



# Universidad Autónoma de Coahuila

## Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

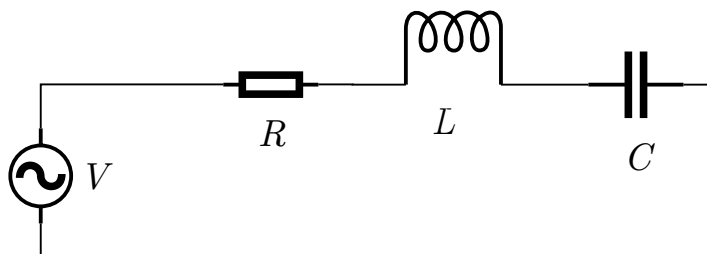
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>14137625</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>JESUS EMMANUEL MORALES MENUIOLA</b>		

## Instructions

- 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

- In the following RLC series circuit,  $R = 80\ \Omega$ ,  $L = 30\text{ mH}$ , and  $C = 600\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)



**Figure 1**

- A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - Calculate the resistance of the heater. (2 points)
  - If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
- What is the root mean square value of a fully wave rectifier? Show all the work. (3 points)



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Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	14121732
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>JOEL GERARDO AGUERO LLANAS</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 80\ \Omega$ ,  $L = 30\text{ mH}$ , and  $C = 200\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

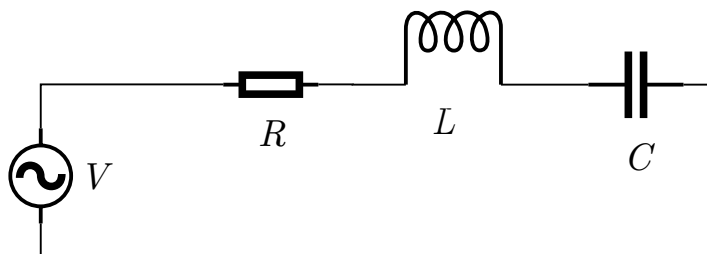


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
3. What is the root mean square value of a fully wave rectifier? Show all the work. (3 points)



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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	14124427
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>JERSON CHAVEZ ORTIZ</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 70\ \Omega$ ,  $L = 80\text{ mH}$ , and  $C = 500\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

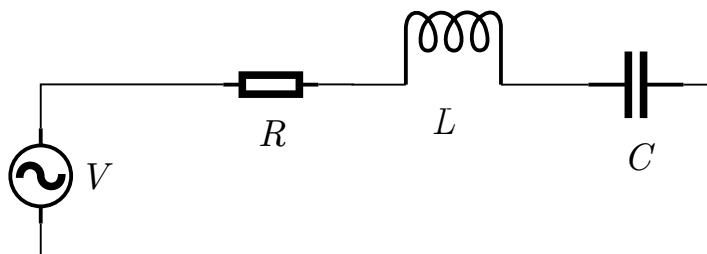


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
How are they connected? (2 points)
3. What is the root mean square value of a fully wave rectifier? Show all the work. (3 points)



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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	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. 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. In the following RLC series circuit,  $R = 30\ \Omega$ ,  $L = 80\text{ mH}$ , and  $C = 400\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

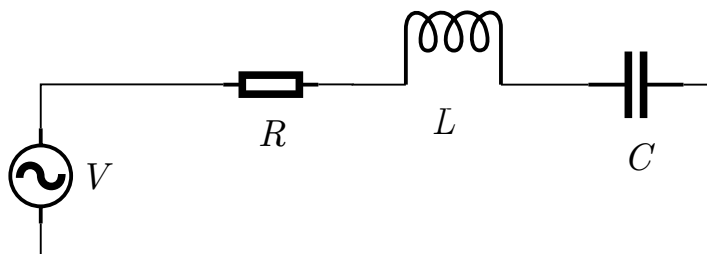


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
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Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>14156037</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>MICHAEL MURILLO MENDEZ</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 20\ \Omega$ ,  $L = 20\text{ mH}$ , and  $C = 600\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

