

Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	9132341
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	EDGAR CERDA 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 A = 7 + 4j, B = 5 + 7j and C = 8 + 7j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 4}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 2 m. The resistance of the metal frame used for the cube is  $3\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	8053323
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JUAN PABLO DUARTE MONSIVAIS		

#### 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 A = 2 + 8j, B = 3 + 6j and C = 5 + 4j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 8}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 5 m. The resistance of the metal frame used for the cube is  $2\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12127844
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JUAN MIGUEL BARRIENTOS GARCIA		

#### 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 A = 5 + 2j, B = 7 + 8j and C = 5 + 7j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 2}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 9 m. The resistance of the metal frame used for the cube is  $6 \,\Omega \,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12132791
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	ISRAEL 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 A = 3 + 3j, B = 7 + 6j and C = 5 + 5j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 3}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 7 m. The resistance of the metal frame used for the cube is  $7 \,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	10062268
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JULIO ALEJANDRO MARIN GARCIA		

#### 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 A = 6 + 4j, B = 7 + 9j and C = 8 + 4j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 4}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 4 m. The resistance of the metal frame used for the cube is  $6\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	7050612
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	BEATRIZ ELIZABETH ALBA 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 A = 6 + 4j, B = 9 + 3j and C = 8 + 2j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 4}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 8 m. The resistance of the metal frame used for the cube is  $6 \,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	98017052
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	LUIZ EDUARDO		

#### 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 A = 6 + 3j, B = 4 + 7j and C = 8 + 5j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 3}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 2 m. The resistance of the metal frame used for the cube is  $5\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12125213
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	EMMANUEL ALEJANDRO		

#### 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 A = 8 + 3j, B = 9 + 3j and C = 4 + 3j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 3}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 4 m. The resistance of the metal frame used for the cube is  $7 \,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12146394
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JOSELY ROSALES		

#### 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 A = 5 + 4j, B = 3 + 2j and C = 8 + 3j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 4}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 8 m. The resistance of the metal frame used for the cube is  $5\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12133449
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	MARIO ALBERTO GAMEZ ROQUE		

#### 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 A = 3 + 2j, B = 4 + 8j and C = 7 + 4j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 2}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 4 m. The resistance of the metal frame used for the cube is  $2\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12146385
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	RODRIGUEZ PEREZ RODOLFO		

#### 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 A = 8 + 8j, B = 5 + 3j and C = 8 + 6j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 8}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 6 m. The resistance of the metal frame used for the cube is  $6\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	10056986
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	ARTURO CORDERO ROBLES		

#### 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 A = 4 + 9j, B = 6 + 7j and C = 2 + 3j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 9}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 9 m. The resistance of the metal frame used for the cube is  $6 \,\Omega \,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12128743
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	GIBRAM ALFONSO HERNANDEZ 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 A = 9 + 7j, B = 8 + 6j and C = 8 + 6j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 7}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 9 m. The resistance of the metal frame used for the cube is  $6\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12157333
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	EDGAR RICARDO CHAIREZ VILLARRIAL		

#### 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 A = 3 + 4j, B = 7 + 8j and C = 4 + 3j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 4}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 9 m. The resistance of the metal frame used for the cube is  $5\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12154267
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JOSE FRANCISCO TOVAR JARAMILLO-		

#### 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 A = 2 + 9j, B = 4 + 9j and C = 2 + 2j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 9}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 4 m. The resistance of the metal frame used for the cube is  $6\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12142724
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	ALLISON DANIELA MACIAS HERNANDEZ		

#### 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 A = 8 + 6j, B = 7 + 4j and C = 8 + 8j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 6}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 5 m. The resistance of the metal frame used for the cube is  $2\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	10068360
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	KIM EDUARDO SANCHEZ 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 A = 9 + 2j, B = 8 + 8j and C = 8 + 4j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 2}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 2 m. The resistance of the metal frame used for the cube is  $5\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	11288180
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JORGE ANTONIO MOLINA 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 A = 6 + 9j, B = 6 + 8j and C = 6 + 2j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 9}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 8 m. The resistance of the metal frame used for the cube is  $2\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	12139200
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	CARLOS RODOLFO MENA MONTES		

#### 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 A = 5 + 6j, B = 5 + 2j and C = 9 + 7j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 6}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 2 m. The resistance of the metal frame used for the cube is  $5\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	10053330
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	JOSE FERNANDO AGUILAR COLORADO		

#### 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 A = 4 + 6j, B = 5 + 7j and C = 3 + 9j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 6}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 7 m. The resistance of the metal frame used for the cube is  $8\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	5113606
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	OBDULIA CASTANEDA 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 A = 7 + 6j, B = 7 + 7j and C = 6 + 3j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 6}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 2 m. The resistance of the metal frame used for the cube is  $3\,\Omega\,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2





Facultad de Ingeniería Mecánica y Eléctrica Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Due for	01/09/2016
Exam / Homework	Homework 1: Basics of DC and AC circuits	Registration #	10073388
Professor's name	Suresh Kumar Gadi	Marks Obtained	/10
Student's name	AXEL JAVIER RODRIGUEZ MARIN		

#### 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 A = 2 + 3j, B = 9 + 4j and C = 3 + 7j, simplify the following expressions. (2 points)

(a) 
$$A^3$$
 (b)  $\frac{A^2B}{C}$  (c)  $\frac{A}{B} + C$  (d)  $\frac{A}{\frac{B}{C} + 3}$ 

2. The side of the cube-shaped metal frame shown in Figure 1 is 2 m. The resistance of the metal frame used for the cube is  $6 \,\Omega \,\mathrm{m}^{-1}$ . Calculate the resistance between two opposite corners. (2 points)



Figure 1



Figure 2

