



# Universidad Autónoma de Coahuila

## Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

|                  |  |                |                 |
|------------------|--|----------------|-----------------|
| Subject          | Circuit analysis II                    | Group          | 5A              |
| Degree           | Electrical engineering                 | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis    | Registration # | <b>14137625</b> |
| Professor's name | Dr. Suresh Kumar Gadi                  | Marks Obtained | ____ / 10       |
| Student's name   | <b>JESUS EMMANUEL MORALES MENUIOLA</b> |                |                 |

### Answers

- $I_{Z1} = (0.256\,13 - j0.405\,78)\,\text{A}$
  - $I_{Z2} = (-0.204\,91 + j0.324\,62)\,\text{A}$
  - $I_{Z3} = (0.453\,74 + j0.3999)\,\text{A}$
  - $I_{Z4} = (0.324\,62 + j0.204\,91)\,\text{A}$
  - $I_{Z5} = (0.180\,35 + j0.113\,84)\,\text{A}$
  - $I_{Z6} = (-0.453\,74 - j0.3999)\,\text{A}$
- $V_{RMS} = 6.8159\,\text{V}$
  - $V_{ARV} = 6.2073\,\text{V}$
- There are no electric currents in the circuit.



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| Subject          | Circuit analysis II                 | Group          | 5A              |
| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>14121732</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>JOEL GERARDO AGUERO LLANAS</b>   |                |                 |

### Answers

- $I_{Z1} = (0.1706 + j0.017157) \text{ A}$
  - $I_{Z2} = (-0.094775 - j0.0095319) \text{ A}$
  - $I_{Z3} = (-0.13097 + j0.54072) \text{ A}$
  - $I_{Z4} = (-0.012255 + j0.12185) \text{ A}$
  - $I_{Z5} = (-0.042893 + j0.42649) \text{ A}$
  - $I_{Z6} = (0.13097 - j0.54072) \text{ A}$
- $V_{RMS} = 6.8159 \text{ V}$
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- There are no electric currents in the circuit.



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| Subject          | Circuit analysis II                 | Group          | 5A              |
| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>14124427</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>JERSON CHAVEZ ORTIZ</b>          |                |                 |

### Answers

- $I_{Z1} = (0.172\,45 - j0.010\,423)\,A$
  - $I_{Z2} = (-0.344\,89 + j0.020\,845)\,A$
  - $I_{Z3} = (0.202\,23 + j0.482\,28)\,A$
  - $I_{Z4} = (0.008\,933\,7 + j0.147\,81)\,A$
  - $I_{Z5} = (0.020\,845 + j0.344\,89)\,A$
  - $I_{Z6} = (-0.202\,23 - j0.482\,28)\,A$
- $V_{RMS} = 6.8159\,V$
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| Subject          | Circuit analysis II                    | Group          | 5A              |
| Degree           | Electrical engineering                 | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis    | Registration # | <b>14156040</b> |
| Professor's name | Dr. Suresh Kumar Gadi                  | Marks Obtained | ____ / 10       |
| Student's name   | <b>LUIS ANTONIO FERNENDEZ CARRASCO</b> |                |                 |

## Answers

- $I_{Z1} = (0.145\,95 - j0.029\,486)\text{ A}$
  - $I_{Z2} = (-0.233\,52 + j0.047\,178)\text{ A}$
  - $I_{Z3} = (0.1531 + j0.306\,65)\text{ A}$
  - $I_{Z4} = (0.039\,315 + j0.1946)\text{ A}$
  - $I_{Z5} = (0.026\,21 + j0.129\,73)\text{ A}$
  - $I_{Z6} = (-0.1531 - j0.306\,65)\text{ A}$
- $V_{RMS} = 6.8159\text{ V}$
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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>14156037</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>MICHAEL MURILLO MENDEZ</b>       |                |                 |

### Answers

- $I_{Z1} = (0.044\,331 + j0.048\,022) \text{ A}$
  - $I_{Z2} = (-0.066\,496 - j0.072\,034) \text{ A}$
  - $I_{Z3} = (-0.255\,68 + j0.2805) \text{ A}$
  - $I_{Z4} = (-0.2161 + j0.199\,49) \text{ A}$
  - $I_{Z5} = (-0.061\,743 + j0.056\,997) \text{ A}$
  - $I_{Z6} = (0.255\,68 - j0.2805) \text{ A}$
- $V_{RMS} = 6.8159 \text{ V}$
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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>11073892</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>JOSUE AMADOR SIFUENTES</b>       |                |                 |

