

Question No. 1

Marks: 100

Construct a software system by **applying** object oriented programming paradigm to cater for multiple RLC circuits which could either be connected in series or parallel. For each such circuit data, about the values for R, L, C, frequency and whether it is a series or parallel circuit, can be read either from a file or asked from the user. One of these values must be your rollnumber. For every circuit, the system should calculate the complex value as well as magnitude and phase angle for

- i. Equivalent impedance
- ii. Resonant frequency
- iii. Individual and Total current iv. Individual and total voltage
- v. Power for every component