Exercise 1: *Answer the following questions by referring to the reading passage.*

1. What's the property of molecules in a solid object?

   ....
   ....

2. What's internal energy of a matter?

   ....
   ....

3. What happens when frictional forces do work?

   ....
   ....

4. In your own words, define the efficiency of a machine?

   ....
   ....

5. What is heat?

   ....
   ....

Exercise 2: *Contextual reference* (Dealing with words in **bold** type*)*

1. **"it"** in line 6 refers to
   a. the motion
   b. the friction

2. **"Them"** in line 12 refers to
   a. the affected surface molecules of the keys
   b. the affected surface molecules of the keys and the floor

3. **"These"** in line 16 refers to
   a. the affected molecules
   b. the nearest neighboring molecules

4. **"Its"** in line 24 refers to
   a. of the molecule
   b. of the matter

5. **"that energy"** in line 26 refers to
   a. the key's original kinetic energy
   b. the floor's kinetic energy

6. **"The heated gases"** in line 33 refers to
   a. potential energy in gasoline and fuel
   b. random kinetic energy of the molecules

7. **"some"** in line 38 refers to
   a. some of the energy released from the chemical bonds
   b. the energy that spreads out

8. **"it"** in line 56 refers to
   a. nothing
   b. the connection between work done by friction and internal energy and heat

Exercise 3: *Fill in the blanks with words/phrases from the reading text*

1. Friction stops when motion stops but cannot restore the ………… ………….of the keys tossed along the floor as gravity can.

2. Frictional forces don't store energy in the form of……………. …………….

3. All molecules in a …………..bounce around in all directions.

4. ………….. ……………of matter equals to the sum of the kinetic energy and potential energy of all of its molecules plus some other forms of energies.

5. A raise in ……………of a matter results from the faster movement of its molecules.

6. Some of ……………. ……………..done frictional forces helps increase the internal energy of matter.

7. Much of the energy released from the ……………… ……………..of gasoline or diesel fuel in a car's engine does no useful work.

8. …………….. ………………of a car's engine is defined by the percent of the energy released by the fuel that goes into work on the car.