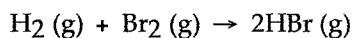


Name \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

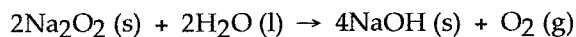
- 1) Calculate the kinetic energy in J of an electron moving at  $6.00 \times 10^6$  m/s. The mass of an electron is  $9.11 \times 10^{-28}$ g. 1) \_\_\_\_\_
- A)  $3.28 \times 10^{-14}$   
B)  $1.64 \times 10^{-14}$   
C)  $4.98 \times 10^{-48}$   
D)  $6.56 \times 10^{-14}$   
E)  $2.49 \times 10^{-48}$
- 2) Calculate the kinetic energy in joules of an automobile weighing 2135 lb and traveling at 55 mph. (1 mile = 1.6093 km, 1 lb = 453.59 g) 2) \_\_\_\_\_
- A)  $3.2 \times 10^6$       B)  $1.2 \times 10^4$       C)  $3.2 \times 10^{-6}$       D)  $2.9 \times 10^5$       E)  $5.9 \times 10^5$
- 3) The kinetic energy of a 7.3 kg steel ball traveling at 18.0 m/s \_\_\_\_\_ J. 3) \_\_\_\_\_
- A) 66      B)  $2.4 \times 10^3$       C)  $1.2 \times 10^3$       D)  $1.3 \times 10^2$       E) 7.3
- 4) Calculate the kinetic energy in joules of a 150 lb jogger (68.1 kg) traveling at 12.0 mile/hr (5.36 m/s). 4) \_\_\_\_\_
- A) 68.1      B) 365      C)  $1.96 \times 10^3$       D) 183      E) 978
- 5) Calculate the kinetic energy in joules of an 80.0 g bullet traveling at 300.0 m/s. 5) \_\_\_\_\_
- A) 80.0      B)  $1.20 \times 10^4$       C)  $3.60 \times 10^6$       D)  $3.60 \times 10^3$       E) 12.0
- 6) The kinetic energy of a 23.2-g object moving at a speed of 81.9 m/s is \_\_\_\_\_ J. 6) \_\_\_\_\_
- A) 77,800      B) 0.95      C) 145      D) 77.8      E) 1900
- 7) The kinetic energy of a 23.2-g object moving at a speed of 81.9 km/hr is \_\_\_\_\_ J. 7) \_\_\_\_\_
- A)  $1.43 \times 10^{-3}$   
B) 77.8  
C) 1900  
D) 6.00  
E) 145

- 8) The kinetic energy of a 23.2-g object moving at a speed of 81.9 km/hr is \_\_\_\_\_ kcal. 8) \_\_\_\_\_
- A)  $1.43 \times 10^{-3}$   
B) 6.00  
C) 454  
D) 0.0251  
E) 1900
- 9) A 100-watt electric incandescent light bulb consumes \_\_\_\_\_ J of energy in 24 hours. 9) \_\_\_\_\_
- A) 4.17                  B)  $8.64 \times 10^6$                   C)  $2.40 \times 10^3$                   D)  $8.64 \times 10^3$                   E)  $2.10 \times 10^3$
- 10) The  $\Delta E$  of a system that releases 12.4 J of heat and does 4.2 J of work on the surroundings is \_\_\_\_\_ J. 10) \_\_\_\_\_
- A) -16.6                  B) 12.4                  C) 16.6                  D) 4.2                  E) -8.2
- 11) The value of  $\Delta E$  for a system that performs 213 kJ of work on its surroundings and loses 79 kJ of heat is \_\_\_\_\_ kJ. 11) \_\_\_\_\_
- A) -292                  B) -134                  C) +134                  D) -213                  E) +292
- 12) Calculate the value of  $\Delta E$  in joules for a system that loses 50 J of heat and has 150 J of work performed on it by the surroundings. 12) \_\_\_\_\_
- A) -100                  B) 100                  C) +200                  D) 50                  E) -200
- 13) The change in the internal energy of a system that absorbs 2,500 J of heat and that does 7,655 J of work on the surroundings is \_\_\_\_\_ J. 13) \_\_\_\_\_
- A) -10,155                  B) 10,155                  C) -5,155                  D)  $1.91 \times 10^7$                   E) 5,155
- 14) The change in the internal energy of a system that releases 2,500 J of heat and that does 7,655 J of work on the surroundings is \_\_\_\_\_ J. 14) \_\_\_\_\_
- A) -10,155  
B)  $-1.91 \times 10^7$   
C) 5,155  
D) 10,155  
E) -5,155
- 15) The value of  $\Delta H^\circ$  for the reaction below is -72 kJ. \_\_\_\_\_ kJ of heat are released when 1.0 mol of HBr is formed in this reaction. 15) \_\_\_\_\_



