There are lots of different types of questions for this course. The following are sample questions only and are not indicative of a full review. See the Lecture Notes and Textbook for more practice and information.

T1: Lab and Electrical Safety and T2: OHSA have intentionally been omitted from this document.

Lab 2: WHMIS has intentionally been omitted from this document. Check out LIN155.CORE ⇨ WHMIS.

T2: Tools

Study the names and uses of each of the tools listed. Recognize each by sight. Select the correct tool by purpose.

Sample test questions:

- *What is the difference between needle-nosed pliers and tweezers?*
- *What is the difference between diagonal cutters and wire strippers?*
- *List the steps detailing how to use copper wick to remove solder from a joint.*
- *List the steps detailing how to use a de-soldering pump to remove solder from a joint.*
- *What are the limitations of a breadboard?*
- *Name the tool given its picture.*

T2: Components

Study the names, schematic symbols, units, and general purpose of all 10 component types listed.

Sample test questions:

- *Determine the value and tolerance of a resistor with colour bands: Yellow, Violet, Yellow, Silver.*
- *Draw two or more symbols for Ground.*
- *Given the schematic symbols, name the components.*
- *How do capacitors and resistors differ in their use in a circuit?*
- *Which component blocks DC signals and allows AC signals to pass?*
- *List 3 uses of a capacitor.*
- *What other names are also used for inductors?*
- *What determines the colour of an LED?*
- *List 2 or more advantages that an LED has over a regular incandescent light bulb.*
- *What other component does a transistor most resemble?*
- *What is the difference in operation between a BJT and a JFET?*
- *List 2 or more sensitivity issues that may cause an IC to fail.*
- *Name 2 electronic components not explicitly discussed in class and draw their schematic symbols.*

T5: PCBs and PADS

Lab 7 is the **Mentor Graphics PADS Tutorial.pdf** file, available in **LIN155.CORE ⇨ Tutorials/Manuals**.

Sample test questions:

- *Given a circuit layout, count the number of traces and components.*
- *What are desirable qualities in a PCB?*
- *List 2 or more general rules a PCB designer should follow when designing a new layout.*

T3: Oscilloscope & Function Generator

Setting up the DC Power Supply, Oscilloscope and Function Generator are important skills to develop in the lab before second semester. Be sure you know how to set up the equipment from a power off setting.

- DC Power Supply: Set the voltage using a DMM, then limit the current.
- Oscilloscope: Default settings, set voltage gain and timebase, turn on cursors for period & Vpp.
- Function Generator: Set High Z Load, set amplitude and frequency, turn on output.

Sample test questions:

- *List the steps of turning on either piece of equipment to get it ready for use in the lab.*
- *Oscilloscope: Given a picture of the oscilloscope, locate the 5 main control knobs.*
- *Oscilloscope: What do each of the 5 main control knobs do on the oscilloscope?*
- *Oscilloscope: Which knob scales the amplitude? What happens if you press this knob like a button?*
- *Oscilloscope: Describe what happens when you turn the timebase knob.*
- *Given a waveform graph, determine its voltage, period, and frequency.*
- *Draw a 2Vpp, 2.5kHz sine wave on this oscilloscope graph.*
- *Oscilloscope: Explain what happens during "auto triggering".*
- *Oscilloscope: What is the difference between "auto mode" and "normal mode" triggering?*
- *A certain sine wave is set to trigger at 5V on a falling-edge condition. Draw the signal.*
- *The period of a signal is 300ms. What is its frequency?*
- *Function Generator: Why do we set the Output Setting to "High Z Output" at the start? How do you do this?*
- *Function Generator: Describe two different ways we may input a signal amplitude setting of 5.5 Vpp.*

T6: Plagiarism

More information may be found in Seneca's Academic Policy: **http://www.senecacollege.ca/academic-policy**

Sample test questions:

- *What is plagiarism?*
- *What is the difference between paraphrasing and summarizing a passage?*
- *What is collusion?*
- *What are the differences between footnotes and endnotes?*
- *Where must a citation occur?*
- *List 2 or more reasons for providing a citation.*
- *(Given a scenario) Is this an example of plagiarism? Explain why or why not.*
- *List two ways in which you can commit plagiarism.*
- *What information do you need to include to cite a hardcopy reference?*

T6: Troubleshooting & Maintenance

These are excellent employability skills to develop, and will improve with experience and exposure over time.

Sample test questions:

- *List 2 or more circuitbuilding tips from the text. (Back of the book.)*
- *What are the 6 steps to Troubleshooting?*

T7: Presentations and T8: AutoCAD have intentionally been omitted from this document.