## Answers

- $I_{Z1} = (0.2117 - j0.1372) \text{ A}$
  - $I_{Z2} = (-0.31755 + j0.2058) \text{ A}$
  - $I_{Z3} = (0.55175 + j0.61942) \text{ A}$
  - $I_{Z4} = (0.3087 + j0.47632) \text{ A}$
  - $I_{Z5} = (0.1372 + j0.2117) \text{ A}$
  - $I_{Z6} = (-0.55175 - j0.61942) \text{ A}$
- $V_{RMS} = 6.8159 \text{ V}$
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| Subject          | Circuit analysis II                 | Group          | 5A              |
| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>11268436</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>EDUARDO ZALDIVAR MARTINEZ</b>    |                |                 |

### Answers

- $I_{Z1} = (0.110\,78 + j0.048\,797)\text{ A}$
  - $I_{Z2} = (-0.387\,73 - j0.170\,79)\text{ A}$
  - $I_{Z3} = (0.123\,24 + j0.470\,95)\text{ A}$
  - $I_{Z4} = (-0.068\,315 + j0.155\,09)\text{ A}$
  - $I_{Z5} = (-0.085\,394 + j0.193\,87)\text{ A}$
  - $I_{Z6} = (-0.123\,24 - j0.470\,95)\text{ A}$
- $V_{RMS} = 6.8159\text{ V}$
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| Subject          | Circuit analysis II                 | Group          | 5A              |
| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>14140390</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>LUIS DAVID MARENTES REYES</b>    |                |                 |

### Answers

- $I_{Z1} = (0.097\,378 - j0.166\,43)\,A$
  - $I_{Z2} = (-0.111\,29 + j0.1902)\,A$
  - $I_{Z3} = (0.370\,54 + j0.184\,89)\,A$
  - $I_{Z4} = (0.1902 + j0.111\,29)\,A$
  - $I_{Z5} = (0.166\,43 + j0.097\,378)\,A$
  - $I_{Z6} = (-0.370\,54 - j0.184\,89)\,A$
- $V_{RMS} = 6.8159\,V$
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- There are no electric currents in the circuit.





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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>12068799</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>JESUS ANTONIO ROBLESREYES</b>    |                |                 |

### Answers

- $I_{Z1} = (0.102\ 66 - j0.234\ 84)\text{ A}$
  - $I_{Z2} = (-0.256\ 64 + j0.587\ 09)\text{ A}$
  - $I_{Z3} = (0.615\ 27 - j0.150\ 61)\text{ A}$
  - $I_{Z4} = (0.167\ 74 + j0.073\ 325)\text{ A}$
  - $I_{Z5} = (0.293\ 55 + j0.128\ 32)\text{ A}$
  - $I_{Z6} = (-0.615\ 27 + j0.150\ 61)\text{ A}$
- $V_{RMS} = 6.8159\text{ V}$
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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>14150725</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>LILIANA VERA GLZ</b>             |                |                 |

## Answers

- $I_{Z1} = (0.453\,04 - j0.343\,89)\text{ A}$
  - $I_{Z2} = (-0.339\,78 + j0.257\,92)\text{ A}$
  - $I_{Z3} = (0.259\,29 + j0.576\,77)\text{ A}$
  - $I_{Z4} = (0.114\,63 + j0.151\,01)\text{ A}$
  - $I_{Z5} = (0.257\,92 + j0.339\,78)\text{ A}$
  - $I_{Z6} = (-0.259\,29 - j0.576\,77)\text{ A}$
- $V_{RMS} = 6.8159\text{ V}$
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| Subject          | Circuit analysis II                  | Group          | 5A              |
| Degree           | Electrical engineering               | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis  | Registration # | <b>14125016</b> |
| Professor's name | Dr. Suresh Kumar Gadi                | Marks Obtained | ____ / 10       |
| Student's name   | <b>DAVID OTHONIEL SALDIVAR PEREZ</b> |                |                 |

### Answers

- $I_{Z1} = (0.254\,48 - j0.007\,648\,7) \text{ A}$
  - $I_{Z2} = (-0.127\,24 + j0.003\,824\,4) \text{ A}$
  - $I_{Z3} = (-0.116\,92 + j0.347\,38) \text{ A}$
  - $I_{Z4} = (0.004\,589\,2 + j0.152\,69) \text{ A}$
  - $I_{Z5} = (0.005\,736\,5 + j0.190\,86) \text{ A}$
  - $I_{Z6} = (0.116\,92 - j0.347\,38) \text{ A}$
- $V_{RMS} = 6.8159 \text{ V}$
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- There are no electric currents in the circuit.



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| Subject          | Circuit analysis II                 | Group          | 5A             |
| Degree           | Electrical engineering              | Due for        | 4/10/2016      |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>1205596</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10      |
| Student's name   | <b>ALBERTO VAZQUEZ MEDINA</b>       |                |                |

### Answers

- $I_{Z1} = (0.274\,63 - j0.015\,492)\,A$
  - $I_{Z2} = (-0.196\,16 + j0.011\,066)\,A$
  - $I_{Z3} = (-0.055\,872 + j0.404\,92)\,A$
  - $I_{Z4} = (0.009\,682\,6 + j0.171\,64)\,A$
  - $I_{Z5} = (0.012\,91 + j0.228\,86)\,A$
  - $I_{Z6} = (0.055\,872 - j0.404\,92)\,A$
- $V_{RMS} = 6.8159\,V$
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- There are no electric currents in the circuit.



