



# 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: Node 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>		

## 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)

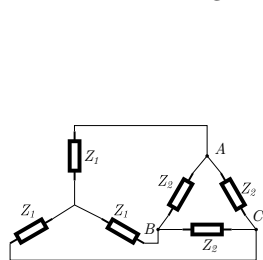


Figure 1

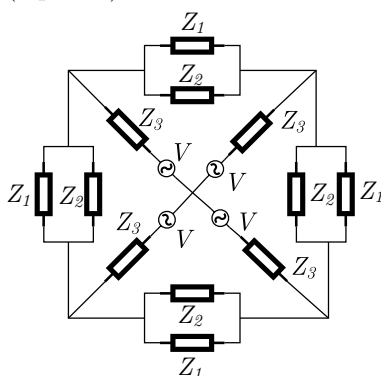


Figure 2

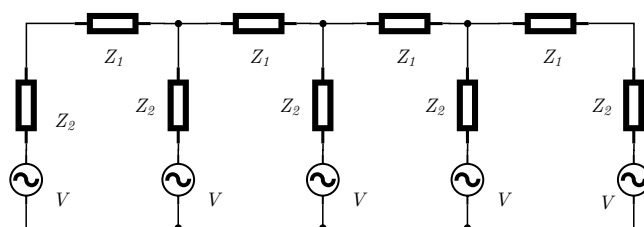


Figure 3

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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### Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Node 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>		

## 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)

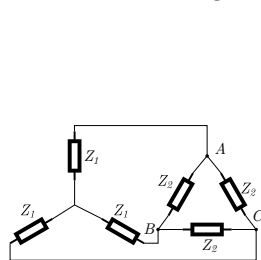


Figure 1

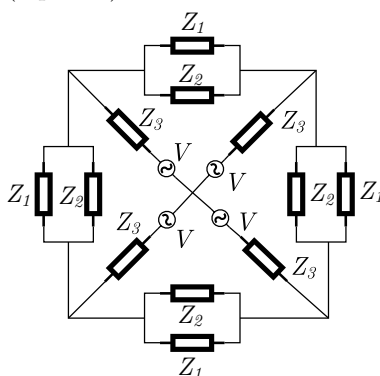


Figure 2

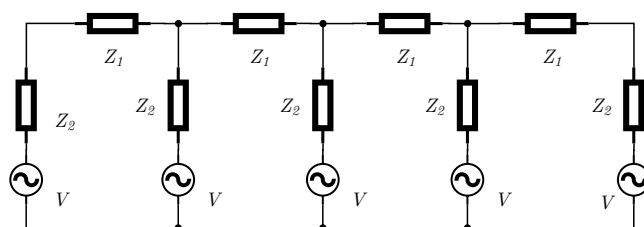


Figure 3

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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### Unidad Torreón

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

## 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)

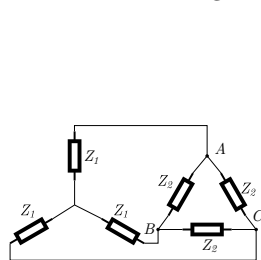


Figure 1

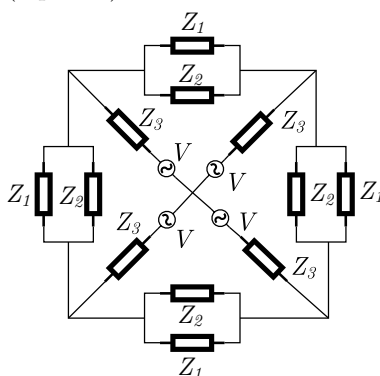


Figure 2

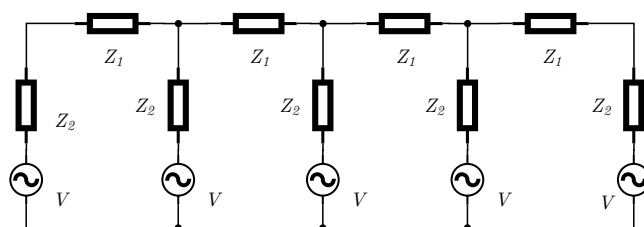


Figure 3

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: Node 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>		

