

ELECTRO MECHANICAL TECHNOLOGY

Assessment Package

National Vocational
Certificate Level 1

Version 1 - December 2014



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December, 2014

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ELECTRO MECHANICAL TECHNOLOGY

Assessment Package

National Vocational
Certificate Level 1

Version 1 - December 2014

Electro Mechanical Technology (Level 1)
KNOWLEDGE ASSESSMENT TEST
(Maintain Safety, Health and Cleanliness)

Credit: 06 Version: 1

Candidate Name: Father's Name:
Registration No: Date: Time Allowed: 30 minutes
Training Institution:.....

Instructions to Candidates:

You must answer all questions.

1) The safety sign  means

- A) Radiation
- B) Flammable**
- C) High Voltage
- D) All of the above

2)  Sign represents

- A) Radiation**
- B) Flammable
- C) Expose Industrial Fans
- D) All of above

3) The process of quickly exiting a particular workplace in case of fire is known as _____

- A) Assessment
- B) Protection
- C) Evacuation**
- D) None of above

4) Process of maintaining health and preventing diseases especially through cleanliness is known as?

- A) Safety
- B) Hygiene**
- C) Risk Assessment
- D) None of Above

5) Material Handling Practices may include

- A) Movement and Protection of materials and/or products
- B) Storage and control of materials and/or products
- C) Both A & B
- D) None of above

Short Questions & Answers

Q1. Write at least 4 types of hazards related to workplace?

Ans: 1) Physical Hazards 2) Environmental Hazards 3) Ergonomic Hazards
4) Psychological Hazards 5) Biological Hazards 6) Radiation Hazards

Q2. Give at least 3 examples of the physical hazards at workplace?

Ans: i) Loose electrical Cables ii) Objects Protruding in walk ways or doorways iii) Exposed Wires
iv) Exposed Moving Parts (like gears, pulleys etc.) v) extreme vibrations

Q3. What is risk in context to the occupational safety and health?

Ans: Risk is the possibility or likelihood that a person may be harmed or suffers adverse health and effects if exposed to a particular hazard

Q4. Enlist at least 3 Personal Protective Equipment for electrical hazards?

Ans: i) Flame Resistant Clothing ii) Insulating Gloves iii) Eye Protection Goggles
iv) Head Protection Hard Helmet v) Electrical Shock Resistant Foot Wears (shoes)

Q4. What is proper handling procedure of tools at work place?

Ans: Their placement should be properly tagged and also systematic as per the requirement.

Q5. What are the basic types of fires give examples?

Ans: There are 5 basic types of fires based on burning of different types of materials. These types are also known as classes of fires as follows:

Class A: fires of ordinary Combustibles such as paper, wood, cloth, Trash and Plastics

Class B: Fires in Flammable Liquids and Gases such as Gasoline, Petroleum oil, Paint, Butane etc.

Class C: Fire in Energized electrical equipment e.g. Motors, Transformers etc.

Class D: Fires in Combustible metals e.g. potassium, sodium etc.

Class K: Fires in cooking oil and gases.

Electro Mechanical Technology (Level 1)

KNOWLEDGE ASSESSMENT TEST

(Communicate in Different Work Contexts)

Credit: 03 Version: 1

Candidate Name: Father's Name:
Registration No: Date: Time Allowed: 30 minutes
Training Institution:.....

Instructions to Candidates:

You must answer all questions.

- 1) Reporting of a severe electrical hazard through documented report is an example of
 - A. Verbal Communication
 - B. Non-Verbal communication
 - C. Written Communication
 - D. All of above

- 2) Describing an electrical fault within an electrical machine by a documented report is specifically called _____
 - A. Business Report Writing
 - B. Science Report Writing
 - C. Short Report Writing
 - D. Technical Report Writing

- 3) Effective communication includes
 - A. Writing effectively
 - B. Speaking effectively
 - C. Listening effectively
 - D. All of above

- 4) Purpose of the work form is
 - A. To get the specified required information within short time
 - B. To give detailed information of job to the worker
 - C. To calculate direct labor and material cost
 - D. all of the above

- 5) The major benefit of Job Card is that
 - A. It can be used for calculation of direct labor and material cost
 - B. It gives information about the processes required to complete a job

- C. It is used for record keeping of a particular worker
- D. None of above

Short Questions & Answers

Q1. What is distinction between Verbal and Non-Verbal Communication?

