

Al-Nahrain University

Subject: Atomic physics

College of Science

Year: third year / 1st semester

Department of Physics

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	Topic Details
1	Introduction to the atomic ,atomic mass ,Avogadro number
2	Determination of e/m for the cathode rays
	Some properties of electromagnetic radiation
3	Black body radiation
4	Plank radiation law
5	Hydrogen atom
6	Behr's theory
7	motion Hydrogen atom , selection rules of Hydrogen atom
8	Elliptic orbits of hydrogen atom
9	Optical spectral and electronic structure, Optical spectral series
10	Vector model of the atom
11	Orbital angular momentum, electron spin, total angular momentum vector
12	Magnetic quantum number
13	Pauli's exclusion principles
14	Distribution of electrons in atom ,spectral notation
15	Spectrum of sodium atom
16	The Zeeman effect, explanation of the normal The Zeeman effect
17	The Lande g factor
18	The Anomalous Zeeman effect
19	Fine structure of Hydrogen energy level
20	Spectra of two- electron atom

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