current and emerging technologies used in graphic design practice and the options they present for effective graphic design solution

**Critical Evidence(s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Design and develop a simple database using a standard database package
- Create, format and prepare presentations for distribution and display
- Customize basic settings
- Add slide show effects.
- Generate employment report from given data by using Microsoft Access.

## 041300869 Manage Human Resource Services

**Overview:** This unit describes the skills and knowledge required to plan, manage and evaluate delivery of human resource services, integrating business ethics. It applies to individuals with responsibility for coordinating a range of human resource services across an organization. They may have staff reporting to them.

Competency Units	Performance Criteria
<b>CU1. Determine strategies for delivery of human resource services</b>	<p><b>P1.</b> Analyze business strategy and operational plans to determine human resource requirements</p> <p><b>P2.</b> Review external business environment that likely impact on organization's human resource requirements</p> <p><b>P3.</b> Consult line and senior managers to identify human resource needs in their areas</p> <p><b>P4.</b> Review organization's requirements for diversity in the workforce</p> <p><b>P5.</b> Deliver human resource services that comply with business goals</p> <p><b>P6.</b> Develop strategic action plan for delivery of human resource services</p> <p><b>P7.</b> Develop roles and responsibilities of human resource team</p> <p><b>P8.</b> Develop quality assurance policy</p>
<b>CU2. Manage the delivery of human resource services</b>	<p><b>P1.</b> Communicate human resource strategies and services to internal and external stakeholders</p> <p><b>P2.</b> Develop and negotiate service agreements between</p> <ul style="list-style-type: none"> <li>• The human resource team,</li> <li>• Service providers</li> <li>• Client groups</li> </ul> <p><b>P3.</b> Document service specifications, performance standards and timeframes</p> <p><b>P4.</b> Document /communicate service</p> <ul style="list-style-type: none"> <li>• Specifications,</li> <li>• Performance standards</li> <li>• Timeframes</li> </ul> <p><b>P5.</b> Monitor Quality assurance processes</p> <p><b>P6.</b> Ensure that services are delivered by appropriate providers, according to service agreements and operational plans</p> <p><b>P7.</b> Identify underperformance of human resource team or service providers</p>

<b>CU3. Evaluate human resource service delivery</b>	<b>P1.</b> Establish Management information system for human resource services <b>P2.</b> Conduct survey to determine level of satisfaction <b>P3.</b> Analyze feedback of survey <b>P4.</b> Recommend changes to service delivery <b>P5.</b> Support agreed change processes across the organization
<b>CU4. Manage integration of business ethics in human resource practices</b>	<b>P1.</b> Ensure ethics in personal behavior <b>P2.</b> Ensure code of conduct is observed across the organization, <b>P3.</b> Observe confidentiality requirements in dealing with all human resource information <b>P4.</b> Deal promptly with unethical behavior <b>P5.</b> Ensure all persons responsible for human resource functions understand requirements regarding their ethical behavior

### Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Identify the key provisions of legal and compliance requirements that apply to managing human resources
- K2:** Summarize the organization's code of conduct
- K3:** Explain human resource strategies and planning processes and their relationship to business and operational plans
- K4:** Describe performance and contract management
- K5:** Explain how feedback is used to modify the delivery of human resources.

### Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to manage human resource services. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

### **Performance requirements**

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- Plan and manage human resource delivery within legislative, organizational and business ethics frameworks
- Communicate effectively with a range of senior personnel
- Identify and arrange training support where appropriate
- Calculate human resource return on investment within the organization.

## 041300860 Develop Entrepreneurial Skills

**Overview:** This Competency Standard identifies the competencies required to develop entrepreneurial skills, in accordance with the organization's approved guidelines and procedures. You will be expected to develop a business plan, collect information regarding funding sources, develop a marketing plan and develop basic business communication skills. Your underpinning knowledge regarding entrepreneurial skills will be sufficient to provide you the basis for your work.

