

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 #	14137625
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JESUS EMMANUEL MORALES MENUIOLA		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (4 + j5) \Omega$ and $Z_2 = (2 + j5) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (9 + j5) \Omega$, $Z_2 = (7 + j5) \Omega$, $Z_3 = (7 + j7) \Omega$ and $V = (3 + j4) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (3 + j5) \Omega$, $Z_2 = (2 + j9) \Omega$ and $V = (9 + j5) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	14121732
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JOEL GERARDO AGUERO LLANAS		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (5 + j9) \Omega$ and $Z_2 = (6 + j7) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (2 + j2) \Omega$, $Z_2 = (9 + j8) \Omega$, $Z_3 = (2 + j4) \Omega$ and $V = (4 + j7) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (5 + j6) \Omega$, $Z_2 = (8 + j5) \Omega$ and $V = (5 + j7) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	14124427
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JERSON CHAVEZ ORTIZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (6 + j3) \Omega$ and $Z_2 = (9 + j7) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (3 + j5) \Omega$, $Z_2 = (6 + j4) \Omega$, $Z_3 = (4 + j9) \Omega$ and $V = (7 + j2) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (8 + j8) \Omega$, $Z_2 = (8 + j8) \Omega$ and $V = (5 + j7) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	14156040
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	LUIS ANTNONIO FERNENDEZ CARRASCO		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (8 + j5) \Omega$ and $Z_2 = (4 + j6) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (9 + j7) \Omega$, $Z_2 = (3 + j7) \Omega$, $Z_3 = (8 + j5) \Omega$ and $V = (8 + j6) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (4 + j8) \Omega$, $Z_2 = (2 + j5) \Omega$ and $V = (4 + j3) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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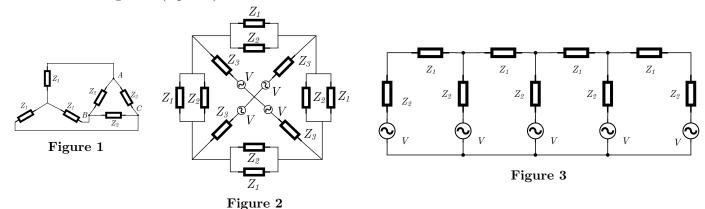
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Nodal and Mesh analysis	Registration #	14156037
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	MICHAEL MURILLO MENDEZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (9 + \mathrm{j}6) \Omega$ and $Z_2 = (7 + \mathrm{j}2) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (7 + \mathrm{j}6) \Omega$, $Z_2 = (8 + \mathrm{j}9) \Omega$, $Z_3 = (3 + \mathrm{j}2) \Omega$ and $V = (3 + \mathrm{j}9) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (5 + j3) \Omega$, $Z_2 = (4 + j9) \Omega$ and $V = (2 + j4) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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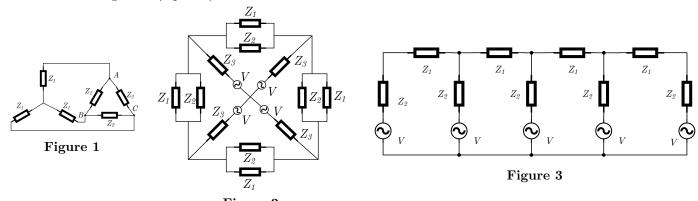
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Nodal and Mesh analysis	Registration #	11073892
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JOSUE AMADOR SIFUENTES		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (9 + \mathrm{j}6) \Omega$ and $Z_2 = (5 + \mathrm{j}4) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (9 + j2) \Omega$, $Z_2 = (5 + j5) \Omega$, $Z_3 = (7 + j9) \Omega$ and $V = (6 + j3) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (7 + j8) \Omega$, $Z_2 = (5 + j6) \Omega$ and $V = (9 + j4) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	11268436
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	EDUARDO ZALDIVAR MARTINEZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (7 + j2) \Omega$ and $Z_2 = (5 + j5) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (4 + j4) \Omega$, $Z_2 = (8 + j8) \Omega$, $Z_3 = (5 + j6) \Omega$ and $V = (4 + j3) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (8 + j2) \Omega$, $Z_2 = (7 + j9) \Omega$ and $V = (2 + j7) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	14140390
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	LUIS DAVID MARENTES REYES		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (8 + j7) \Omega$ and $Z_2 = (3 + j7) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (8 + j3) \Omega$, $Z_2 = (3 + j6) \Omega$, $Z_3 = (9 + j3) \Omega$ and $V = (3 + j8) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (4 + j3) \Omega$, $Z_2 = (2 + j9) \Omega$ and $V = (8 + j7) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	12068799
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JESUS ANTONIO ROBLESREYES		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (5 + j2) \Omega$ and $Z_2 = (3 + j7) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (4 + j5) \Omega$, $Z_2 = (6 + j2) \Omega$, $Z_3 = (9 + j3) \Omega$ and $V = (9 + j2) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (6 + j7) \Omega$, $Z_2 = (7 + j4) \Omega$ and $V = (2 + j7) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	14150725
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	LILIANA VERA GLZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (3 + \mathrm{j}4) \Omega$ and $Z_2 = (6 + \mathrm{j}9) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (4 + j5) \Omega$, $Z_2 = (5 + j3) \Omega$, $Z_3 = (4 + j9) \Omega$ and $V = (4 + j6) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (9 + j3) \Omega$, $Z_2 = (9 + j9) \Omega$ and $V = (4 + j7) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	14125016
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	DAVID OTHONIEL SALDIVAR PEREZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (3 + \mathrm{j}6) \Omega$ and $Z_2 = (9 + \mathrm{j}5) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (4 + j2) \Omega$, $Z_2 = (5 + j6) \Omega$, $Z_3 = (3 + j4) \Omega$ and $V = (2 + j7) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (7 + j4) \Omega$, $Z_2 = (2 + j2) \Omega$ and $V = (7 + j6) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	1205596
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	ALBERTO VAZQUEZ MEDINA		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (5 + j7) \Omega$ and $Z_2 = (7 + j8) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (6 + j8) \Omega$, $Z_2 = (8 + j8) \Omega$, $Z_3 = (4 + j7) \Omega$ and $V = (6 + j7) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (7 + j9) \Omega$, $Z_2 = (7 + j4) \Omega$ and $V = (4 + j8) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	12666518
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	SAMUEL ROSAS GONZALEZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (5 + j7) \Omega$ and $Z_2 = (9 + j5) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (7 + j3) \Omega$, $Z_2 = (4 + j2) \Omega$, $Z_3 = (2 + j6) \Omega$ and $V = (9 + j7) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (4 + j8) \Omega$, $Z_2 = (8 + j4) \Omega$ and $V = (6 + j8) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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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 #	12064655
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	EDSON ORLANDONAVARRO RAMIREZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (7 + j9) \Omega$ and $Z_2 = (6 + j9) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (4 + j7) \Omega$, $Z_2 = (4 + j8) \Omega$, $Z_3 = (5 + j4) \Omega$ and $V = (5 + j4) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (3 + j3) \Omega$, $Z_2 = (7 + j8) \Omega$ and $V = (3 + j7) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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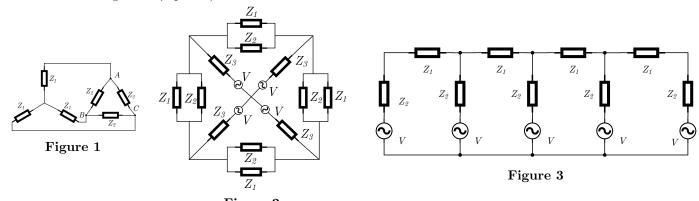
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Nodal and Mesh analysis	Registration #	11126870
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JUAN GAEL GONZALEZ RODRIGUEZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (6 + j8) \Omega$ and $Z_2 = (8 + j9) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (9 + \mathrm{j}6) \Omega$, $Z_2 = (5 + \mathrm{j}2) \Omega$, $Z_3 = (9 + \mathrm{j}9) \Omega$ and $V = (4 + \mathrm{j}2) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (9 + \text{j6}) \Omega$, $Z_2 = (3 + \text{j6}) \Omega$ and $V = (6 + \text{j4}) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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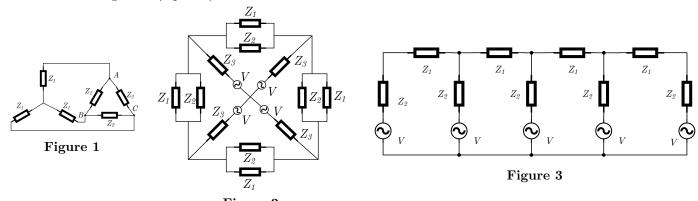
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Nodal and Mesh analysis	Registration #	14155580
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	LUIS ALEJANDRO URBINA GONZALEZ		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (6 + j2) \Omega$ and $Z_2 = (4 + j4) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (7 + j7) \Omega$, $Z_2 = (4 + j6) \Omega$, $Z_3 = (9 + j6) \Omega$ and $V = (5 + j5) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (4 + j8) \Omega$, $Z_2 = (4 + j4) \Omega$ and $V = (2 + j3) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)