## 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)

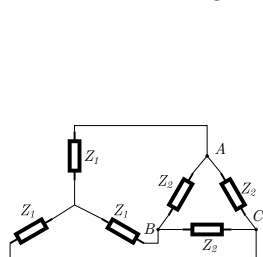


Figure 1

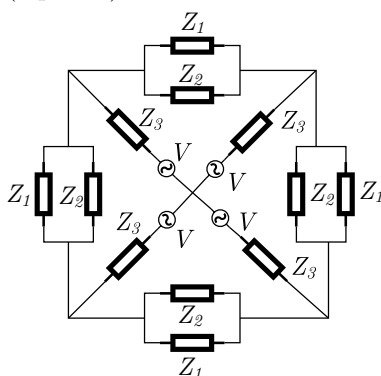


Figure 2

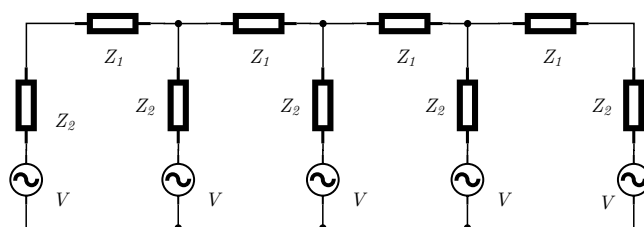


Figure 3

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: Node 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>		

## 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  $Z_1 = (9 + j6) \Omega$  and  $Z_2 = (7 + j2) \Omega$ . Calculate the equivalent resistance between the terminals  $A$  and  $B$  of the circuit shown in Figure 1. (2 points)

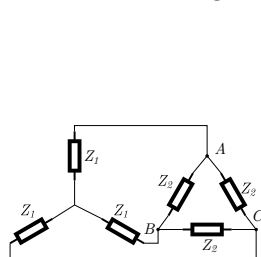


Figure 1

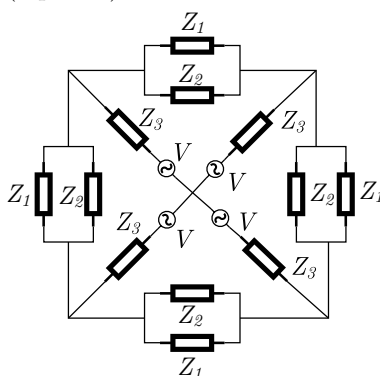


Figure 2

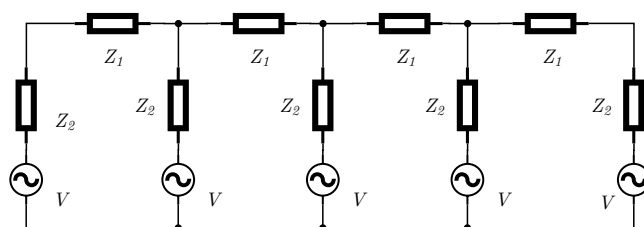


Figure 3

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

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Node 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>		

## 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  $Z_1 = (9 + j6) \Omega$  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)

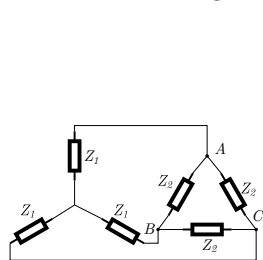


Figure 1

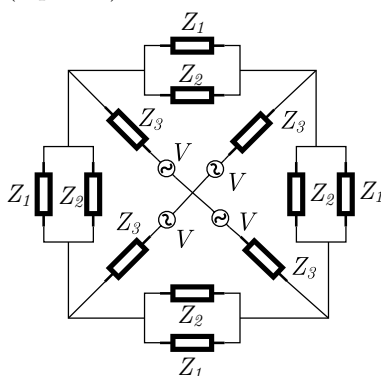


Figure 2

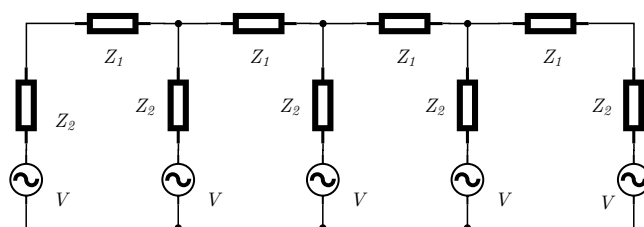


Figure 3

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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### Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Node 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>		

