

## Revision summary

“Old” ideas – expect you to know from PHYS 20101

- probabilities in quantum mechanics
- solving TISE and TDSE
- separation of variables
- orthogonality of eigenfunctions
- commutators and incompatible observables
- energy spectra of:  $\infty$  square well; harmonic oscillator; H atom

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“New” ideas

- tunnelling probabilities (general barriers)
- first-order perturbation theory
- spin and other two-state systems (Pauli matrices, eigenvectors)
- general features of quantised angular momenta (eigenvalues; addition rules; raising and lowering operators)
- magnetic moments and interactions with magnetic fields
- entanglement

Look at Examples 7 for practice in describing or explaining these