

Bring to the exam:

1. One 882-E Scantron.
2. A number 2 pencil.
3. One double-sided 8.5 x 11 inch page of notes.
4. A calculator.

Expect to see everything listed below on the third exam. To prepare yourself review your class notes, the assigned homework, and reread each of these topics in your text.

#### Chapter 15 (6 questions)

Specific heat capacity

Internal energy

Thermal expansion and contraction

Water's thermal expansion and contraction

#### Chapter 22 (8 questions)

Charging an object by friction

Charge polarization

The electric force,  $F_{\text{electric}} = (kq_1q_2)/d^2$ , also known as Coulomb's law

Electric fields

#### Chapter 23 (7 questions)

Circuits

$PE_{\text{electric}} = qV$

Power:  $P = IV$

Anything about electrons moving in an electric circuit.

Circuit breakers and fuses

#### Chapter 24 (3 questions)

Magnets

Magnetic forces

Magnetic fields

Electrons moving in magnetic fields

Magnetic domains

#### Chapter 33 (6 questions)

Ions and isotopes

X-rays, gamma-rays, alpha and beta transmutations

Uranium

Radioactive decay

Half-lives

Carbon dating