Unit 1 - How to access the portal

Week 0 : Assignment

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2018-08-06, 23:59 IST.

1) Specific volume is an intensive property. Following statement is

- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers:
True

1 point

2) Consider the following equations:

3A + 6B → 3D  \( \Delta H = 403 \text{ kJ/mol} \)
E + 2F → A  \( \Delta H = -105.2 \text{ kJ/mol} \)
C → E + 3D  \( \Delta H = +64.8 \text{ kJ/mol} \)

the heat of reaction of following equation

\( F + \frac{1}{2} C \rightarrow A + B + D \)

- +47.0 kJ/mol
- -87.4 kJ/mol
- 362.8 kJ/mol
- -362.8 kJ/mol

No, the answer is incorrect.
Score: 0
Accepted Answers:
-87.4 kJ/mol

1 point

3) If enthalpy change (\( \Delta H \)) for a reaction is -ve. Then the reaction is endothermic. Following statement is:

- True

No, the answer is incorrect.
Score: 0
Accepted Answers:
-87.4 kJ/mol

1 point
4) For the process to occur under adiabatic condition, the correct condition is:

- $\Delta T = 0$
- $\Delta p = 0$
- $Q = 0$
- $W = 0$

No, the answer is incorrect.
Score: 0
Accepted Answers:

5) Consider the following equation:

$$2SO_3 \rightarrow 2SO_2 + O_2$$

Initial concentration of $SO_3$ is 5 mole/l at atmospheric condition. At equilibrium condition, concentration of $SO_3$ is reduced to 3 mole/l. The value of $K_c$ (equilibrium constant) is:

- 6.75 mole/l
- 0.44 mole/l
- 1.67 mole/l
- 0.60 mole/l

No, the answer is incorrect.
Score: 0
Accepted Answers:

6) The half life period of decomposition of a compound is 50 minutes. If the initial concentration is doubled, the half life period is reduced to 25 minutes. The order of reaction is:

- 1st order
- 2nd order
- 0 order
- None of these

No, the answer is incorrect.
Score: 0
Accepted Answers:

2nd order

7) The major indoor combustion pollutants are:

- Carbon monoxide
- Polynuclear aromatic hydrocarbons (PAHs)
- Nitrogen dioxides
- All of these

No, the answer is incorrect.
Score: 0
Accepted Answers:

All of these

8) In presence of excess air, the value of equivalence ratio is:

- $< 1$
- $= 0$
9) Viscosity of liquids decreases with increase in temperature. Following statement is:  

- True
- False

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
True

10) Air is flowing over a 1m long flat plate at a rate of 10 m/s. Reynolds number and nature of flow are:  
(density = 1.125 kg/m³, viscosity = 1.81 × 10⁻⁵ kg/m.s)  

- 1 × 10⁵, Laminar
- 6.2 × 10⁵, Turbulent
- 2.3 × 10⁵, Laminar
- 5.2 × 10⁵, Turbulent

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
6.2 × 10⁵, Turbulent