

# Qualification Structure ~ Maintaining Plant and Systems: Electrical

Candidates must achieve SIXTEEN units made up of:

- ◆ all TWELVE of the mandatory units;
- plus
- ◆ FOUR further units from the technical options.

**MANDATORY UNITS - candidates must achieve all TWELVE units.**

Unit Title and Ref. Number
Unit MPS Elec 1: Position and install electrical plant and equipment
Unit MPS Elec 2: Dismantle electrical plant and equipment
Unit MPS Elec 3: Carry out planned maintenance procedures on electrical plant and equipment
Unit MPS Elec 4: Adjust electrical plant and equipment to meet operating requirements
Unit MPS Elec 5: Remove components from electrical plant and equipment
Unit MPS Elec 6: Replace components in electrical plant and equipment
Unit MPS Elec 7: Monitor the performance and condition of electrical plant and equipment
Unit MPS Elec 8: Assess the performance and condition of electrical plant and equipment
Unit MPS Elec 9: Diagnose and determine the causes of faults in electrical plant and equipment
Unit CO1: Contribute to effective working relationships
Unit CO2: Work safely, minimise risk and comply with emergency procedures
Unit CO3: Identify and deal with hazards in the work environment

**TECHNICAL OPTIONS - candidates must achieve any FOUR units of which THREE must be selected from SET A and ONE from SET B.**

SET A: Unit Title and Ref. Number (Select THREE units)
Unit MPS Elec10: Assemble components of electrical plant and equipment
Unit MPS Elec11: Restore components from electrical plant and equipment to operational condition by repair
Unit MPS Elec12: Prepare work areas for the maintenance of electrical plant and equipment
Unit MPS Elec13: Prepare materials for the maintenance of electrical plant and equipment
Unit MPS Elec14: Prepare equipment in support of electrical engineering activities
Unit MPS Elec15: Reinststate the work area after completing the maintenance of electrical plant and equipment
Unit MPS Elec16: Hand over electrical plant and equipment
SET B: Unit Title and Ref. Number (Select ONE unit)
Unit MPS Elec17: Determine the feasibility of repair of components from electrical plant and equipment
Unit MPS Elec18: Test the performance and condition of electrical plant and equipment
Unit MPS Elec19: Analyse the test results relating to the tested electrical plant and equipment
Unit MPS Elec 20 Establish that an electrical engineering process has been completed to specification

# Unit Summaries – Maintaining Plant & Systems - Electrical

## *MANDATORY UNITS*

### **Unit MPS Elec 1: Position and install electrical plant and equipment**

This unit is about installing, positioning and securing the equipment and components in accordance with the specification and checking that the installation is complete and free from damage.

### **Unit MPS Elec 2: Dismantle electrical plant and equipment**

This unit is about making all isolations and disconnections to the equipment in line with approved procedures and carrying out the dismantling to the agreed level using correct tools and techniques.

### **Unit MPS Elec 3: Carry out planned maintenance procedures on electrical plant and equipment**

This unit is about carrying out the maintenance activities within the limits of your personal authority, in the specified sequence and in an agreed timescale.

### **Unit MPS Elec 4: Adjust electrical plant and equipment to meet operating requirements**

This unit is about making the required adjustments in the specified sequence and in an agreed timescale and confirming that the adjusted equipment meets the required operating specification.

### **Unit MPS Elec 5: Remove components from electrical plant and equipment**

This unit is about removing the required components using approved tools and techniques and checking the condition of the removed components and recording those that will require replacing.

### **Unit MPS Elec 6: Replace components in electrical plant and equipment**

This unit is about replacing the components in the correct sequence using appropriate tools and techniques and making any necessary settings or adjustments to the components to ensure they will function correctly.

### **Unit MPS Elec 7: Monitor the performance and condition of electrical plant and equipment**

This unit is about correctly setting up and checking/calibrating the equipment required for the monitoring being carried out and carrying out the monitoring activities effectively with minimum disruption to normal activities.

### **Unit MPS Elec 8: Assess the performance and condition of electrical plant and equipment**

This unit is about carrying out the assessment using all relevant data and valid methods, comparing current performances and condition data with that from previous assessments and identifying and reporting the implications arising from the assessments.

### **Unit MPS Elec 9: Diagnose and determine the causes of faults in electrical plant and equipment**

This unit is about completing the fault diagnosis within the agreed time and determining the implications of the fault for other work and for safety considerations.

### **Unit CO1: Contribute to effective working relationships**

This unit is about establishing and maintaining productive working relationships.

### **Unit CO2: Work safely, minimise risk and comply with emergency procedures**

This unit is about working in line with health and safety regulations and legislation at all times and dealing appropriately with risks of injury to people or damage to property.

### **Unit CO3: Identify and deal with hazards in the work environment**

This unit is about checking for and identifying potential hazards. It also involves taking the appropriate action to minimise the risks posed.

## *TECHNICAL OPTIONS*

### **SET A**

#### **Unit MPS Elec10: Assemble components of electrical plant and equipment**

This unit is about using the appropriate methods and techniques to assemble the components in their correct positions and securing the components using the specified connectors and securing devices.

#### **Unit MPS Elec11: Restore components from electrical plant and equipment to operational condition by repair**

This unit is about carrying out the repairs within agreed timescale using approved materials and components and methods and procedures and ensuring that the repaired component meets the specified operating conditions.

#### **Unit MPS Elec12: Prepare work areas for the maintenance of electrical plant and equipment**

This unit is about preparing work areas so that they are ready for engineering activities to be carried out and making sure that the required safety arrangements are in place.

#### **Unit MPS Elec13: Prepare materials for the maintenance of electrical plant and equipment**

This unit is about obtaining, checking and preparing materials using approved procedures and equipment.

#### **Unit MPS Elec14: Prepare equipment in support of electrical engineering activities**

This unit is about obtaining, checking and preparing equipment using approved procedures and making sure that the required safety arrangements are in place.

#### **Unit MPS Elec15: Reinstate the work area after completing the maintenance of electrical plant and equipment**

This unit is about separating and correctly storing equipment, components and materials for re-use as well as waste items for disposal. It also involves restoring the work area to a safe condition.

#### **Unit MPS Elec16: Hand over electrical plant and equipment**

This unit is about handing over electrical plant and equipment to the control of others and accepting and confirming responsibility for the control of electrical plant and equipment.

### **SET B**

#### **Unit MPS Elec17: Determine the feasibility of repair of components from electrical plant and equipment**

This unit is about assessing the amount and level of wear or damage to the component and determining what work is required to bring the component back to the specified condition.

#### **Unit MPS Elec18: Test the performance and condition of electrical plant and equipment**

This unit is about setting up and carrying out the tests using the correct procedures and within agreed timescales, reviewing the results and carrying out further tests if necessary.

#### **Unit MPS Elec19: Analyse the test results relating to the tested electrical plant and equipment**

This unit is about analysing the data using approved methods and procedures and comparing the analysis against the product or asset specification to identify any faults or variations from specification.

#### **Unit MPS Elec 20: Establish that an electrical engineering process has been completed to specification**

This unit is about carrying out the checks in an appropriate sequence using approved methods and procedures and reporting completion of compliance activities in line with organisational procedures.