|  |  |  |  |
| --- | --- | --- | --- |
| **Qualification details** | | | |
| **Training Package code and title** | **UEE11 Electrotechnology Training Package (Release 1.5)** | | |
| **Qualification National Code & Title** | 22289VIC – Certificate II in Integrated Technologies | **State**  **code** | YN54 |
| **Qualification National Code & Title:** | UEE21911 – Certificate II in Electronics | **State**  **code:** | A113 |
| **Qualification National Code & Title:** | UEE20511 – Certificate II in Computer Assembly and Repair | **State**  **code:** | A103 |
| **Qualification National Code & Title:** | UEE40711 – Certificate IV in Electronics and Communications | **State**  **code:** | A137 |
| **Qualification National Code & Title:** | UEE40111 – Certificate IV in Computer Systems | **State**  **code:** | A132 |
| **Qualification National Code & Title:** | UEE50511 – Diploma of Electronics and Communications Engineering | **State**  **code:** | A160 |
| **Qualification National Code & Title:** | UEE50111 – Diploma of Computer Systems Engineering | **State**  **code:** | A155 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit of competence (UoC) details** | | | |
| **Unit National code & title** | UEECS0003 - Assemble, set up and test computing devices (Old unit UEENEED102A) | State code | WC386 |

|  |  |
| --- | --- |
| **Student Name** |  |
| **Student Declaration** | I declare that the evidence submitted is my own work:  ………………………………………….. |

|  |
| --- |
| **Assessment details** |
| **Assessment Tool 3**: Practical Assessment |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Assessor Name** | Murali Selvaraj / Saranya Chandrukannan | | | |
| **Assessment Decision** | Satisfactory | | Not Yet Satisfactory | |
| **Assessor Signature** |  | | **Date** | DD/MM/YYYY |
| **Is student eligible for reassessment (Re-sit)?** | No | Yes | **Reassessment Date:** | DD/MM/YYYY |

|  |  |  |  |
| --- | --- | --- | --- |
| **Feedback to student** | | | |
|  | | | |
| **Feedback from student** | | | |
|  | | | |
| **Student signature** |  | **Date** | DD/MM/YYYY |
| **Assessor signature** | Murali Selvaraj / Saranya Chandrukannan | **Date** | DD/MM/YYYY |

|  |  |
| --- | --- |
| **Assessment Type** | Practical Demonstration |
| **Assessment Resource** | * Internet * SMTAFE Blackboard * SMTAFE Lab facility & PC * Microsoft Office suite * SMTAFE tools and equipment * Instruction to student (this document) * Workshop conditions (PPE as necessary) * Range of hand tools * Enterprise procedures |
| **Assessment Conditions** | * This is an individual assessment. No discussion is allowed with your peers. * Switch off your mobile phones * The students must complete all the given tasks * Complete the listed tasks within 3 hours * Seek lecturer’s feedback after completion of each step and before proceeding to the next step. * Students may refer to their notes when completing this assessment and can access Blackboard as a resource. * Your lecturer will observe your compliance with OH requirements, good housekeeping practice (safe work methods), appropriate hardware and software selection, component recognition of use of software tools, and programming logic methods. * Report to your lecturer once work is completed. |
| **Prerequisite Units** | UEECD0007 Apply Occupational Health Safety regulations, codes and practices in the workplace. |
| **Assessment Instructions to Student** | **You are required to:**   * Read through the instructions and appendix information carefully, before beginning the task to ensure you fully understand the requirements. * The student will receive feedback from the assessor within one week after the project submission. * The student has access to a second attempt at the assessment during week 10 (if re-sit is identified by your lecturer). |
|  |
| **Location** | South Metropolitan TAFE, Thornlie Campus, 8 Block, 8G27 |
| **When** | Session 8 |
| **Duration** | 3 hours to complete all the listed tasks and submit the report. |
| **Submission Mode** | Online submission to Blackboard LMS |
| **Expected Deliverables** | . 1. AT3 practical Assessment report  2. AT3 observation checklist |

**Assessment Tool 3: Instructions and tasks description**

**Project Task Description:**

The students are expected to perform the following tasks under supervision, by following predetermined safety standards (Refer Appendix). The required skills for this unit will be assessed, based on demonstration of these tasks, against the observation checklist items. Read through the instructions carefully before beginning the task to ensure you fully understand the requirements.

**Student outcome**: Successful completion of this assessment should demonstrate the following outcomes:

* Have knowledge of and observe OHS policies and procedures when carrying out work
* Identify basic computer and network hardware components
* Connect and configure a basic network
* Install operating system and software
* Set up a basic network file share

**AT3 Assessment Report requirements (AT3\_PracticalAssessment\_Report.docx):**

You are required to create a document using Microsoft Word, which details the procedure for:

* Part A:
  + The hardware components of your desktop PC
  + Steps to correctly connect computing devices components and peripherals
* Part B
  + Document any interconnectivity issues, faults, and basic operation steps
  + Document rectification or repair information to address the faults (if found any)
* Part C:
  + The operating system installed and configuration used (e.g. username and password)
  + Steps followed to install an operating system and application software
  + Steps followed to install a software. Checks performed on OS and software
* Part D:
  + Test procedure for computer operation including network configuration, connect and operation (LAN internet)
  + Document the IP address obtained by your system when connected to the network

**Resources Required (Collect from Lecturer):**

Collection of parts required for PC consisting of at least:

* 1x Case
* 1x Motherboard
* 1x CPU and CPU cooler
* 1x RAM module
* 1x PSU
* 1x HDD/SSD
* 1x Optical drive
* Screwdrivers
* Operating System installation media (ISO File in USB or boot disk – Win10, Win7 or any Linux flavour)
* Collection of software to be installed (USB drive or DVD)

**Follow the provided steps to complete the tasks (Part A, Part B, Part C and Part D):**

* Prepare your work area for work to be done.
* Gather and check all the required resources. Report any issues or damage to your assessor.
* Assemble your PC from the provided parts.
* Install an operating system
* Check for any anomalies
* Install missing drivers and the Software updates.
* Test the Operating System and the Software operation.
* Identify interconnectivity issues, hardware, sub assembly, software faults using basic operation steps
* Perform rectification of interconnectivity, hardware, sub assembly or software faults
* Connect to the classroom network using network media
* Get your assessor to check your work.
* Take photographs of the steps to document the steps involved and the procedure followed
* Safely shut down your PC
* Dismantle your PC and return all components to their storage location. Restore work area to original state (i.e. return borrowed cables, reconnect existing systems, etc.).
* Clean your work area.
* Notify your assessor of completion of work. Done.

