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Question 1. The  $PV = \text{constant}$  implies that

- A.  $d(PV) = 0$
- B.  $dT = 0$
- C.  $dE = 0$
- D. All of the above

Question 2. The ideal gas law describes

- A. The momentum exchange from collisions between molecules as a function of temperature
- B. The force exerted by collisions between molecules and the walls where the gas is contained
- C. How fast gas molecules move and collide under different temperatures
- D. All of the above

Question 3. The term  $P \cdot V$  in the ideal gas law has units of

- A. Newton
- B. Joule
- C. Pascal
- D.  $\text{m}^3$

Question 4. An adiabatic process exchanges

- A. zero pressure with the environment
- B. zero temperature with the environment
- C. zero volume with the environment
- D. zero heat with the environment

Question 5. The Joule's law describes

- A. how fast the pressure increases when temperature decreases
- B. how fast the temperature increases when pressure decreases
- C. the relationships between power of the source providing the heat, time and temperature
- D. none of these on the list

Question 6. The specific heat of two different liquids at the same temperature and pressure are

- A. likely different
- B. likely the same

Question 7. Two beakers contain two liquids of the same mass. We heat them up to the same final temperature, without any phase changes occurring. The liquid that overall heats up faster has

- A. greater specific heat than the other
- B. smaller specific heat than the other
- C. this has nothing to do with specific heat

Question 8. Heat is a form of energy that relates to the

- A. the energy flow from hot to cold
- B. the energy flow from cold to hot
- C. the energy flow between same temperatures

Question 9. When a body of water is evaporating then its temperature is

- A. rising
- B. dropping
- C. no change

Question 10. A very fast gas decompression under a constant volume results in a sudden temperature

A. drop

B. rise

C. no effect on temperature