Transport properties of the fully ionized plasma in the first Born approximation of the linear response theory.

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The method of the Chebyshev polynomial expansion of the Fermi distribution functions, previously used for treatment of electron-electron scattering in ultra-strong degeneracy and slow degeneracy regions, is applied to the case of an arbitrary degeneracy. Interpolation formulas for electron-electron and electron-ion correlation functions in the wide temperature-density region are suggested. On the base of the linear response theory in the formulation of the relevant statistical operator method the behavior of the electrical conductivity, the heat conductivity and the thermopower of the fully ionized plasma is investigated. The applicability of the method to the partly ionized plasma is discussed.