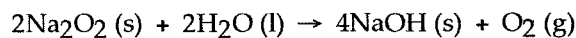
- A) 0.44                  B) 144                  C) -72                  D) 72                  E) 36

- 16) The value of  $\Delta H^\circ$  for the reaction below is  $-126 \text{ kJ}$ . \_\_\_\_\_ kJ are released when 2.00 mol of NaOH is formed in the reaction? 16) \_\_\_\_\_



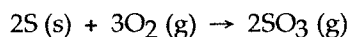
- A) 252                      B) 7.8                      C)  $-126$                       D) 63                      E) 3.9

- 17) The value of  $\Delta H^\circ$  for the reaction below is  $-126 \text{ kJ}$ . The amount of heat that is released by the reaction of 25.0 g of  $\text{Na}_2\text{O}_2$  with water is \_\_\_\_\_ kJ. 17) \_\_\_\_\_



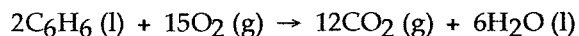
- A) 20.2                      B) 40.4                      C) 67.5                      D)  $-126$                       E) 80.8

- 18) The value of  $\Delta H^\circ$  for the reaction below is  $-790 \text{ kJ}$ . The enthalpy change accompanying the reaction of 0.95 g of S is \_\_\_\_\_ kJ. 18) \_\_\_\_\_



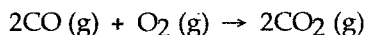
- A)  $-12$                       B)  $-790$                       C)  $-23$                       D) 23                      E) 12

- 19) The value of  $\Delta H^\circ$  for the reaction below is  $-6535 \text{ kJ}$ . \_\_\_\_\_ kJ of heat are released in the combustion of 16.0 g of  $\text{C}_6\text{H}_6 (\text{l})$ ? 19) \_\_\_\_\_



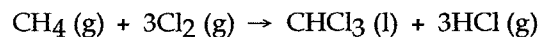
- A)  $5.23 \times 10^4$                       B)  $2.68 \times 10^3$                       C)  $-6535$                       D) 673                      E)  $1.34 \times 10^3$

- 20) The value of  $\Delta H^\circ$  for the reaction below is  $-482 \text{ kJ}$ . Calculate the heat (kJ) released to the surroundings when 12.0 g of  $\text{CO} (\text{g})$  reacts completely. 20) \_\_\_\_\_



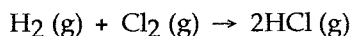
- A)  $2.89 \times 10^3$                       B) 207                      C)  $-482$                       D) 103                      E) 65.7

- 21) The value of  $\Delta H^\circ$  for the reaction below is  $-336 \text{ kJ}$ . Calculate the heat (kJ) released to the surroundings when 23.0 g of  $\text{HCl}$  is formed. 21) \_\_\_\_\_



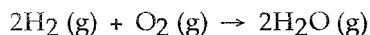
- A) 177                      B) 70.7                      C) 211                      D)  $2.57 \times 10^3$                       E)  $-336$

- 22) The value of  $\Delta H^\circ$  for the reaction below is  $-186$  kJ. Calculate the heat (kJ) released from the reaction of 25 g of  $\text{Cl}_2$ . 22) \_\_\_\_\_

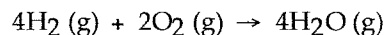


- A) 66                      B) 47                      C) 33                      D)  $5.3 \times 10^2$                       E)  $-186$

- 23) The enthalpy change for the following reaction is  $-483.6$  kJ: 23) \_\_\_\_\_

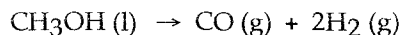


Therefore, the enthalpy change for the following reaction is \_\_\_\_\_ kJ:



- A)  $-483.6$                       B)  $2.34 \times 10^5$                       C) 483.6                      D)  $-967.2$                       E) 967.2

- 24) The value of  $\Delta H^\circ$  for the reaction below is  $+128.1$  kJ: 24) \_\_\_\_\_



How many kJ of heat are consumed when 15.5 g of  $\text{CH}_3\text{OH}(\text{l})$  decomposes as shown in the equation?

- A) 0.48                      B) 32                      C) 8.3                      D) 62.0                      E)  $1.3 \times 10^2$

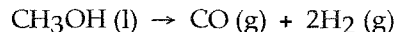
- 25) The value of  $\Delta H^\circ$  for the reaction below is  $+128.1$  kJ: 25) \_\_\_\_\_



How many kJ of heat are consumed when 5.10 g of  $\text{H}_2(\text{g})$  is formed as shown in the equation?

