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| **Course Name:** | **Elements of Electrical and Electronics Engineering** | **Semester:** | **I** |
| **Exam:** | **EEEE IA1** | **Division:** | **C4** |
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Q2. Calculate the current through 4 Ω resistor using Norton’s theorem. In the circuit shown in figure 2, the value of R1 will be the last two digits of roll no. time’s Ω

For eg: For Roll no: 1000020, then R1 = 20Ω. If your last digits are from 01 to 10, kindly add 10 to your last two digits, so roll no with last two digits with 01 will become 11, then R1 = 11Ω (EVEN ROLL NO ATTEMPT Q2)

1. Simulate the circuit shown in figure 2, using LTspice software and measure Vth, Rth and IL.
2. Also Solve the numerical theoretical and measure IN, RN and current through 4 Ω load resistor (IL)

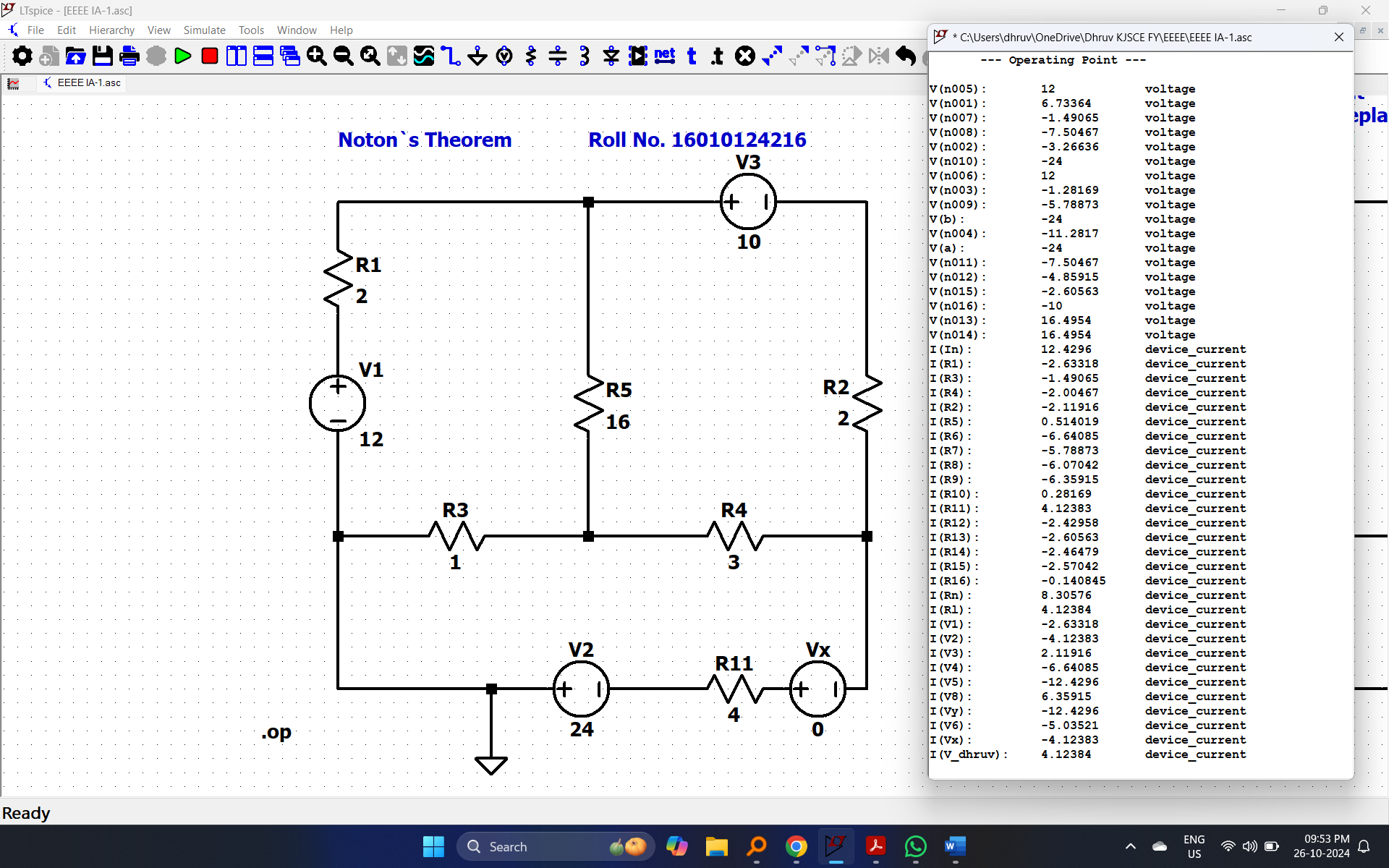
Tabulate the results as shown in the table below.

|  |  |  |
| --- | --- | --- |
| Parameter | Theoretical Value | Simulated Value |
| Norton`s Current IN | 12.4296 A | 12.4296 A |
| Norton`s Resistance RN | 1.9862 Ω | 1.9860144860 Ω |
| Load Current IL | 4.1241 A | 4.12384 A |



**Figure 2**

**Simulations:**

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**A screenshot of a computer

Description automatically generated**

**A computer screen shot of a diagram

Description automatically generated**

**A computer screen shot of a circuit diagram

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