Ans: Verbal or oral communication is to communicate messages through spoken words while non-verbal communication includes body language, facial expressions and even postures.

Q2. What important information can be extracted from the following picture in context of electrical work?



Ans: The picture actually stops personnel from a place of electrical hazards

Q3. Write the most used types of questions?

- Ans:
- 1) Open questions
 - 2) Closed questions

Q4. Why are visual communication skills so important? Give at least two reason

Ans: Visual communications are important because of the following reason:

- 1. Some information can only be communicated visually e.g. identification and use of personal protective equipment
- 2. Visual representation can give clearer understanding of the situation with much less time.
- 3. Visual representation has more impact on minds as compared to oral communication

Q5. Enlist at least three methods of official correspondence in the context of written communication?

- 1. Official Letter
- 2. Memorandum
- 3. Office order
- 4. Official Notice
- 5. Technical Report

Electro Mechanical Technology (Level 1)

KNOWLEDGE ASSESSMENT TEST

(Apply a Problem Solving Method)

Credit: 06

Version: 1

Candidate Name: Father's Name:

Registration No: Date: Time Allowed: 30 minutes

Training Institution:.....

Instructions to Candidates:

You must answer all questions.

1) _____ is a situation regarded as unwelcome and needing to be dealt with and overcome.

- A) Brainstorming
- B) Pros and cons
- C) Problem
- D) None of Above

2) Brainstorming is basically _____?

- A) Problem solving methods
- B) Problem creating methods
- C) Both
- D) None of above

3) How you will identify a problem?

- A) Brainstorm
- B) Pros and cons
- C) IDEAL
- D) All

4) In the ideal method of problem solving we consider?

- A) Loss less situation
- B) Loss full situation
- C) Both
- D) None of above

5) In the pros and cons method of problem solving?

- A) Only advantages are considered
- B) Only Disadvantages are considered
- C) Both advantages and disadvantages are considered
- D) None of above

Short Questions & Answers

Q1. What are different problem solving methods?

Ans: following are the different problem solving methods

- 1) Brainstorm 2) Pros and cons 3) IDEAL 4) Research

Q2. Define Problem Solving Method?

Ans: The process of working through details of a problem to reach a solution. Problem solving may include mathematical or logical operations and can be an individual's critical thinking skills.

Q3. What is Brainstorming?

Ans: Brainstorming is a process for generating new idea for specific area of interest.

Q4. What is ideal situation?

Ans: The lossless and best situation that can be adopted to perform a problem solving method.

Q5. What is Research?

Ans: Research is searching for and gathering information, usually to answer a particular question or problem.

Electro Mechanical Technology (Level 1)

KNOWLEDGE ASSESSMENT TEST

(Apply Basic Reading, Writing and Speaking Skills in English in
Different Life Contexts)

Credit: 06 Version: 1

Candidate Name: Father's Name:
Registration No: Date: Time Allowed: 30 minutes
Training Institution:.....

Instructions to Candidates:

You must answer all questions.

1) Numbers of English language communication skills are?

- A) Two
- B) Three
- C) Four
- D) Five

2) The numbers of vowels in English are _____?

- A) Three
- B) Four
- C) Five
- D) Six

3) The letters which are written in English but not spoken are called_____?

- A) Vowel
- B) Consonant
- C) Small
- D) Silent

4) Listening Means_____

- A) Lending ear
- B) Lending ear to spoken ear
- C) Lending ear to spoken words to understand message
- D) Hearing the sound around

5) Dictation Means

- A) Objective Test
- B) Oral test
- C) Test for writing
- D) Test for memory

Short Questions & Answers

Q1. What are English language communication skills?

Ans: Following are the English language communication
Listening, speaking, reading and writing.

Q2. What information is extracted from following figure?



Ans: Bare live wires ahead and may cause severe electric shock.

Q3. What is meaning of "Phrase" in English language?

Ans: a small group of words standing together as a conceptual unit, typically forming a component of a clause.

Q4. What is the information depicted by the following figure?



Ans: This figure is basically high voltage danger symbol.

Q5. What is reading?

Ans: *Reading* is the process of looking at a series of written symbols and getting meaning from them. When we *read*, we use our eyes to receive written symbols.