- A) 62.0                      B) 653                      C) 326                      D) 162                      E) 128

- 26) The value of  $\Delta H^\circ$  for the reaction below is  $+128.1$  kJ: 26) \_\_\_\_\_



How many kJ of heat are consumed when 5.10 g of  $\text{CO}(\text{g})$  is formed as shown in the equation?

- A) 0.182                      B) 23.3                      C) 62.0                      D) 8.31                      E) 162

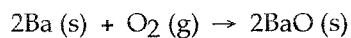
27) The value of  $\Delta H^\circ$  for the reaction below is +128.1 kJ: 27) \_\_\_\_\_



How many kJ of heat are consumed when 5.75 g of CO (g) reacts completely with hydrogen to form CH<sub>3</sub>OH (l)?

- A) 162                      B) 8.3                      C) 62.0                      D) 26.3                      E) 23.3

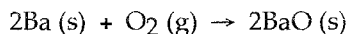
28) The value of  $\Delta H^\circ$  for the reaction below is -1107 kJ: 28) \_\_\_\_\_



How many kJ of heat are released when 5.75 g of Ba (s) reacts completely with oxygen to form BaO (s)?

- A) 46.4                      B) 23.2                      C) 96.3                      D) 26.3                      E) 193

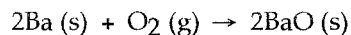
29) The value of  $\Delta H^\circ$  for the reaction below is -1107 kJ: 29) \_\_\_\_\_



How many kJ of heat are released when 5.75 g of BaO (s) is produced?

- A) 23.2                      B) 193                      C) 96.3                      D) 20.8                      E) 56.9

30) The value of  $\Delta H^\circ$  for the reaction below is -1107 kJ: 30) \_\_\_\_\_



How many kJ of heat are released when 15.75 g of Ba (s) reacts completely with oxygen to form BaO (s)?

- A) 35.1                      B) 20.8                      C) 63.5                      D) 70.3                      E) 114

31) The molar heat capacity of a compound with the formula C<sub>2</sub>H<sub>6</sub>SO is 88.0 J/mol-K. The specific heat of this substance is \_\_\_\_\_ J/g-K. 31) \_\_\_\_\_

- A) 1.13                      B) -88.0                      C) 88.0                      D)  $6.88 \times 10^3$                       E) 4.89

32) A sample of aluminum metal absorbs 9.86 J of heat, upon which the temperature of the sample increases from 23.2°C to 30.5°C. Since the specific heat capacity of aluminum is 0.90 J/g-K, the mass of the sample is \_\_\_\_\_ g. 32) \_\_\_\_\_

- A) 65                      B) 72                      C) 6.6                      D) 8.1                      E) 1.5

33) The specific heat capacity of lead is 0.13 J/g-K. How much heat (in J) is required to raise the temperature of 15 g of lead from 22°C to 37°C? 33) \_\_\_\_\_

- A) 2.0                      B)  $5.8 \times 10^{-4}$                       C) 29                      D) -0.13                      E) 0.13

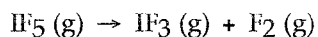
34) The temperature of a 15-g sample of lead metal increases from 22°C to 37°C upon the addition of 29.0 J of heat. The specific heat capacity of the lead is \_\_\_\_\_ J/g-K. 34) \_\_\_\_\_  
A) 1.9                      B) 29                      C) -29                      D) 0.13                      E) 7.8

35) The specific heat of bromine liquid is 0.226 J/g · K. The molar heat capacity (in J/mol-K) of bromine liquid is \_\_\_\_\_. 35) \_\_\_\_\_  
A) 707                      B) 0.226                      C) 18.1                      D) 9.05                      E) 36.1

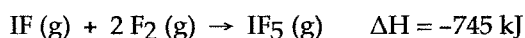
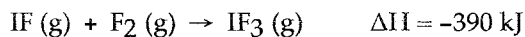
36) The specific heat of liquid bromine is 0.226 J/g-K. How much heat (J) is required to raise the temperature of 10.0 mL of bromine from 25.00°C to 27.30°C? The density of liquid bromine: 3.12 g/mL. 36) \_\_\_\_\_  
A) 16.2                      B) 5.20                      C) 10.4                      D) 300                      E) 32.4

37) The ΔH for the solution process when solid sodium hydroxide dissolves in water is 44.4 kJ/mol. When a 13.9-g sample of NaOH dissolves in 250.0 g of water in a coffee-cup calorimeter, the temperature increases from 23.0°C to \_\_\_\_\_°C. Assume that the solution has the same specific heat as liquid water, i.e., 4.18 J/g-K. 37) \_\_\_\_\_  
A) 37.8°C                      B) 37.0°C                      C) 40.2°C                      D) 24.0°C                      E) 35.2°C

38) ΔH for the reaction 38) \_\_\_\_\_

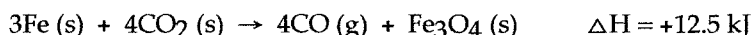
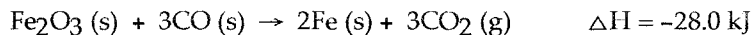


is \_\_\_\_\_ kJ, give the data below.

