



## **JOB DESCRIPTION**

Salary Grade: 6 CUPE 1328
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**Job Title:**  
**A.V. Technician – Computers**

### **PRIMARY FUNCTION**

The primary function of this job is to repair micro-computers and peripheral equipment for schools and Board offices.

### **MAIN RESPONSIBILITIES**

1. Repair micro-computers and peripheral equipment for schools, by performing such tasks as:
  - repairing a variety of equipment e.g.: laser computers, computer monitors, different types of printers (e.g. Standalone, Network, Sharing), disc drives, keyboards, mouse, fax machines, scanner etc.
  - utilizing an assortment of tools such as: oscilloscope, voltage OHM meter, diagnostic software, digital multimeter, frequency counter, spotlight, magnifying glass, clamp, air hose, vacuum, solder iron and sucker, external power supply, screw driver, pliers, heat gun etc.
  - picking up the next piece of equipment needing repair from the shelf and reading repair tag for possible identification of problem
  - opening up the equipment and using an air hose to blow out dust and cleaning parts with alcohol and brush or cotton swabs
  - conducting a general check of the machine eg: checking switches, re-set, power on and off to check sequence, checking the physical set-up of the floppy drive, set-up table or computer screen with the computer manual etc.
  - referencing the manual for the particular computer that is being serviced and checking the circuit diagram in order to get a 'road map' for the repair
  - utilizing test equipment and various equipment service manuals to isolate and identify the problem eg: oscilloscope to check the signal levels to microprocessor

- trouble shooting to component level as opposed to replacing entire circuit boards/modules etc.
  - obtaining a fully functioning computer (in cases when service manual for the malfunctioning computer is not available), turning it on and bringing the 'set-up' on the screen to check if the 'set-up' of the malfunctioning computer has been altered by students or teacher; opening up the functioning computer to see how the circuitry works and what the correct voltage, signal shapes are etc.
  - replacing parts (e.g. chips, transistors, diodes etc.) or repairing parts by using soldering iron/gun and other tools as necessary
  - testing the repair job by utilizing the same process that was used to initially isolate the problem
  - running diagnostic test on machine after repair.
2. Perform a variety of duties that assist in the repair/modification of micro-computers and peripheral equipment, such as:
- loading various software
  - utilizing anti-virus software by inserting the disc into the computer and following the procedures
  - modifying software so that it is functional eg: if existing software is already using a particular address and new software installation instructions state use of that particular address, enter in new commands to change address and thereby rectify the problem
  - upgrading micro-computers e.g.: by purchasing parts such as system board, memory, associated peripherals etc. and replacing parts, loading software and checking to ensure that the machine works
  - modifying the machinery in cases when parts are unavailable e.g.: modify power supply and write note to school to provide instructions on how to use machine.
  - building complete multimedia systems and loading software
  - maintaining a current/up-to-date knowledge of all aspects of the technical repair field by taking courses, reading materials etc.
3. Maintain a supply of computer parts by:
- sourcing suppliers by contacting them by phone and getting pricing information
  - completing the order form and having supervisor approve purchase of parts
  - maintaining an inventory book with a list of all purchased items and indication of when they were used
  - maintaining a log of the ordered parts and the dates the parts were delivered
  - generating a monthly report.

4. Maintain a record of repair work and a library of manuals by:
  - listing work done on the equipment repair tag and retaining a copy
  - stamping date repair was completed on sticker on equipment
  - recording date, equipment number, school name and nature of problem in repair book
  - purchasing and maintaining a library of relevant manuals/guides e.g.: ECG book (cross reference of comparable/generic parts), IC book (IC configuration and figures), computer manuals, electronic catalogues etc.
5. Respond to telephone enquiries from schools relating to repair work such as: status of repair job; trouble-shooting with caller to perform diagnostic repairs and determine whether problem is hardware or software related.
6. Perform other duties as assigned or required.

### **SKILL**

- 3 year Electronic Technology Diploma or equivalent.
- 1 - 2 years related experience.
- Knowledge to utilize equipment such as digital voltage meter, analog meter, frequency counter, disc drive tester, PC diagnostic Board etc.
- Knowledge to read Circuit diagrams.
- Knowledge of micro computer operating system

### **EFFORT**

- Complexity in utilizing the knowledge of how computers work and the function of the various components to facilitate their repair. Complexity in repairing increasingly more complex equipment eg: circuit boards are 'more minuscule' with 'surface mounted' parts (parts were initially mounted by being pierced through the board therefore easier to dislodge). Complexity to effectively utilize test equipment, circuit diagrams, service manuals to isolate and identify problem. Complexity in sometimes designing a unique solution to recurring problem.
- Physical effort: when lifting equipment (up to 30 lbs); physical concentration when using probes, tools etc. to repair equipment (up to 90%).

### **RESPONSIBILITY**

- Independence of action in selecting method/route of identifying and locating problem in equipment. Accountable for ensuring equipment is safe for use.

- Improper repair of equipment could result in damage to equipment, injury to staff and students, or subsequent/recurring malfunctioning causing inconvenience to School e.g.: classroom lab shutdown if computer server malfunctions.
- Contact with section staff in performance of duties. Contact with School staff for exchange of information.

### **WORKING CONDITIONS**

- Dust from machines when using air blower. Fumes when soldering and using lubricants and cleaners.
- Eye and back strain from working on small components.
- Physical concentration when working with electronic machinery and with tools to avoid shocks, burns etc.