## 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)

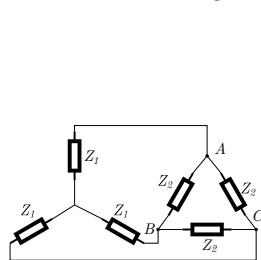


Figure 1

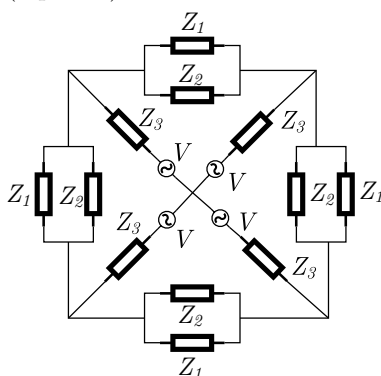


Figure 2

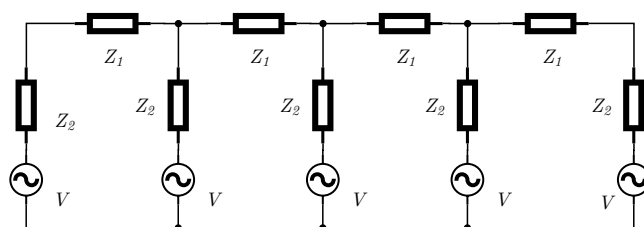


Figure 3

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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### Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Node 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>		

## 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)

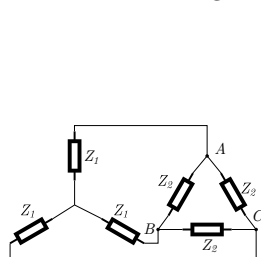


Figure 1

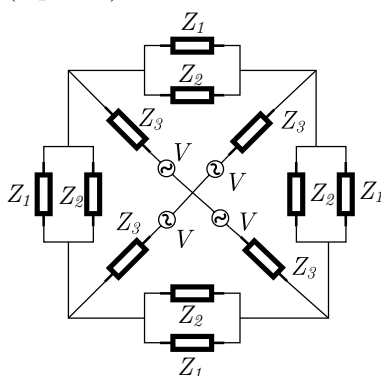


Figure 2

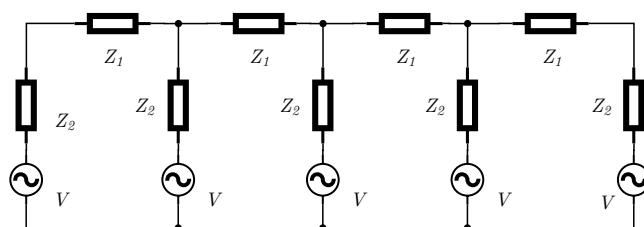


Figure 3

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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### Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Node 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>		

