

1	Describe the Laws of Thermodynamics.	№1
2	Describe Thermodynamic Potentials.	№1
3	Explain operators and inverse operators, the uncertainty principle.	№1
4	Explain the principle of superposition, matrices.	№1
5	Describe schrödinger equation, flux density, linear oscillator, potential box, the transmission coefficient.	№1
6	Explain energy and momentum	№1
7	Explain and describe angular momentum, eigenvalues and eigen functions, parity states.	№1
8	Describe the motion in a centrally symmetric field.	№1
9	Describe spherical coordinates, decomposition in plane waves.	№1
10	Explain transformation matrices, matrix density.	№1
11	Explain and describe Conductors.	№1
12	Explain and describe Semiconductors.	№1
13	Explain and describe Isolators.	№1
14	Explain Electrostatic Fields.	№1
15	Explain Gravitational Fields.	№1
16	Describe Lorentz Force.	№2
17	Describe fields in a Medium.	№2
18	Explain Gauss's Law for Magnetism.	№2
19	Explain Gauss's Law for Electric Fields.	№2
20	Decscribe dispersion of Light.	№2
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25	Describe exchange energy and ferromagnetism.	№2
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27	Describe Maxwell's Equations.	№2
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29	Explain and describe Paramagnetism.	№2
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32	Explain and describe emission and absorption of radiation.	№3
33	Explain and describe paradoxes in quantum mechanics.	№3
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39	Describe Compton Scattering, the formation of electron-positron pairs.	№3
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58	Describe and explain Quantum Chromodynamics.	№3
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