

DAILY ASSESSMENT FORMAT

Date:	5 JUNE 2020	Name:	HARSHITHA H
Course:	ELECTRICAL NETWORK THEORY	USN:	4AL18EC020
Topic:	Online open source circuit simulation: 1.Series RLC 2.Parallel RLC 3.RL and RC series circuit frequency response	Semester & Section:	IV SEM & A SECTION
Github Repository:	harshithah		

FORENOON SESSION DETAILS

Image of session

The image shows two screenshots of a web browser displaying educational content from electronics-tutorials.ws.

Top Screenshot: Series RLC Circuit

The page title is "Series RLC Circuit". It features a circuit diagram of a series RLC circuit with a resistor (R), inductor (L), and capacitor (C) connected in series to an AC voltage source $V_m \angle \theta$. The current is labeled I .

Text on the page: "Firstly, let us define what we already know about series RLC circuits."

- Inductive reactance: $X_L = 2\pi f L = \omega L$
- Capacitive reactance: $X_C = \frac{1}{2\pi f C} = \frac{1}{\omega C}$
- When $X_L > X_C$ the circuit is Inductive
- When $X_C > X_L$ the circuit is Capacitive
- Total circuit reactance = $X_T = X_L - X_C$ or $X_C - X_L$
- Total circuit impedance = $Z = \sqrt{R^2 + X_T^2} = R + jX$

Bottom Screenshot: Admittance Triangle for a Parallel RLC Circuit

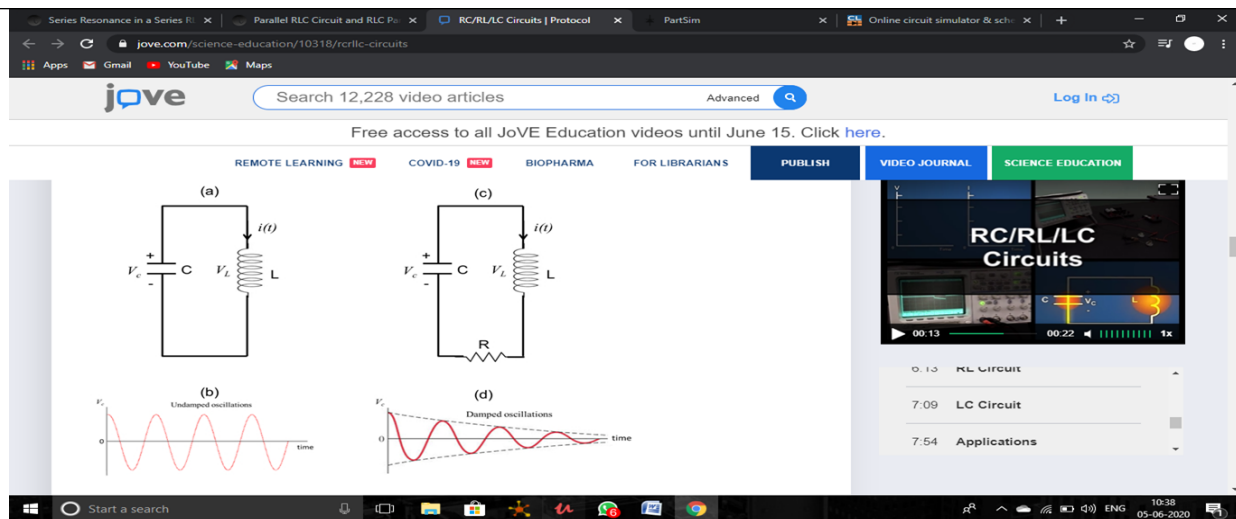
The page title is "Admittance Triangle for a Parallel RLC Circuit". It explains that an admittance triangle has a horizontal conductance axis (G) and a vertical susceptance axis (jB).

Two triangles are shown:

- Impedance Triangle:** A right-angled triangle with hypotenuse Z (impedance), horizontal side R (resistance), and vertical side X (reactance). The angle between R and Z is θ .
- Admittance Triangle:** A right-angled triangle with hypotenuse Y (admittance), horizontal side G (conductance), and vertical side B (susceptance). The angle between G and Y is θ .