Competency Units	Performance Criteria
<b>CU1. Develop a business plan</b>	<p><b>P1.</b> Conduct a market survey to collect following information</p> <ul style="list-style-type: none"> <li>• Customer /demand</li> <li>• Tools, equipment, machinery and furniture with rates</li> <li>• Raw material</li> <li>• Supplier</li> <li>• Credit / funding sources</li> <li>• Marketing strategy</li> <li>• Market trends</li> <li>• Overall expenses</li> <li>• Profit margin</li> </ul> <p><b>P2.</b> Select the best option in terms of cost, service, quality, sales, profit margin, overall expenses</p> <p><b>P3.</b> Compile the information collected through the market survey, in the business plan format</p>
<b>CU2. Collect information regarding funding sources</b>	<p><b>P1.</b> Identify the available funding sources based on their terms and conditions, maximum loan limit, payback time, interest rate</p> <p><b>P2.</b> Choose the best available option according to investment requirement</p> <p><b>P3.</b> Prepare documents according to the loan agreement requirement</p> <p><b>P4.</b> Include the information of funding sources in the business plan</p>
<b>CU3. Develop a marketing plan</b>	<p><b>P1.</b> Make a marketing plan for the business including product, price, placement, promotion, people, packaging and positioning</p> <p><b>P2.</b> Include the information of marketing plan in the business plan</p>



<b>CU4. Develop basic business communication skills</b>	<p><b>P1.</b> Communicate with internal customers e.g.: labor, partners and external customers e.g.: suppliers, customers etc., using effective communication skills</p> <p><b>P2.</b> Use different modes of communication to communicate internally and externally e.g.: presentation, speaking, writing, listening, visual representation, reading etc.</p> <p><b>P3.</b> Use specific business terms used in the market</p>
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### Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explain the 7ps of marketing including product, price, placement, promotion, people, packaging and positioning
- K2:** Describe 7Cs of business communication
- K3:** Define different modes of communication and their application in the industry
- K4:** Enlist specific business terms used in the industry
- K5:** Enlist the available funding sources
- K6:** Explain how to get loan to start a new business
- K7:** Explain market survey and its tools e.g. questionnaire, interview, observation etc.
- K8:** Describe the market trends for specific product offering
- K9:** State the main elements of business plan
- K10:** Explain how to fill the business plan format

### Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to develop Entrepreneurial Skills.

### Performance requirements

- Conduct market survey and formulate business plans in terms of feasibility, investment potential, risk, and completeness.
- Demonstrate the use of both verbal and non-verbal business communication.
- Effectively present business ideas and profile

## 071300625 Perform Electrical Winding

**Overview:** This Competency Standard covers required skills and knowledge to make winding, perform paper insulation, insert coils relevant slots, connect coils, perform varnishing as per standard and Perform winding continuity Test.

Competency Units	Performance Criteria
<b>CU1. Make winding Coils</b>	<b>P1.</b> Select wire as per required gauge <b>P2.</b> Make coils as per as per specifications
<b>CU2. Perform paper insulation</b>	<b>P1.</b> Select insulation paper <b>P2.</b> Cut insulation paper as per slot size <b>P3.</b> Insert insulation paper in stator /rotor slots
<b>CU3. Insert coils in relevant slots</b>	<b>P1.</b> Insert coil in internal slot as per pitch <b>P2.</b> Insert coil in external slot as per pitch <b>P3.</b> Insert wedge/insulation paper
<b>CU4. Connect coils</b>	<b>P1.</b> Inter connect coil as per circuit diagram <b>P2.</b> Perform lacing of coils
<b>CU5. Perform varnishing as per standard</b>	<b>P1.</b> Select varnish grade as per standard <b>P2.</b> Apply varnish to coil <b>P3.</b> Dry varnish
<b>CU6. Perform winding continuity Test</b>	<b>P1.</b> Adjust test parameters of test bench as per requirement <b>P2.</b> Perform continuity, high voltage, and power input tests <b>P3.</b> Record warning indication and follow as per SOPs

### Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

**K18:** Describe solenoid switch

### Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

**K1:** Explain types of winding wires

**K2:** Describe standard wire gauge (SWG)

**K3:** Describe wire gauging procedure

- K4:** Define coil and number of turns in a coil
- K5:** Define types of windings
- K6:** Describe winding procedure
- K7:** Describe varnishing procedure
- K8:** Explain winding Testing procedure

