It Just Keeps Going and Going

WEEP Exam Helium Version

**Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

\_\_\_\_ 1. Power can be described as

|  |  |  |  |
| --- | --- | --- | --- |
| a. | the rate of energy transfer. | c. | the force exerted over a given distance. |
| b. | the change in kinetic energy. | d. | the ratio of work output to work input. |

\_\_\_\_ 2. A gymnast falls from a height onto a trampoline. For a moment, both the gymnast’s kinetic energy and gravitational potential energy are zero. How is the gymnast’s mechanical energy stored for that moment?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | rest energy | c. | elastic energy |
| b. | chemical energy | d. | thermal energy |

\_\_\_\_ 3. Which is an example of heating through convection?

|  |  |
| --- | --- |
| a. | warm air rising toward the ceiling |
| b. | touching a hot stove |
| c. | using a greenhouse to grow plants in winter |
| d. | The sun heats up the inside of a car |

\_\_\_\_ 4. What is the specific heat of a substance that requires 99,100 J of thermal energy to heat 3.47 kg of this substance from 11C to 45C?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 634 J/kg·K | c. | 695 J/kg·K |
| b. | 2600 J/kg·K | d. | 840 J/kg·K |

**sad**

**Answer Section**

**MULTIPLE CHOICE**

1. ANS: A

Rationale

a. correct answer

b. work

c. work

d. efficiency

PTS: 1

2. ANS: C

The deformation of the trampoline stores the energy, which is returned to the gymnast as she bounces off the trampoline and into the air.

PTS: 1 DIF: Bloom's Level 2 REF: pp. 291-292

NAT: B.5 | B.6

3. ANS: A

Heating through convection occurs through the circulation of warm liquids and gases.

PTS: 1 DIF: Bloom's Level 3 REF: p. 317

NAT: B.6

4. ANS: D

99,100 J = 3.47 kg · C · ()

C = 840 J/kg·K

PTS: 1 DIF: Bloom's Level 3 REF: p. 318

NAT: B.6