**Prelab-4 Worksheet**

**Circuit Analysis – I**

|  |  |
| --- | --- |
| Student Name(s): |  |
| Student ID(s): |  |

## **Task 1: Design Voltage Divider Circuit**

Fill in Table 1 with the resistor values you selected to meet the design requirements of the voltage divider circuit.

**Table 1: Resistor Values Selected for Voltage Divider Circuit**

|  |  |
| --- | --- |
| **Resistor Name** | **Resistor Value** |
|  |  |
|  |  |
|  |  |
|  |  |

## **Task 2: Simulate Voltage Divider Circuit**

Place screenshots below of the four LTSpice circuits that illustrate that the design requirements are met for each possible load connection to your voltage divider circuit.

**Screenshot # 1: Fig. 2 (a)** (Place your Screenshot # 1 below)

**Screenshot # 2: Fig. 2 (b)** (Place your Screenshot # 2 below)

**Screenshot # 3: Fig. 2 (c)** (Place your Screenshot # 3 below)

**Screenshot # 4: Fig. 2 (d)** (Place your Screenshot # 4 below)

**Prelab-4 Submission Requirements:**

* Convert/save this Prelab-4 Worksheet **as a .pdf file** with a filename as follows:

**If Prelab is done individually:** “Prelab-4\_FirstName\_LastName.pdf”.

**If Prelab is done in a group:** If you have been explicitly instructed by your lab instructor to perform the Prelab exercises in a group, then save this Prelab-4 Worksheet **as a .pdf file** with a filename following the convention below:

Let’s consider that two students are doing the prelab in a group. Then the filename should be: “Prelab-4\_FirstName of Student 1\_FirstName of Student 2.pdf”. For example, if name of the two students are Tom Cruz and Morgan Freeman, respectively, then the Prelab-4 Worksheet file should have the following name: “Prelab-4\_Tom\_Morgan.pdf”. Similar file naming convention should be followed to properly name your LTspice schematic file. Improperly named files may be subject to point deductions.

* **Prelab Submission Checklist:** There should be total five files submitted for your Prelab-4 assignment. The Prelab-4 Worksheet (.pdf) and four LTspice schematic files (.asc).
* Check with your lab instructor about specific instructions on how to submit your Prelab files for assessment and grading.

**Prelab Score:** This prelab contributes to 30 points toward Lab 4 (each Task in the Prelab is worth 10 points). In-lab hands-on work will contribute to 70 points (Lab 4 total is 100 points).