111-2 普通物理學甲下 期中考開書考

一張含有 圖表 的圖片

自動產生的描述

Q2. What is dielectric?

Dielectric is a sort of insulators. Usually used in capacitance, storing electricity.

Q3. What is the difference between dielectric and insulator?

Dielectric is a sort of insulators, the most significant difference between the two material is that: molecules in dielectric can be polarized in electric field.

If the molecules can be polarized in the electric field, then the nuclear and electrons were separate into the longest distant while the degree wouldn’t cause interaction between molecules.

If this phenomenon happens, the electoral energy is greater than the one that the dielectric isn’t be placed in the electric field. Therefore, when the dielectric is move away from the electric field, molecules in dielectric will back to the original state, the electric energy would be released.

Q4. Why does the study of dielectric properties concern storage and dissipation of electric energy in materials?

The original purpose of dielectric is to accept and release electric energy, therefore, the storage must be concerned.

Dissipation is also a focus of study in dielectric. The source of dissipation is the process of electrons recover from the electric field. In this process, part of the energy used to do work on the electrons. The energy is thus dissipated.

Q5.

By capacitance of parallel plane,

Consider the case of capacitance in series:

Consider the case of parallel:

If , the parallel circuit is greater than series.

If , the two is the same.

If , series is greater than parallel.