

Examples, Solid-state Physics

June, 2019

1 Free electron model and Fermi energy

Explain *briefly* the Fermi-Dirac distribution and the Fermi energy for free electron model.

2 Phonon

Explain *briefly* what is meant by “phonon”.

3 Reciprocal lattice

Explain *briefly* what is meant by “reciprocal lattice”.

4 Brillouin Zone

Explain *briefly* what is meant by “Brillouin zone”.

5 Band structure

Explain *briefly* what is meant by “electronic band structure”.

6 Hole

Explain *briefly* what is meant by a “hole” in semiconductor physics.