BSc thesis defense – set of questions for exam

1. Formulate Kirchhoff's equations and write them for the particular circuit
2. Nodal description of the circuit
3. Mesh description of the circuit
4. Resonance phenomena in electrical circuit
5. The circuit with non-sinusoidal excitation - phenomena
6. Powers in electrical circuits
7. 3-phase circuits
8. Transient phenomena in RLC circuits
9. Commutation laws in electrical circuits
10. Electrical filters
11. Frequency characteristics of electrical circuits
12. 2-port networks and their description
13. Operational amplifier and its applications in electrical engineering
14. Stability of electrical systems
15. Formulation of Maxwell equations
16. Methods of electrical capacity calculation
17. Superposition principle and its application