Exercise 1

Total Points = (17.5/20). Feel free to clarify things with me (via email/in person)

Question 1 : Physical Meaning of J

Correct, (3/3)

Question 2 : Periodic Boundary Conditions

Periodic BC implies the spins at the edges being neighbors, so you basically have a circular chain instead of a long rod. I give you 0.5 because PBC is a consequence of all spins having equal number of neighbors. (0.5/1)

Question 3.1 : Relevant dimensionless ratios

Correct, (1/1)

Question 3.2 : Dependence of $\langle m \rangle$ on h

Your simulation results seem to be fine, however, the finite N curve is totally wrong. (-0.5) The actual dependence on m on h and N looks like :

$$m = \frac{sinh(\beta h)}{\sqrt{sinh^2(\beta h) + e^{-4\beta J}}} \left(\frac{1 - (\lambda_- / \lambda_+)^N}{1 + (\lambda_- / \lambda_+)^N} \right)$$

Total = 2/2.5

Question 3.2 : Dependence of $\langle m \rangle$ on N

You didn't compare the simulation results to either the finite N case or the thermodynamic limit. (-1). You could have seen a gradual convergence of the magnetization to 1, had you used (I think, a higher temperature, or the brute force method instead of accept-reject, but it is ok.
Total = 1.5/2.5

Question 4 : The code

I think the idea behind this exercise was to do a crude estimate of the expectation value of the magnetization (by generating random configurations, computing the magnetization, and just taking the Boltzmann average).
However, it is okay that you did accept-reject. -0.5 for having no comparison to the analytical curves. Total = 9.5/10