Electro Mechanical Technology (Level 1)

KNOWLEDGE ASSESSMENT TEST

(Apply Basic Numeracy Skills in Different Life Contexts)

Credit: 05 Version: 1

Candidate Name: Father's Name:

Registration No: Date: Time Allowed: 30 minutes

Training Institution:.....

Instructions to Candidates:

You must answer all questions.

1) Result of $23 + 42/3$ is?

- A) 37
- B) 39
- C) 38
- D) None of the above

2) 1 mega is equal to

- A) 10^6
- B) 10^3
- C) 10^{-6}
- D) None of the above

3) If $W = 5$, $I = 2$, what is the value of if $V = W/I$

- A) 3.5
- B) 1.5
- C) 2.5
- D) None of above

4) 1 kilo gram is equal to?

- A) 10,000 grams
- B) 1,000 grams
- C) 100 grams
- D) All of the above

5) If we round of 8.675 to 2 decimal places, the result is?

- A) 8.66
- B) 8.67
- C) 8.68**
- D) None of above

Short Questions & Answers

Q1. Name any two types of graph?

- Ans: 1) Pie graph
2) Bar graph

Q2. What is the unit of current?

Ans: Ampere

Q3. Hexagonal shape has how many sides?

Ans: 6

Q4. Name any three measuring instruments use in electrical?

Ans: Volt meter, Ampere meter, Tachometer

Q5. KW stands for?

Ans: Kilo Watt

Electro Mechanical Technology (Level 1)

KNOWLEDGE ASSESSMENT TEST

(Demonstrate Positive Workplace Attitude and Behaviors)

Credit: 04 Version: 1

Candidate Name: Father's Name:
Registration No: Date: Time Allowed: 30 minutes
Training Institution:.....

Instructions to Candidates:

You must answer all questions.

- 1) Grooming is related to
 - A. Improvement of appearance and behavior
 - B. Improving knowledge and skill for a specific position or purpose
 - C. Both A & B
 - D. None of above

- 2) While performing an operation on some electrical machine in the workshop/industry always wear
 - A. Loose Dress
 - B. Causal Dress
 - C. Tight Dress
 - D. Sleeping Dress

- 3) Which one of the following must be kept confidential by the employees of organization?
 - A. Information
 - B. Material
 - C. Documents
 - D. All of above

- 4) In context of the work place, anger of the employee may severely affect
 - A. Decision power and creativity of the employee
 - B. Personal life of the employee
 - C. Health of the employee
 - D. None of above

- 5) One should be _____ in workplace.
 - A. lenient
 - B. strict
 - C. Professional

D. None of above

Short Questions & Answers

Q1. Write down at least 2 rules of dress code generally adopted for workplace across the world?

Ans:

- i. Any clothing that has words, terms, or pictures that may be offensive to other employees must be avoided
- ii. Clothing that reveals excessive body parts (back, chest, feet, stomach etc.) or undergarments are unacceptable.
- iii. Clothing should be pressed and never wrinkled, torn, dirty, or frayed

Q2. Define customer service?

Ans: Customer service is the act of taking care of the customer's needs by providing and delivering service and assistance before, during, and after the customer's requirements are met

Q3. What do we mean by positive/active listening?

Active listening means to listen and grasp carefully the information communicated verbally

Q4. Write down at least 3 symptoms of work related stress?

Ans: i) disappointment ii) Lack of confidence iii) increased emotional reactions iv) Loss of motivation v) Lack of concentration vi) Change in eating habits and sleeping patterns

Q5. Write down symptoms of positive attitude of employee in context to the workplace?

Ans: i) Punctuality ii) Motivation for job iii) Greeting coworker iv) Patience and tolerance v) Providing better customer services

Electro Mechanical Technology (Level 1)

KNOWLEDGE ASSESSMENT TEST

(Carry Out Maintenance Procedures as Electro Machine Technician-Helper)

Credit: 06 Version: 1

Candidate Name: Father's Name:
Registration No: Date: Time Allowed: 30 minutes
Training Institution:.....

Instructions to Candidates:

You must answer all questions.

1) Which is not the usual type of maintenance?

- A) Preventive
- B) Corrective
- C) Recursive
- D) None of above

2) Condition of being protected from danger, risk or injury is called _____?

