

Period 15 Exercise Answers

E.1 Solar energy originates deep within the Sun as

- a) nuclear fission energy.
- b) nuclear fusion energy.
- c) chemical energy.
- d) gravitational energy.
- e) None of the above is correct.

E.1 = b

E.2 The surface temperature of the sun is about

- a) 60 °C
- b) 600 °C
- c) 6,000 °C
- d) 1,000,000 °C
- e) 16,000,000 °C

E.2 = c

E.3 The percent of solar energy incident on the Earth, relative to the total amount of solar energy emitted by the Sun, is about

- a) 50%
- b) 14%
- c) 1%
- d) 0.000000045%

E.3 = d

E.4 About 1.52×10^{22} joules of solar energy is incident on the Earth each day. Of this large amount of energy, how much escapes back into space as either visible light or infrared radiation?

- a) none (0%)
- b) about 30%
- c) about 50%
- d) about 70%
- e) all of it (100%)

E.4 = e

E.5 Which of the following pair of gasses is most abundant in the Earth's atmosphere?

- a) oxygen and carbon dioxide
- b) oxygen and nitrogen
- c) ozone and nitrogen
- d) carbon dioxide and nitrogen
- e) None the above is correct.

E.5 = b

E.6 The protective ozone layer lies within which region of the atmosphere?

- a) Troposphere (up to an altitude of about 12.5 km)
- b) Stratosphere (between 12.5 km and 30 km)
- c) Mesosphere (between 30 km and 80 km)
- d) There is no ozone layer.

E.6 = b

E.7 Which of the following sources of energy are NOT derived from solar energy?

- a) wind power
- b) water power
- c) geothermal power
- d) fossil fuels
- e) All of the energy sources listed above are derived from solar energy.

E.7 = c

E.8 Which of the following is NOT an example of biomass?

- a) alcohol distilled from fermented corn
- b) firewood
- c) dried animal waste
- d) uranium
- e) ALL of the above are examples of biomass.

E.8 = d

Period 15 Answers

E.1 = b

E.2 = c

E.3 = d

E.4 = e

E.5 = b

E.6 = b

E.7 = c

E.8 = d