### **Critical Evidence (s) Required**

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Make winding Coils
- Perform paper insulation
- Insert coils in relevant slots
- Connect coils
- Perform varnishing as per standard
- Perform winding continuity Test

### **Tools and Equipment required**

The tools and equipment required for this competency standard are given below:

- Digital volt meter
- Watt meter
- Multimeter
- Wire flexible
- Tool box (23 pieces)
- Screw driver set (star, flat)
- Winding machine
- Ignition coil

## 071300621 Repair/Replace Mechanical Components

**Overview:** This Competency Standard covers the skills and knowledge required to replace fuel pump, oil pump, fan belt, radiator, oil filter and change cam shaft, crank shaft, valve train components, timing belt and change injector for generator maintenance & repair. Trainees will be expected to follow guidelines and procedure for repair/replace and maintenance of generator as given in company manual.

Competency Units	Performance Criteria
<b>CU1. Replace Fuel / Injection Pump</b>	<b>P1.</b> Select tools and equipment <b>P2.</b> Replace fuel pipes <b>P3.</b> Replace fuel filter <b>P4.</b> Replace the fuel injection pump <b>P5.</b> Calibrate injection pump and atomizer <b>P6.</b> Reinstall calibrated injector pump and atomizer
<b>CU2. Replace Oil Pump</b>	<b>P1.</b> Select Tools and equipment <b>P2.</b> Remove oil pump <b>P3.</b> Repair / Replace faulty components of oil pump
<b>CU3. Replace Fan Belt</b>	<b>P1.</b> Collect tools and equipment <b>P2.</b> Identify size of fan belt <b>P3.</b> Replace fan belt <b>P4.</b> Adjust fan belt
<b>CU4. Replace Radiator</b>	<b>P1.</b> Arrange tools and equipment <b>P2.</b> Uninstall the radiator <b>P3.</b> Clean and flush radiator <b>P4.</b> Repair radiator <b>P5.</b> Reinstall radiator
<b>CU5. Change Oil Filter</b>	<b>P1.</b> Collect tools and equipment <b>P2.</b> Select proper size of oil filter <b>P3.</b> Remove oil filter <b>P4.</b> Install oil filter

<b>CU6. Change Air Filter</b>	<b>P1.</b> Collect tools and equipment <b>P2.</b> Select proper size of air filter <b>P3.</b> Remove air filter <b>P4.</b> Install air filter
<b>CU7. Change Connecting Rod</b>	<b>P1.</b> Select tools and equipment <b>P2.</b> Remove the canopy <b>P3.</b> Remove engine from alternator <b>P4.</b> Dismantle engine <b>P5.</b> Remove connecting rod <b>P6.</b> Repair /replace connecting rod
<b>CU8. Change Cam Shaft</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Remove tippet cover <b>P3.</b> Remove cam shaft <b>P4.</b> Repair and replace cam shaft
<b>CU9. Change Crank Shaft</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Remove fly wheel <b>P3.</b> Open main big end <b>P4.</b> Remove Timing plate and timing gear / Pulley <b>P5.</b> Remove hosing <b>P6.</b> Remove main oil seal plate <b>P7.</b> Remove crank shaft <b>P8.</b> Repair and replace Crank shaft
<b>CU10. Change Valve Train Components</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Remove tippet cover, atomizer pipe timing belt, rocker and head bolt <b>P3.</b> Dress/ Polish valve and valve seats <b>P4.</b> Replace head gas kit <b>P5.</b> Reinstall valve train component
<b>CU11. Change Timing Belt / Timing Gear</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Identify timing marks <b>P3.</b> Loose the adjustment bolt <b>P4.</b> Remove the timing belt/gear <b>P5.</b> Reinstall the timing belt / gear

<b>CU12. Change Injector/Automizer</b>	<b>P1.</b> Identify the tools and equipment <b>P2.</b> Remove the injection pipe <b>P3.</b> Remove the mounting bolt of injector <b>P4.</b> Remove the injector <b>P5.</b> Calibrate the injectors <b>P6.</b> Install the injectors
<b>CU13. Change/Repair Cylinder Head</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Repair Valve seat <b>P3.</b> Perform Top overhaul <b>P4.</b> Perform head tightening sequence
<b>CU14. Change/Repair Cylinder Block</b>	<b>P1.</b> Identify tools and equipment <b>P2.</b> Perform major overhaul <b>P3.</b> Change sleeve <b>P4.</b> Perform Honing <b>P5.</b> Replace piston and piston rings

### Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Describe injection pump
- K2:** Explain Types of injection pump
- K3:** Define calibration
- K4:** Describe oil pump
- K5:** Explain types of oil pump
- K6:** Define fan belt
- K7:** Explain type of fan belts
- K8:** Describe uses of proper tools/equipment
- K9:** Define radiator
- K10:** Write cleaning methods of radiator
- K11:** Define oil filter
- K12:** Define sizes of oil filter
- K13:** Describe air filter
- K14:** Explain types and sizes of air filter
- K15:** Describe connecting rod
- K16:** Explain types and sizes of connecting rod

- K17:** Define bushes of connecting rod
- K18:** Use of torque wrench
- K19:** Describe cam shaft
- K20:** Explain types of cam shaft
- K21:** Describe crank shaft
- K22:** Describe fly wheel
- K23:** Describe valve train
- K24:** Define grinding/polishing
- K25:** Describe timing belt/timing plate/timing gear
- K26:** Knowledge about calibration of injector
- K27:** Define cylinder head
- K28:** Define components in cylinder head
- K29:** Define cylinder block
- K30:** Define components in cylinder block
- K31:** Define piston and piston rings.

### **Critical Evidence(s) Required**

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Types of injection pump
- Types of oil pump
- Sizes of oil filter
- Bushes of connecting rod
- Types of cam shaft
- Types of cam shaft
- Valve train
- Calibration of injector
- Components in cylinder head

### **Tools and Equipment required**

The tools and equipment required for this competency standard are given below:

- Torque wrench
- Socket box
- Ring compressor
- Filter chain
- Open end spanner set

- Universal pliers
- Combination pliers
- Hammer set(steel)
- Hammer set (plastic/rubber)
- Screw driver set (star, flat)
- Feeler gauge
- Valve re-facer machine
- Nose pliers
- Vernier caliper
- Ring installer
- Filter (air, oil, fuel, water)
- Lubricants
- Overhauling kit
- Hydraulic jack (portable, 200kg)
- Allen key set



## 071300628 Perform tests as per specification

**Overview:** This Competency Standard identifies the competencies required skills and knowledge to perform voltage testing, perform frequency testing procedure, test heat testing procedure, observe speed testing procedure and write test load report for record.

Competency Units	Performance Criteria
<b>CU1. Perform test on full load</b>	<b>P1.</b> Identify full load as per manufacturer <b>P2.</b> Connect load bank with generator <b>P3.</b> Select full load of load bank
<b>CU2. Record Voltage</b>	<b>P1.</b> Record start time <b>P2.</b> Record fluctuation in voltage <b>P3.</b> Repeat the process up to 3-time intervals <b>P4.</b> Document the average Voltage
<b>CU3. Record Ampere</b>	<b>P1.</b> Record start time <b>P2.</b> Record fluctuation in Current <b>P3.</b> Repeat the process up to 3-time intervals <b>P4.</b> Document the average Ampere
<b>CU4. Record frequency</b>	<b>P1.</b> Record start time <b>P2.</b> Record fluctuation in Frequency <b>P3.</b> Repeat the process up to 3-time intervals <b>P4.</b> Document the average Frequency
<b>CU5. Record Temperature</b>	<b>P1.</b> Record start time <b>P2.</b> Record fluctuation in Temperature <b>P3.</b> Repeat the process up to 3-time intervals <b>P4.</b> Document the average Temperature
<b>CU6. Record Engine Speed</b>	<b>P1.</b> Record start time <b>P2.</b> Record fluctuation in record per minute (RPM) <b>P3.</b> Repeat the process up to 3-time intervals <b>P4.</b> Document the average Speed
<b>CU7. Compile all the Test result</b>	<b>P1.</b> Prepare table <b>P2.</b> Enter all the average data in the table <b>P3.</b> Take signatures on the document from the customer and expert