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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>12666518</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>SAMUEL ROSAS GONZALEZ</b>        |                |                 |

## Answers

- $I_{Z1} = (0.208\,63 - j0.087\,843)\,A$
  - $I_{Z2} = (-0.149\,02 + j0.062\,745)\,A$
  - $I_{Z3} = (0.090\,98 + j0.382\,75)\,A$
  - $I_{Z4} = (0.087\,843 + j0.208\,63)\,A$
  - $I_{Z5} = (0.062\,745 + j0.149\,02)\,A$
  - $I_{Z6} = (-0.090\,98 - j0.382\,75)\,A$
- $V_{RMS} = 6.8159\,V$
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- There are no electric currents in the circuit.



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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>12064655</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>EDSON ORLANDONAVARRO RAMIREZ</b> |                |                 |

### Answers

- $I_{Z1} = (0.115\,47 + j0.038\,462)\,\text{A}$
  - $I_{Z2} = (-0.089\,808 - j0.029\,915)\,\text{A}$
  - $I_{Z3} = (-0.122\,88 + j0.283\,33)\,\text{A}$
  - $I_{Z4} = (-0.029\,915 + j0.089\,808)\,\text{A}$
  - $I_{Z5} = (-0.067\,308 + j0.202\,07)\,\text{A}$
  - $I_{Z6} = (0.122\,88 - j0.283\,33)\,\text{A}$
- $V_{RMS} = 6.8159\,\text{V}$
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- There are no electric currents in the circuit.



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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>11126870</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>JUAN GAEL GONZALEZ RODRIGUEZ</b> |                |                 |

## Answers

- $I_{Z1} = (0.214\,18 - j0.391\,92)\text{ A}$
  - $I_{Z2} = (-0.160\,64 + j0.293\,94)\text{ A}$
  - $I_{Z3} = (0.469\,02 + j0.383\,56)\text{ A}$
  - $I_{Z4} = (0.261\,28 + j0.142\,79)\text{ A}$
  - $I_{Z5} = (0.261\,28 + j0.142\,79)\text{ A}$
  - $I_{Z6} = (-0.469\,02 - j0.383\,56)\text{ A}$
- $V_{RMS} = 6.8159\text{ V}$
  - $V_{ARV} = 6.2073\text{ V}$
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| Degree           | Electrical engineering                | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis   | Registration # | <b>14155580</b> |
| Professor's name | Dr. Suresh Kumar Gadi                 | Marks Obtained | ____ / 10       |
| Student's name   | <b>LUIS ALEJANDRO URBINA GONZALEZ</b> |                |                 |

### Answers

- $I_{Z1} = (0.158\,24 - j0.025\,313)\text{ A}$
  - $I_{Z2} = (-0.474\,71 + j0.075\,94)\text{ A}$
  - $I_{Z3} = (0.376\,14 + j0.322\,36)\text{ A}$
  - $I_{Z4} = (0.037\,97 + j0.237\,36)\text{ A}$
  - $I_{Z5} = (0.021\,697 + j0.135\,63)\text{ A}$
  - $I_{Z6} = (-0.376\,14 - j0.322\,36)\text{ A}$
- $V_{RMS} = 6.8159\text{ V}$
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- There are no electric currents in the circuit.





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| Degree           | Electrical engineering              | Due for        | 4/10/2016       |
| Exam / Homework  | Homework 3: Nodal and Mesh analysis | Registration # | <b>14629184</b> |
| Professor's name | Dr. Suresh Kumar Gadi               | Marks Obtained | ____ / 10       |
| Student's name   | <b>JOSE WALDO QUINTANA ARANDA</b>   |                |                 |

### Answers

- $I_{Z1} = (0.093\,331 - j0.236\,54)\text{ A}$
  - $I_{Z2} = (-0.155\,55 + j0.394\,23)\text{ A}$
  - $I_{Z3} = (0.489\,31 + j0.010\,821)\text{ A}$
  - $I_{Z4} = (0.295\,67 + j0.116\,66)\text{ A}$
  - $I_{Z5} = (0.131\,41 + j0.051\,85)\text{ A}$
  - $I_{Z6} = (-0.489\,31 - j0.010\,821)\text{ A}$
- $V_{RMS} = 6.8159\text{ V}$
  - $V_{ARV} = 6.2073\text{ V}$
- There are no electric currents in the circuit.