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## Calculation the energy of four electron system have (Z=10-12)

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**Abstract :** The aim from this research calculate the total energy and correlation energy of some ions have four as  $(Ne^{+6}, Na^{+7} \text{ and } Mg^{+8})$  which have (Z=10-12) using Hartree - Fock approximation.

**Keywords**: Hartree-Fock wave function – Hamiltonianoperator correlation energy – four electron system.

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