## **Knowledge and Understanding**

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Know about the generator capacity and load bank
- K2:** Describe voltage testing procedure
- K3:** Describe current testing procedure
- K4:** Describe frequency testing procedure
- K5:** Describe heat testing procedure
- K6:** Describe speed testing procedure
- K7:** Know about the test report writing

## **Critical Evidence(s) Required**

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Perform voltage testing
- Perform frequency testing procedure
- Test heat testing procedure
- Perform speed testing
- Interpret report

## **Tools and Equipment Required**

The tools and equipment required for this competency standard are given below:

- Digital volt meter
- Ammeter
- Bench power supply (variable DC)
- Watt meter
- Multimeter
- Power factor meter
- Megger/insulation tester

## 071300629 Plan Work

### Overview:

This Competency Standard identifies the competencies required to ensure all paperwork is filled out in a clear, legible and accurate format, and completed with required information. Also ensure all required information is documented in accordance with SOP's.

Competency Unit	Performance Criteria
<b>1. Assess site hazards</b>	<b>P1.</b> Inspect site visually <b>P2.</b> Identify actual and potential hazards <b>P3.</b> Communicate with site supervisor/customer/supplier
<b>2. Ensure work procedures</b>	<b>P1.</b> Identify Tools & equipment <b>P2.</b> Prepare job sheet /job card/work order <b>P3.</b> Follow job sequence <b>P4.</b> Demonstrate/co-ordinate activities with others
<b>3. Follow symbols</b>	<b>P1.</b> Follow warning symbols <b>P2.</b> Follow electrical symbols <b>P3.</b> Follow mechanical symbols
<b>4. Ensure drawing parameters</b>	<b>P1.</b> Follow metric and imperial measurements <b>P2.</b> Adopt inter-conversion of metric and imperial measurement <b>P3.</b> Distinguish between plan, side view and section
<b>5. Ensure environmental concerns</b>	<b>P1.</b> Identify actual and potential environmental concerns (proximity to water courses, noise levels, fuel leaks and hazardous materials) <b>P2.</b> Review environment concerns <b>P3.</b> Review work plan as per standard <b>P4.</b> Communicate report to site supervisor

## Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- Define hazards
- Describe types of hazards
- Define job sheet/ job card/work order
- Describe various types of symbols
- Describe metric and imperial measurement system

## Critical Evidence(s) Required

The candidates need to produce following critical evidence(s) in order to be competent in this competency standard:

- Hazards caused damage
- Job sheet/ job card/work order
- Metric and imperial measurement system
- Free hand sketch
- Environmental concerns

## Tools and Equipment required

The tools and equipment required for this competency standard are given below:

Sr. No	Items
1.	Vernier caliper
2.	Ruler set
3.	Measurement set
4.	Sufficient Paper
5.	Drawing material
6.	Cutting set

## LIST OF TOOLS AND EQUIPMENT

Sr. No	A. Testing instruments	Quantity,24-25 students
1.	Volt meter	10
2.	Clamp on mater	10
3.	Phase sequence meter	10
4.	Pressure gauge (oil)	10
5.	vacuum gauge	10
6.	PH meter	10
7.	Growler	10
8.	Bench power supply (variable DC)	5
9.	Megger/insulation tester,	10
10.	Frequency meter	10
11.	Temperature mater	10
12.	Tachometer	10
13.	Watt meter	10
14.	Multimètre	10
15.	Power factor meter	10
Tools and Equipment		
1.	Timing light	5
2.	Engine analyzer	5 set
3.	Electronic Fuel Injection (EFI) engine diagnostic scanner	2
4.	Compression gauge	10
5.	Cylinder leakage tester	10
6.	Fuel injection test device	5
7.	Fuel injector pressure tester	5
8.	Glow plug analyzer	10
9.	Smoke diagnostic tool kit	10
10.	Heat gun	10
11.	Torque wrench	15
12.	Open end spanner set	15
13.	Combination spanner set	15
14.	Ring spanner set	15
15.	Socket box	15
16.	Adjustable screw wrench set	15
17.	Vice grip pliers	15
18.	Universal pliers	15
19.	Nose pliers	15
20.	Combination pliers	15
21.	Inside circlip pliers	15
22.	Outside circlip pliers	15
23.	Bearing puller inside	15
24.	Bearing puller outside	15
25.	Ring installer	15
26.	Ring remover	15
27.	Ridge remover	15
28.	C clamp	15
29.	Ring compressor	15
30.	Hammer set(steel)	15
31.	Hammer set (plastic/rubber)	15
32.	Allen key set	15

