

Fundamentals of Nanoelectronics, Basic Concepts Unit 4
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L4.1 Quiz
Answers

4.1. Introduction

4.1a If everything is at the same temperature, the possibility of extracting energy from a battery and dissipating energy into the contacts is forbidden by

- (a) the law of conservation of energy
- (b) the second law of thermodynamics
- (c) the non-zero resistance associated with ballistic conductors
- (d) law of conservation of charge
- (e) none of the above, the process is NOT forbidden

4.1b If everything is at the same temperature, the possibility of extracting energy from the contacts and charging up a battery is forbidden by

- (a) the law of conservation of energy
- (b) the second law of thermodynamics
- (c) the non-zero resistance associated with ballistic conductors
- (d) law of conservation of charge
- (e) none of the above, the process is NOT forbidden