**General requirements:**

* Help directory is used to resolve any straightforward start up or access issues or anomalies. The students may refer to their notes, textbook and/or access further documentation supplied in class for completing this assessment
* Get advice from your lecturer to ensure the work is co-ordinated effectively with others.
* The student must clean the worksite, after the demonstration is complete, and returns tools and materials to their appropriate storage place.
* Your lecturer must be notified about the completion of the work in accordance with established procedures.
* Work is carried out efficiently without waste of materials or damage to apparatus, circuits, the surrounding environment, or services and using sustainable energy principles.

Apply following sustainable energy principles and practices during class sessions:

* Make sure your monitors, printers, and other accessories are on a power strip/surge protector
* Turn off the monitor if PC is not used for more than 20 minutes (Use power management scheme).
* Turn off both the CPU and monitor if PC is not used for more than 2 hours (Use power management scheme).

**Documents Storage Requirements:**

* Completed deliverable documents must be submitted (stored) under the AT3\_PracticalAssessment submission link in Blackboard.

**Appendix A: Practical Task OHS Prestart Procedures**

* The student will need to obtain OHS policy, access permit, clearances and isolation permissions from the assessor.
* The student will follow safe work methods, and methods for controlling risks must be obtained, read and understood prior to undertaking the activity.
* The student is to prepare for electrical and non-electrical isolation to prevent creation of hazards relating to the computer equipment according to procedures.
* Tools and equipment needed for the work must be checked for safety before you use them and correct functionality according to established procedures and regulatory requirements.

**Appendix B: Safety precautions, when working with computer systems**

**General Safety**

Before working on any electronics, consider following these basic safety precautions to help reduce any hazards.

* Remove any electronic equipment you’re testing or working on from the power source.
* Never assume the power circuit is off. Test and test again with a voltmeter to confirm.
* Remove fuses and replace them only after the power to the circuit is disconnected.
* Don’t connect power to a circuit until you’re done working on it and rechecked the work.
* Always ensure that all electronics equipment is properly grounded
* If it’s damaged, replace it. For instance, replace cables instead of repairing with insulating tape.
* Always use the right electronics repair and maintenance tools.
* Always return covers after removing them to reduce the risk of electric shock.
* Make sure your circuit is not overloaded.
* Always have safety equipment like a fire extinguisher, a basic first aid kit and a mobile phone nearby.

**Personal Safety**

It’s important to ensure that you’re safe when working on electronic circuits. Here are some personal safety precautions to keep in mind:

* Always keep your work area dry.
* Always work in a well-ventilated area.
* Don’t wear flapping or loose clothing when working.
* Don’t work with metallic jewellery on your hands like watches, rings and bracelets.
* Don’t use bare hands to remove hot parts.
* Always wear non-conductive shoes.
* Always wear insulator gloves in your hands when carrying out repairs.
* When removing high-voltage charges on capacitors, always use a shorting stick.
* Don’t hold the test prods when measuring voltage over 300V.
* Always remove power to a circuit before connecting alligator clips.
* Always wear safety goggles.
* Be careful when handling large capacitors as they can still hold high voltage even after you’ve disconnected the circuit from power.

**High Voltage Safety**

One mistake that electronics experts make when doing repairs or maintenance work is assuming routine safety procedures after getting all too familiar with their work. It’s important to know that most electronic equipment use high-voltage that is dangerous and can be fatal. Always follow these safety precautions when working on or near high-voltage circuits.

* Don’t work on electronic equipment or make repairs with high voltage on.
* Don’t take chances doing what you’re not sure about.
* Consider using an isolation transformer when working on AC powered electronic circuits or equipment.
* Never tamper with interlocks.
* Don’t ground yourself: Make it a practice to use only one hand when connecting equipment to an electronic circuit.

**Fire Safety Precautions**

* When working with electronic equipment, there is often a risk of fire caused by a short circuit or other reason. Follow these precautionary steps:
* Avoid anything that would cause a fire around your working area like paper, cloth or other combustible materials.
* Look out for damaged wire insulation, overheating of electronic equipment, damaged circuit boards and corrosive components like batteries.
* If there is a burning smell on your electronic equipment, disconnect the power source.
* If there is a fire, use a no conducting dry powder or CO2 fire extinguisher.
* Always check your circuit to be sure that everything is okay after repairs or maintenance before connecting power.

**Electric Shock**

* One of the major hazards when working with electronic equipment is electric shock. To avoid this, you should take a few safety precautions, including:
* Always read safety procedures that come with every electronic equipment you’re about to test or work on.
* Recheck all wires for bad connections
* Always make sure that all parts of electronic equipment are well-mounted to prevent accidents.
* Keep electronic equipment away from water and other liquids
* Always check for signs of wear, defects and fraying on electronic equipment cables, cords and connectors.
* Use special safety rubber gloves and shoes.

**Appendix C: OHS risk control measures and procedures in relation to computer and keyboard**

****