33.	Screw driver set (star, flat)	15
34.	Feeler gauge	15
35.	Micrometer	15
36.	Vernier caliper	15
37.	Winding machine	10
38.	Hydrometer	15
39.	Bench vise	10
40.	Hand hacksaw frame	25
41.	Scriber	25
42.	Scraper (triangular & flat)	25 set
43.	Surface gauge	10
44.	Surface plate	10
45.	Air blower	10
46.	Hand drill machine	10
47.	Oil cane	15
48.	valve re-facer machine	2
49.	Filter chain	25
50.	Oil drain plug spanner	25
51.	Spark plug spanner	25
52.	Hand grinder machine	5
53.	Tap and die set (inch & millimeter)	25 set
54.	Nipple forming set	25
55.	Tri square	25
56.	Hand file set	25
57.	Needle file set	25
58.	Cross cut chisel	25
59.	Flat chisel	25
60.	Round chisel	25
61.	Centre punch	25
62.	Pin punch set	25
63.	Insulation remover	25
64.	Thimble press	25
65.	Funnel	25
66.	Pipe wrench set	10
67.	Portable petrol and diesel generator	5
68.	Label maker (wire, tape, plastic)	10 Dozen
69.	Soldering iron (25W & 100 W)	15
70.	Lifts (scissor, Paper cutter)	25
71.	Air compressor witz full accessoires	2
72.	Personale Protective Equipment	25
73.	High voltage gloves, (rubber and leather)	25
74.	Material safety Data Sheets (MSDS)	25
75.	Temperature sensor	25
76.	Tool box (23 pieces)	25
77.	Tool belt (13 pieces)	25
78.	Silicone gun	25
79.	Heat sensor	25
80.	Oil pressure sensor	25
81.	RPM sensor/magnetic pickup	25
82.	Mallet	25
	Rawhide mallet	25
83.	Battery (200 Ah) and battery charger	2 each
84.	Hydraulic jack (portable, 200kg)	5
85.	AVR	10
86.	Fuel solenoid switch	10
87.	Tool trolley	5

LIST OF CONSUMABLE SUPPLIES		
1.	Spark plug	10 Dozen
2.	Automizer nozzle	24
3.	Filter (air, oil, fuel, water)	10
4.	Lubricants	5 *4
5.	Overhauling kit	5
6.	Belts different sizes	50
7.	Bearings different sizes	50
8.	Radiator hose pipes	15
9.	Engine alternator foundation	15
10.	Bridge set/diode plates	25
11.	Enamel copper wire different SWG	5 KG each
12.	Insulation paper with different SWG	10 KG each
13.	Varnish	10 liters
14.	Wire sleeves different sizes	100 No. each
15.	Valve lapping stick	25
16.	Emery pastes	10 tin
17.	Emery paper different sizes	25 No. each
18.	Slip rings	10
19.	Carbon brushes different sizes	15 set each
20.	Insulation taps	200.No
21.	Cables (3/29, 7/29,7/36, 4)	300 meter each
22.	Cables (7/44, /7/52,7/64) etc.	300 meter each
23.	Flexible cable different sizes	200 meter each
24.	Multi core cables different sizes	100meter each
25.	Cotton tap	100 No.
26.	Flexible pipes	10
27.	Circuit breaker different rating	50
28.	Relays	25
29.	Selector switch	25
30.	Bulbs	50
31.	Fuses different rating	50 No. each
32.	Magnetic contactor different rating	5 No. each
33.	Penal box	5
34.	High tension lead	15 set
35.	High tension tap	15 set
36.	Soap	25 No
37.	Detergent etc.	25 No
38.	Cotton waste	10 Dozen

