

## Quiz on Chapter 7

1. which energy does the variational method help to estimate?
2. Does the variational method give a lower or upper bound on this energy?
3. If a trial wavefunction has a negative expectation value of energy, can we conclude that there is a bound state? If the expectation value is positive, can we conclude that it is not bound?
4. Write down the Hamiltonian for the Helium atom
5. Write down the Hamiltonian for the Hydrogen molecular ion.