- A) Assessment
- B) Health
- C) Safety
- D) None of above

3) The ratio of output power to input power of machine is called_____?

- A) Output value
- B) Efficiency
- C) Input value
- D) None of above

4) PPE's refer to _____

- A) Personal Protective Estimations
- B) Personal Protective Efficiencies
- C) Personal Protective Equipment's
- D) None of Above

5) Most important entity for making healthy work environment is

- A) Safety
- B) Risk
- C) Cleanliness
- D) None of above

Short Questions & Answers

Q1. What is preventive maintenance?

Ans: The type of maintenance that is regularly performed on a piece of equipment to lessen the likelihood of it failing. Preventative maintenance is performed while the equipment is still working, so that it does not break down unexpectedly.

Q2. What is corrective maintenance?

Ans: Corrective maintenance is a maintenance task performed to identify, isolate, and rectify a fault so that the failed equipment, machine, or system can be restored to an operational condition.

Q3. What is meaning of Phrase in English language?

Ans: a small group of words standing together as a conceptual unit, typically forming a component of a clause.

Q4. Write down the four different types of Personal Protective Equipment PPE's?

Ans: Following are the four types of PPE's

1). Ear muff 2) Safety Helmet 3) Safety shoes 4) Safety Goggles

Q5. What is safe working procedure?

Ans: Safety work procedure is a way to identify the hazards involved and putting into place ways to prevent an injury occurring.

Electro Mechanical Technology (Level 1)

KNOWLEDGE ASSESSMENT TEST

(Produce a Plan for Career Options Related To an Electro Machine Technician)

Credit: 03 Version: 1

Candidate Name: Father's Name:
Registration No: Date: Time Allowed: 30 minutes
Training Institution:.....

Instructions to Candidates:

You must answer all questions.

- 1) _____ refers to the learning opportunities designed to help employees grow.
A) Training
B) Development
C) Education
D) all

- 2) In career development, seeking out career resources is included in _____.
A) An individual role
B) Manager role
C) Employer role
D) None of Above

- 3) In career development, offering and discussing variety of paths for career development is included in
A) An individual role
B) Manger role
C) Employer role
D) None of above

- 4) Competency-based-job-analysis means defining job in terms of _____.
A) Measurable Competency
B) Observable Competency
C) Behavioral Competency

D) All

5) In order to successfully plan your future direction you must analyze your own

A) Knowledge

B) Skills

C) Abilities

D) All

Short Questions & Answers

Q1. What is carrier profile?

Ans: A Career Profile (or' Personal Profile ') is an introductory paragraph at the beginning of your CV containing a short summary of your background and career plans.

Q2. What is career guidance?

Ans: Career guidance consists of the services that help people successfully manage their career development.

Q3. Who provide career guidance?

Ans: Professionals who provide career guidance include career counselors and career development facilitators.

Q4. What is career development?

Ans: Career development, a major aspect of human development, is the process through which a person's work identity is formed.

Q5. What is self-Assessment?

Ans The evaluation of oneself or one's actions or performance and this is the basic factor for making career guidance plan.

Electro Mechanical Technology (Level 1)
KNOWLEDGE ASSESSMENT TEST
(Electro Mechanical Technology-Integrated)

Credit: 33 Version: 1

Candidate Name: Father's Name:
Registration No: Date: Time Allowed: 1 hour and 30 minutes
Training Institution:

Instructions to Candidates:

You must answer all questions.

- 1) The process of quickly exiting a particular workplace in case of fire is known as _____
 - A) Assessment
 - B) Protection
 - C) **Evacuation**
 - D) None of above

- 2) Process of maintaining health and preventing diseases especially through cleanliness is known as?
 - A) Safety
 - B) **Hygiene**
 - C) Risk Assessment
 - D) None of Above

- 3) Material Handling Practices may include
 - A) Movement and Protection of materials and/or products
 - B) Storage and control of materials and/or products
 - C) **Both A & B**
 - D) None of above

- 4) Reporting of a severe electrical hazard through documented report is an example of
 - A) Verbal Communication
 - B) Non-Verbal communication
 - C) **Written Communication**
 - D) All of above

- 5) Describing an electrical fault within an electrical machine by a documented report is specifically called_____

- A) Business Report Writing
- B) Science Report Writing
- C) Short Report Writing
- D) Technical Report Writing

6) _____ is a situation regarded as unwelcome and needing to be dealt with and overcome.

