

Quantum Mechanics - Solutions

Q66 continued

$$\cancel{E} = \frac{-(Ze^2)^2 m}{2\hbar^2 (l+1/2)^2}$$

so now $(Ze^2) \rightarrow B$

$$l \rightarrow \mu$$

so finally

$$E = -\frac{m B^2}{2\hbar^2 (N+\mu+1)^2} \quad \text{where } N = \nu = 0, 1, 2$$