

**NEW ZEALAND MARITIME SCHOOL**

**NZ Diploma Electro-technology**

**Year 1 ETO Cadets, 2019.**

**NZ2511-02.**

**(STCW-78 III/1, as amended in 2010)**

**Course 942.466**

**‘Safe Use of Electrical Equipment’**

**Learning Outcomes Assessment**

***Research each of the FOUR Learning Outcomes and answer with your interpretation.***

***You may work individually or as a team but you must name the team members.***

***Use reading material provided on Canvas, library material or other suitable sources. Where possible provide reference to the sources. Email back to the tutor when complete.***

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Student Name:

Student ID:

Team Members:

Date:

Learning Outcome 1: Follow safety instructions of electrical equipment and machinery

* Describe the Generation and distribution of electrical power on-board ship.
* Describe the use and purpose of implementation of a "three phase-three wire, insulated neutral system" for shipboard application.
* Demonstrate basic knowledge of structure of electrical switchboards.
* Identify safety precautions before commencing work or repair.

Answer here

Learning Outcome 2: Recognise and report electrical hazards and unsafe equipment

* Recognise safety hazards which can be present when working on shipboard electrical equipment: electric shock, arc blast, transient overvoltage, and moveable (rotating) parts, environmental factors like high temperature, humidity, water, fuel, steam leaks, rain, wind, and ship rolling or pitching.
* Follow isolation and emergency procedures.
* Explain Lockout/Tag out procedures.

Answer here

Learning Outcome 3: Understand safe voltages for hand-held equipment

* Recognise causes of electric shock and precautions to be observed to prevent shock.
* Describe relationships between shock voltage and shock current.
* Recognise the possibility of the electric shock by the electrostatic charge.
* Explain the influence of shock current on human body.
* Recognise meaning of warning signs.

Answer here

Learning Outcome 4: Understand risks associated with high-voltage equipment and on-board work

* Explain the different voltages on-board and their risks.
* Explain the difference of electric shock caused by low and high voltage.
* Explain the basic parameters of electric arc: the temperature, the energy etc.
* Demonstrate basic understanding of general High Voltage protection measures: housings, partitions, distances, insulation mats, insulation materials, access restrictions, markings and warnings, HV equipment access monitoring and locks.

Answer here