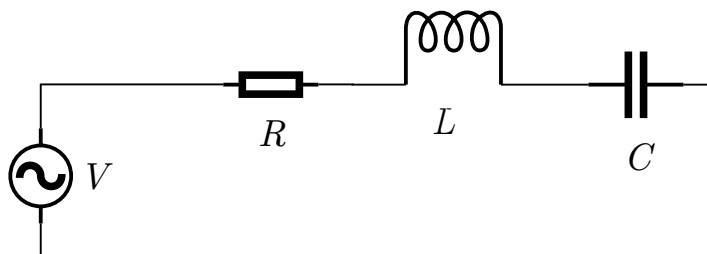


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
How are they connected? (2 points)
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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>11073892</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>JOSUE AMADOR SIFUENTES</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 20\ \Omega$ ,  $L = 30\text{ mH}$ , and  $C = 800\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

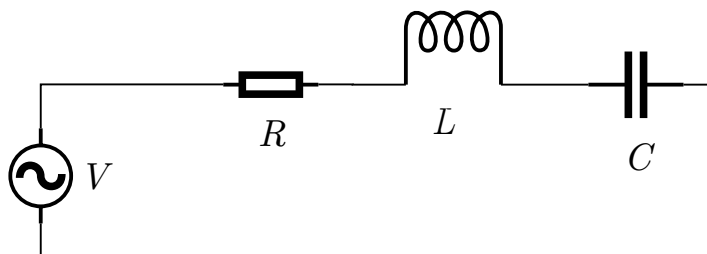


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>11268436</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>EDUARDO ZALDIVAR MARTINEZ</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 90\ \Omega$ ,  $L = 40\text{ mH}$ , and  $C = 200\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

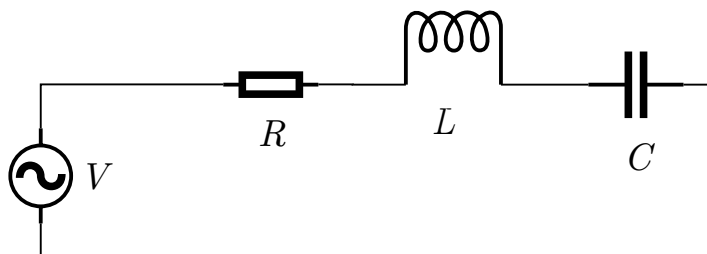


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
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Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	14140390
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>LUIS DAVID MARENTES REYES</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 80 \Omega$ ,  $L = 40 \text{ mH}$ , and  $C = 500 \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

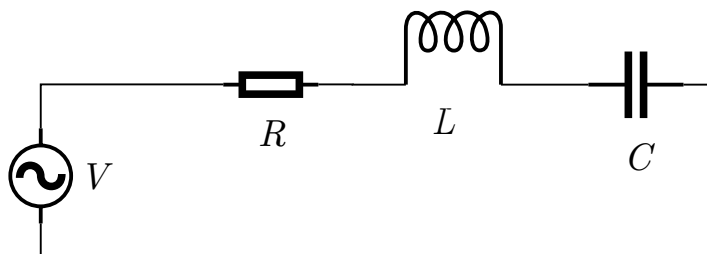


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>12068799</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>JESUS ANTONIO ROBLESREYES</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 20\ \Omega$ ,  $L = 40\text{ mH}$ , and  $C = 800\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

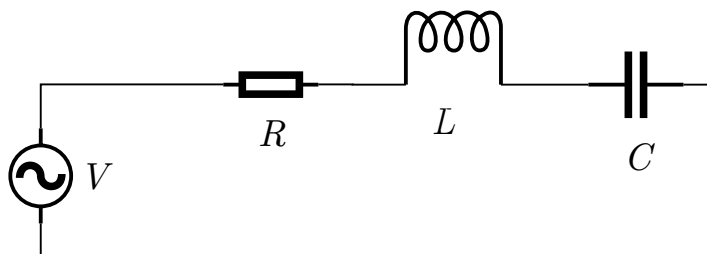


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
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Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	14150725
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>LILIANA VERA GLZ</b>		

## Instructions

- 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

- In the following RLC series circuit,  $R = 50 \Omega$ ,  $L = 50 \text{ mH}$ , and  $C = 600 \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

