|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Parallel RLC | | Series RLC | |
| Characteristic Equation: | | Characteristic Equation: | |
| Natural response | Step response | Natural response | Step response |
| Over-damped |  |  |  |  |
| Under-damped |  |  |  |  |
| Critically damped |  |  |  |  |

Note:

+ : Over-damped

+ : Under-damped

+ : Critically damped

For the case of Over-damped and Under-damped, there are two roots: v

Especially, in case of Under-damped

For the case of Critically damped, the root is: