

In the name of God

Department of Physics
Shahid Beheshti University

ADVANCED TOPICS IN STATISTICAL PHYSICS II

Exercise Set 2

(Date Due: 1395/12/20)

1. Normal mode for three bodies in 2-Dimension: Compute the natural vibrational frequency for three objects with different masses in 2D explained in class.
2. Compute dispersion relation for a one dimensional lattice with two objects in each unit cell.
3. Solve exercise of chapter 7 (R. K. Pathria): Q4, Q5, Q6, Q9, Q10, Q14, Q21, Q26, Q31, Q37.

Good luck, Movahed