## 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)

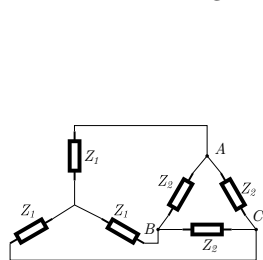


Figure 1

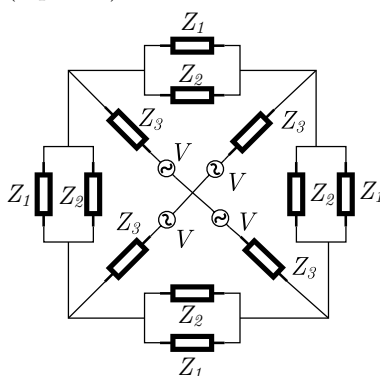


Figure 2

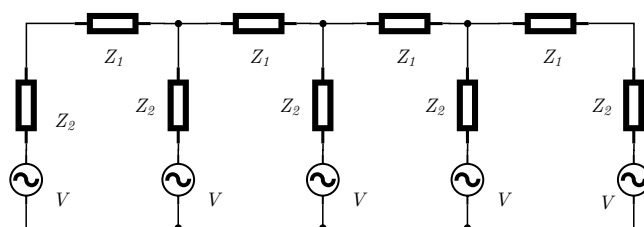


Figure 3

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: Node and Mesh analysis	Registration #	14150725
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>LILIANA VERA GLZ</b>		

## 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)
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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  $Z_1 = (3 + j4) \Omega$  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)

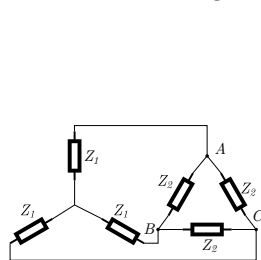


Figure 1

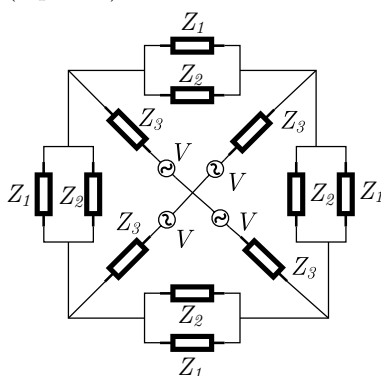


Figure 2

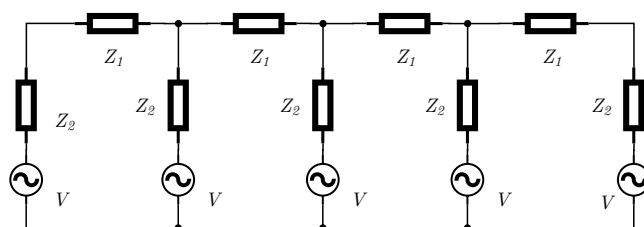


Figure 3

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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### Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	4/10/2016
Exam / Homework	Homework 3: Node 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>		

## 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  $Z_1 = (3 + j6) \Omega$  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)

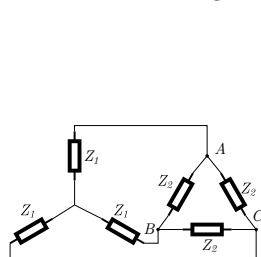


Figure 1

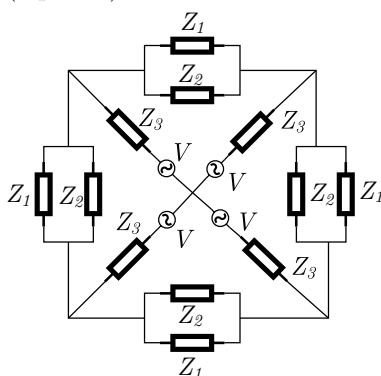


Figure 2

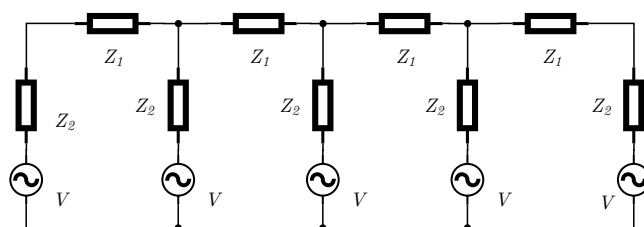


Figure 3

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)