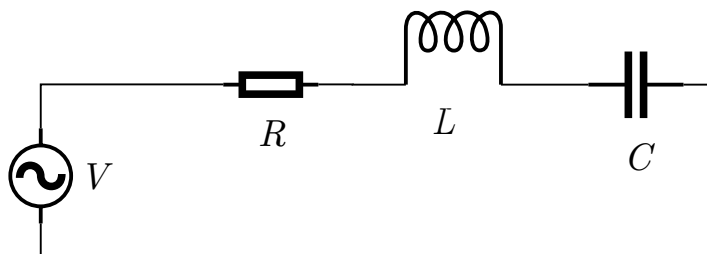


Figure 1

- A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - Calculate the resistance of the heater. (2 points)
  - If two heaters are connected in series, what is the power consumed by each heater? (2 points)
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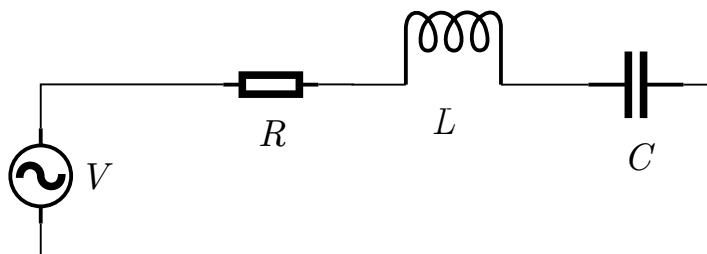
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>14125016</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>DAVID OTHONIEL SALDIVAR PEREZ</b>		

## Instructions

- 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

- In the following RLC series circuit,  $R = 90\ \Omega$ ,  $L = 80\text{ mH}$ , and  $C = 400\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)



**Figure 1**

- A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - Calculate the resistance of the heater. (2 points)
  - If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
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Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>1205596</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>ALBERTO VAZQUEZ MEDINA</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 60\ \Omega$ ,  $L = 30\text{ mH}$ , and  $C = 500\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

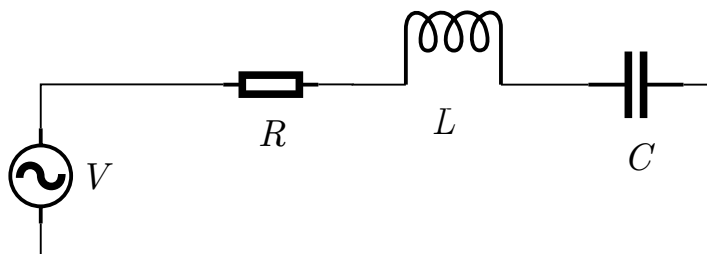


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
How are they connected? (2 points)
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## Facultad de Ingeniería Mecánica y Eléctrica

Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>12666518</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>SAMUEL ROSAS GONZALEZ</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 40\ \Omega$ ,  $L = 60\text{ mH}$ , and  $C = 600\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

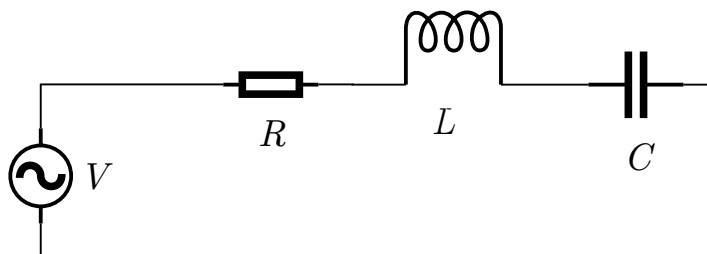


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
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Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>12064655</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>EDSON ORLANDONAVARRO RAMIREZ</b>		

## Instructions

1. 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. In the following RLC series circuit,  $R = 40\ \Omega$ ,  $L = 70\text{ mH}$ , and  $C = 500\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