Text on the page: "Now that we have an admittance triangle, we can use Pythagoras to calculate the magnitudes of all three sides as well as the phase angle as shown. from Pythagoras"

$$Y = \sqrt{G^2 + (B_L - B_C)^2}$$



Report –

ELECTRICAL NETWORK THEORY

TOPICS COVERED:

1. Online open source circuit simulation:

Series RLC:

- Inductance reactance against frequency
- Capacitance reactance against frequency
- Series resonance frequency
- Impedance in a series resonance circuit
- Series RLC circuit at resonance
- Series current circuit at resonance
- Phase angle of series resonance circuit
- Bandwidth of series resonance circuit
- Bandwidth of series RLC resonance circuit

Parallel RLC:

- Phasor diagram
- Current triangle for parallel RLC circuit
- Impedance
- Admittance
- Conductance
- Susceptance
- Admittance triangle

RL and RC series circuit frequency response

Date:5 JUNE 2020	Name:HARSHITHA H
Course: PYTHON	USN: 4AL18EC020
Topic: Application 10:Project exercise on building a Geocoder web service	Semester & Section: IV SEM & A SECTION

AFTERNOON SESSION DETAILS

Image of session

The image displays three sequential screenshots of a Udemy course interface for 'The Python Mega Course'. The first screenshot, titled '269. Student Project - How The Output Should Look Like', shows a web browser displaying a table with columns 'ID', 'Address', 'Name', and 'Employees'. The table contains five rows of data. The second screenshot, titled '270. Solution, Part 1', shows a code editor with HTML and CSS code for a web form. The third screenshot, titled '271. Solution, Part 2', shows a code editor with Python code for a Flask application that handles file uploads and geocoding requests. Each screenshot includes a navigation bar at the bottom with links for 'Course content', 'Overview', 'Q&A', 'Bookmarks', and 'Announcements'.

269. Student Project - How The Output Should Look Like

ID	Address	Name	Employees
1	2009 21st St San Francisco CA 94114 USA	Madeira	8
2	725 Dolores St San Francisco CA 94119 USA	Bready Shop	15
3	332 Hill St San Francisco California 94114 USA	Super River	25
4	3995 23rd St San Francisco CA 94114 USA	Ben's Shop	10
5	1006 Sanchez St San Francisco California USA	Sanchez	12

270. Solution, Part 1

```

1 <!DOCTYPE html>
2 <html lang="en">
3 <title> Super Geocoder </title>
4 <head>
5 <link href="../static/main.css" rel="stylesheet">
6 </head>
7 <body>
8 <div class="container">
9 <div>
10 <div>Please upload your CSV file. The values containing addresses should be in a column named (address/addr or <code>address/addr</code>).
11 <form action="{url_for('success_table')}}" method="POST" enctype="multipart/form-data">
12 <input type="file" accept=".csv" name="file" />
13 <button type="submit"> Submit </button>
14 </form>
15 </div>
16 <div class="output">
17 <div>{{textsafe}}
18 </div>
19 </div>
20 </body>
21 </html>

```

271. Solution, Part 2

```

1 from flask import Flask, render_template, request, send_file
2 from geopy.geocoders import Nominatim
3 import pandas
4
5 app = Flask(__name__)
6
7 @app.route("/")
8 def index():
9     return render_template("index.html")
10
11 @app.route("/success_table", methods=['POST'])
12 def success_table():
13     if request.method == 'POST':
14         file = request.files['file']
15         ge = Nominatim()
16         df = pandas.read_csv(file)
17         df[['latitude']] = df[['coordinates']].apply(lambda x: x.latitude if x != None else None)
18         df[['longitude']] = df[['coordinates']].apply(lambda x: x.longitude if x != None else None)
19         df.to_csv("uploads/geocoded.csv", index=False)
20         return render_template("index.html", text=send_file("uploads/geocoded.csv", as_attachment=True))
21
22 @app.route("/download_file")
23 def download():
24     return send_file("uploads/geocoded.csv", attachment_filename="yourfile.csv", as_attachment=True)
25
26 if __name__ == "__main__":
27     app.run(debug=True)

```

Report –

PYTHON:

Application 10. Project exercise on building a Geocoder Web service:

- **Solutions: Part 1**
Part 2