# 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: Node 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>		

## 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)

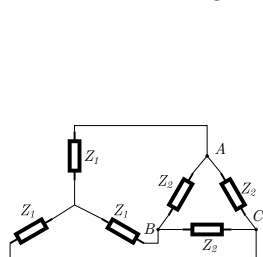


Figure 1

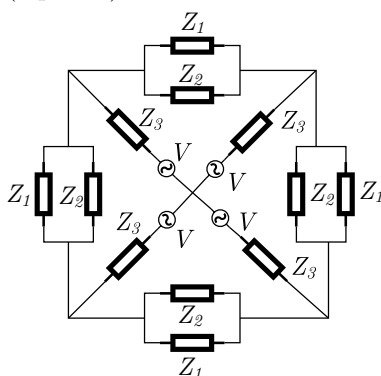


Figure 2

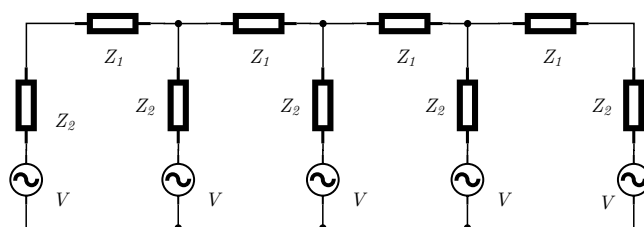


Figure 3

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)



# 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: Node 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>		

## 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)

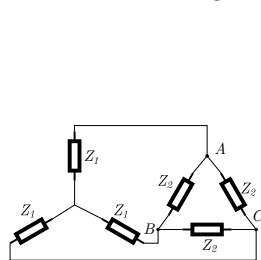


Figure 1

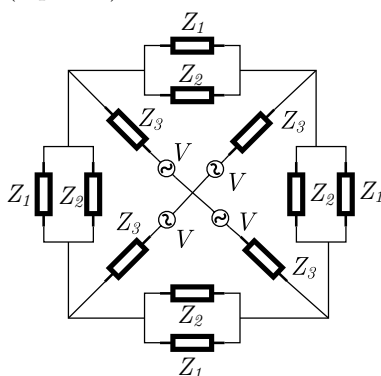


Figure 2

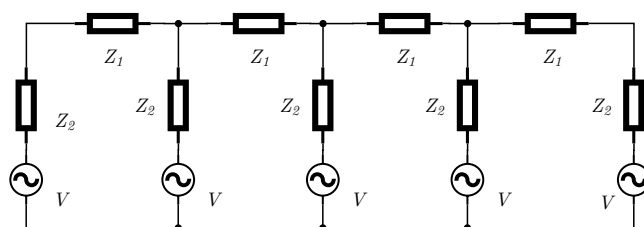


Figure 3

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)



# 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: Node 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>		

## 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)

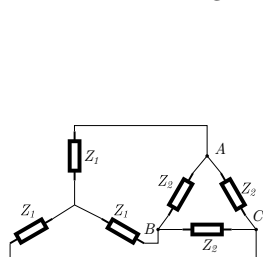


Figure 1

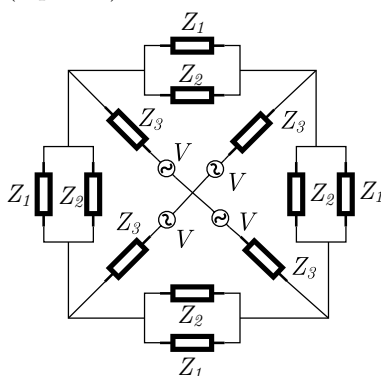


Figure 2

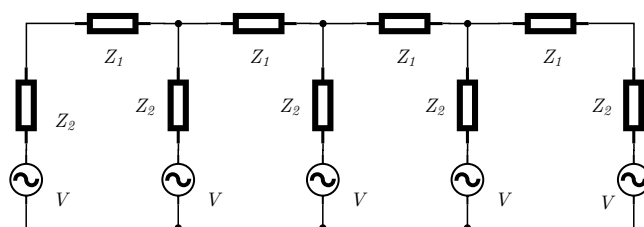


Figure 3

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)



