CHEM 2C, Assignment 2, posted 4/9, due 4/16, in class

For this assignment, present answers to problems:

1. 1.22 (requires 1.21). Degeneracy means that for different values of n_1 and n_2, the energies can be the same. For example, in 1.21, the value of the energy for the cases $n_1 = 1$ and $n_2 = 2$ is the same as the value of the energy for the case when $n_1 = 2$ and $n_2 = 1$. These are called degenerate states.
2. 1.24
3. 1.28
4. 1.30
5. 1.32 (requires 1.31)
6. 1.36
7. 1.38
8. 1.42
9. 1.44
10. 1.48
11. 1.50
12. 1.52
13. 1.54
14. 1.56
15. 1.58
16. 1.60
17. 1.62 (explain on the basis of the choice of quantum numbers)

Please remember to present all steps toward the solution.