- A) Brainstorming
- B) Pros and cons
- C) Problem
- D) None of Above

7) Brainstorming is basically _____?

- A) Problem solving methods
- B) Problem creating methods
- C) Both
- D) None of above

8) How you will identify a problem?

- A) Brainstorm
- B) Pros and cons
- C) IDEAL
- D) All

9) The letters which are written in English but not spoken are called _____?

- A) Vowel
- B) Consonant
- C) Small
- D) Silent

10) Listening Means _____

- A) Lending ear
- B) Lending ear to spoken ear
- C) Lending ear to spoken words to understand message
- D) Hearing the sound around

11) 1 mega is equal to

- A) 10^6
- B) 10^3
- C) 10^{-6}
- D) None of the above

- 12) If $W = 5$, $I=2$, what is the value of if $V =W/I$
- A) 3.5
 - B) 1.5
 - C) 2.5
 - D) None of above
- 13) While performing an operation on some electrical machine in the workshop/industry always wear
- A) Loose Dress
 - B) Causal Dress
 - C) Tight Dress
 - D) Sleeping Dress
- 14) Which one of the following must be kept confidential by the employees of organization?
- A) Information
 - B) Material
 - C) Documents
 - D) All of above
- 15) In context of the work place, anger of the employee may severely affect
- A) Decision power and creativity of the employee
 - B) Personal life of the employee
 - C) Health of the employee
 - D) None of above
- 16) The ratio of output power to input power of machine is called_____?
- A) Output value
 - B) Efficiency
 - C) Input value
 - D) None of above
- 17) PPE's refer to _____
- A) Personal Protective Estimations
 - B) Personal Protective Efficiencies
 - C) Personal Protective Equipment's
 - D) None of Above
- 18) Most important entity for making healthy work environment is
- A) Safety
 - B) Risk
 - C) Cleanliness
 - D) None of above

19) In career development, seeking out career resources is included in_____.

- A) An individual role
- B) Manager role
- C) Employer role
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21) Competency-based-job-analysis means defining job in terms of_____.

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- B) Observable Competency
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- D) All

Short Questions & Answers

1) What is risk in context to the occupational safety and health?

Ans: Risk is the possibility or likelihood that a person may be harmed or suffers adverse health and effects if exposed to a particular hazard

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iv) Head Protection Hard Helmet v) Electrical Shock Resistant Foot Wears (shoes)

3) What is distinction between Verbal and Non-Verbal Communication?

Ans: Verbal or oral communication is to communicate messages through spoken words while non-verbal communication includes body language, facial expressions and even postures.

4) What important information can be extracted from the following picture in context of electrical work?



5) Enlist at least three methods of official correspondence in the context of written communication?

1. Official Letter
2. Memorandum
3. Office order
4. Official Notice
5. Technical Report

6) What is ideal situation?

Ans: The lossless and best situation that can be adopted to perform a problem solving method.

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Ans: Research is searching for and gathering information, usually to answer a particular question or problem.

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Ans: a small group of words standing together as a conceptual unit, typically forming a component of a clause.

9) What is the information depicted by the following figure?



Ans: This figure is basically high voltage danger symbol.

10) What is reading?

Ans: *Reading* is the process of looking at a series of written symbols and getting meaning from them. When we *read*, we use our eyes to receive written symbols

11) Name any two types of graph?

- Ans:
- 1) Pie graph
 - 2) Bar graph

12) What is the unit of current?

Ans: Ampere

13) Name any three measuring instruments use in electrical?

Ans: Volt meter, Ampere meter, Tachometer

14) Define customer service?

Ans: Customer service is the act of taking care of the customer's needs by providing and delivering service and assistance before, during, and after the customer's requirements are met

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Ans: Corrective maintenance is a maintenance task performed to identify, isolate, and rectify a fault so that the failed equipment, machine, or system can be restored to an operational condition.

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Ans: Career development, a major aspect of human development, is the process through which a person's work identity is formed.

20) What is self-Assessment?

Ans The evaluation of oneself or one's actions or performance and this is the basic factor for making career guidance plan.

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