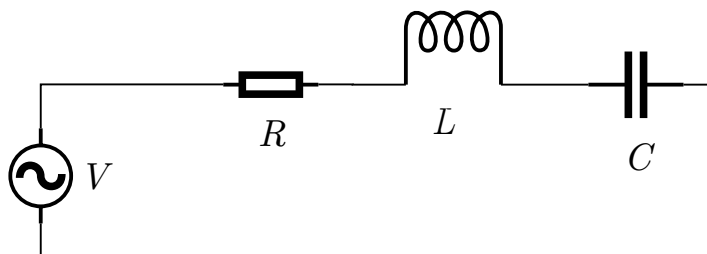


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
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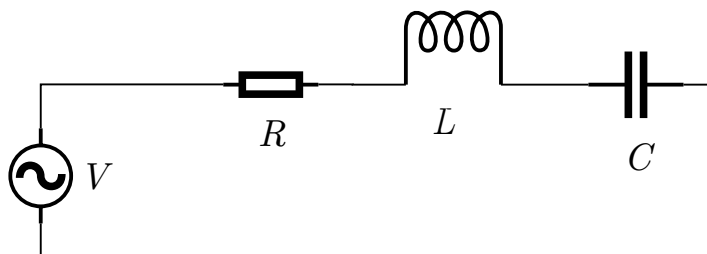
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>11126870</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>JUAN GAEL GONZALEZ RODRIGUEZ</b>		

## Instructions

- 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

- In the following RLC series circuit,  $R = 80 \Omega$ ,  $L = 20 \text{ mH}$ , and  $C = 400 \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)



**Figure 1**

- A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - Calculate the resistance of the heater. (2 points)
  - If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
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Unidad Torreón

Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	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. 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. In the following RLC series circuit,  $R = 60\ \Omega$ ,  $L = 60\text{ mH}$ , and  $C = 700\ \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)

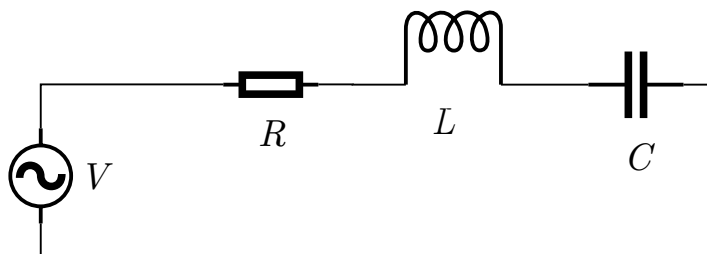


Figure 1

2. A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - (a) Calculate the resistance of the heater. (2 points)
  - (b) If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - (c) If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job?  
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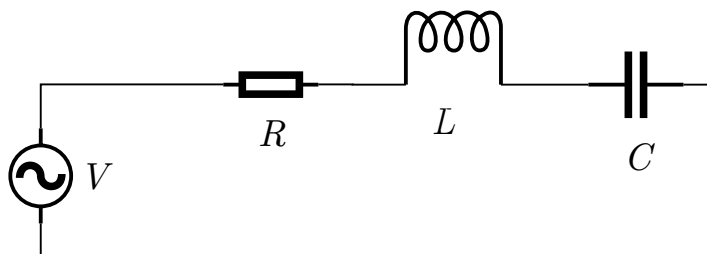
Subject	Circuit analysis II	Group	5A
Degree	Electrical engineering	Date	06/12/2016
Exam / Homework	Exam (Extraordinary)	Registration #	<b>14629184</b>
Professor's name	Dr. Suresh Kumar Gadi	Marks Obtained	____ / 10
Student's name	<b>JOSE WALDO QUINTANA ARANDA</b>		

## Instructions

- 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

- In the following RLC series circuit,  $R = 80 \Omega$ ,  $L = 30 \text{ mH}$ , and  $C = 400 \mu\text{F}$ . Calculate the resonant frequency for the circuit. (10 point)



**Figure 1**

- A pure resistive heater of 500 W is connected to the mains of 120 V at 60 Hz.
  - Calculate the resistance of the heater. (2 points)
  - If two heaters are connected in series, what is the power consumed by each heater? (2 points)
  - If a heat equivalent to 750 W is required, what are the minimum numbers of heaters required to do the job? How are they connected? (2 points)
- What is the root mean square value of a fully wave rectifier? Show all the work. (3 points)