# 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: Node 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>		

## 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)

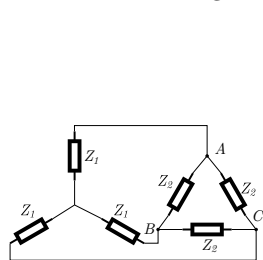


Figure 1

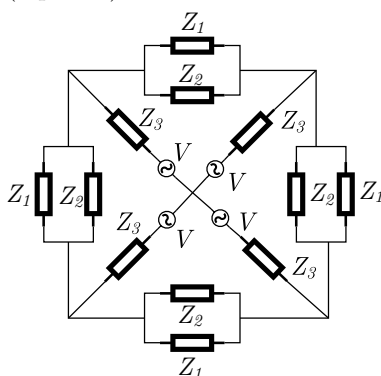


Figure 2

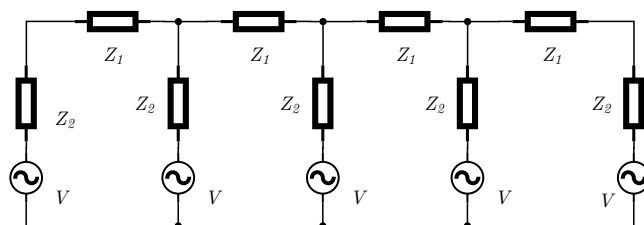


Figure 3

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



# 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: Node 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>		

## 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)

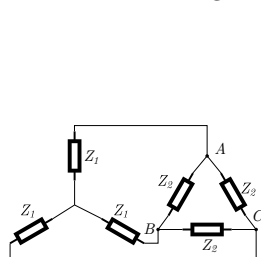


Figure 1

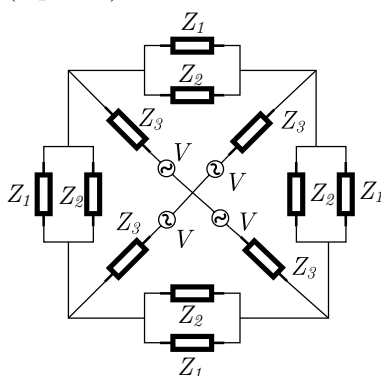


Figure 2

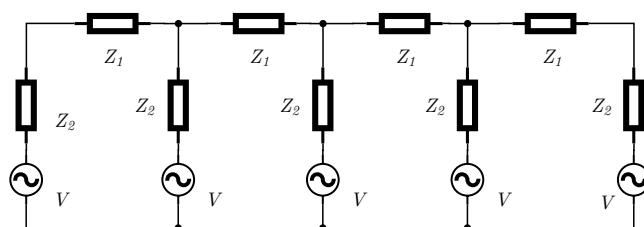


Figure 3

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)





# 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: Node 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>		

## 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)

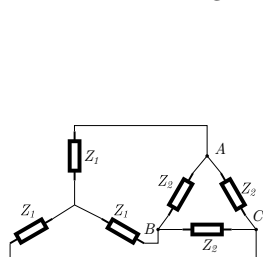


Figure 1

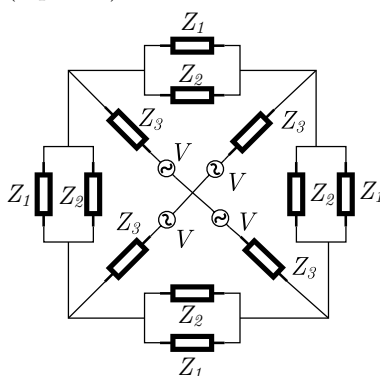


Figure 2

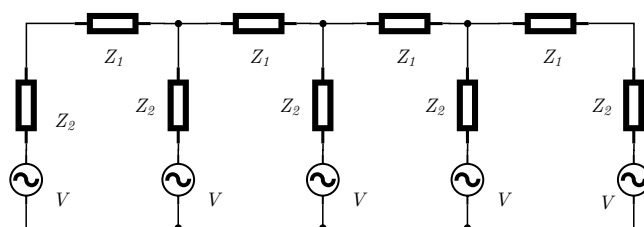


Figure 3

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)