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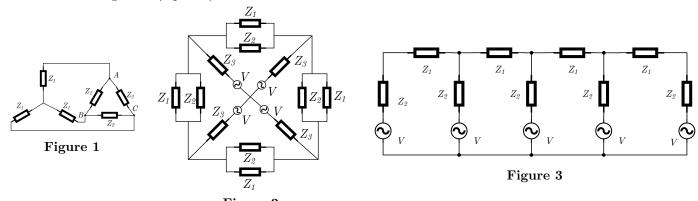
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Nodal and Mesh analysis	Registration #	14629184
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JOSE WALDO QUINTANA ARANDA		

Instructions

- 1. The student should submit the homework on or before the due date. (LATE SUBMISSION = 0 MARKS)
- 2. Answers should be hand written on the A4 or Letter size bond papers. (20% of the marks obtained will be reduced)
- 3. The student should print his/her corresponding question-paper and staple it along with his/her answer sheets. (20% of the marks obtained will be reduced)
- 4. In the calculations, the student should maintain at least a precision of 3 decimal places with a correct rounding. (20% of the marks obtained will be reduced)

Questions

1. Let $Z_1 = (5 + j3) \Omega$ and $Z_2 = (5 + j4) \Omega$. Calculate the equivalent resistance between the terminals A and B of the circuit shown in Figure 1. (2 points)



- 2. Let $Z_1 = (9 + j5) \Omega$, $Z_2 = (7 + j2) \Omega$, $Z_3 = (8 + j4) \Omega$ and $V = (2 + j9) \Omega$. Using Mesh analysis to find the current flowing through each element shown in the circuit shown in Figure 2. (4 points)
- 3. Let $Z_1 = (4 + j2) \Omega$, $Z_2 = (5 + j2) \Omega$ and $V = (3 + j5) \Omega$. Using nodal analysis find the current flowing through each element shown in the circuit shown in Figure 3. (4 points)