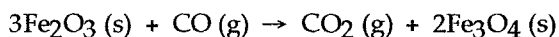


A) +35                      B) +1135                      C) -35                      D) -1135                      E) +355

39) Given the following reactions 39) \_\_\_\_\_



the enthalpy of the reaction of Fe<sub>2</sub>O<sub>3</sub> with CO

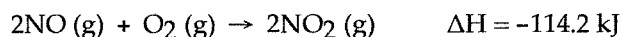


is \_\_\_\_\_ kJ.

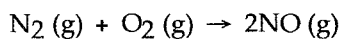
A) -15.5                      B) +109                      C) -59.0                      D) 40.5                      E) -109

40) Given the following reactions

40) \_\_\_\_\_



the enthalpy of the reaction of the nitrogen to produce nitric oxide



is \_\_\_\_\_ kJ.

A) 180.6

B) -180.6

C) 90.3

D) 47.8

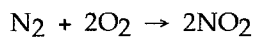
E) -47.8

41) Given the following reactions

41) \_\_\_\_\_



the enthalpy of the reaction of nitrogen with oxygen to produce nitrogen dioxide



is \_\_\_\_\_ kJ.

A) -292

B) -146

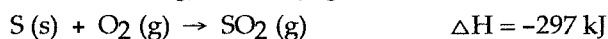
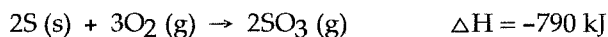
C) -68

D) 292

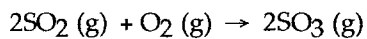
E) 68

42) Calculate  $\Delta H^\circ$  (in kJ) for reaction 3.

42) \_\_\_\_\_



the enthalpy of the reaction in which sulfur dioxide is oxidized to sulfur trioxide



is \_\_\_\_\_ kJ.

A) -1384

B) 1087

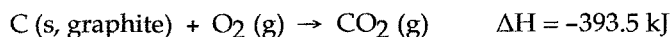
C) 196

D) -196

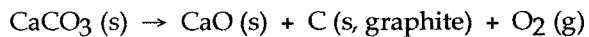
E) -543

43) Given the following reactions

43) \_\_\_\_\_



the enthalpy of the reaction



is \_\_\_\_\_ kJ.

A) -571.6

B) 571.6

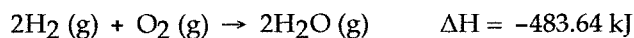
C)  $7.01 \times 10^4$

D) 215.4

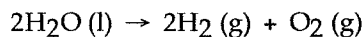
E) -215.4

44) Given the following reactions

44) \_\_\_\_\_



the enthalpy for the decomposition of liquid water into gaseous hydrogen and oxygen



is \_\_\_\_\_ kJ.

A) 571.66

B) 527.65

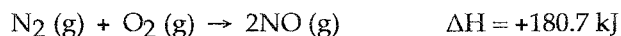
C) -527.65

D) 439.63

E) -395.62

45) Given the following reactions

45) \_\_\_\_\_



the enthalpy for the decomposition of nitrogen dioxide into molecular nitrogen and oxygen



is \_\_\_\_\_ kJ.

A) 67.6

B) -67.6

C) -293.8

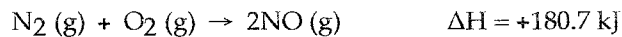
D) 45.5

E) 293.8



46) Given the following reactions

46) \_\_\_\_\_



the enthalpy of reaction for

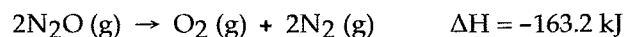
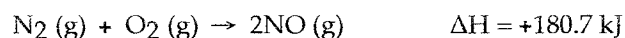


is \_\_\_\_\_ kJ.

- A) 45.5                  B) -293.8                  C) -45.5                  D) 293.8                  E) 67.6

47) Given the following reactions

47) \_\_\_\_\_



the enthalpy of reaction for

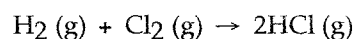


is \_\_\_\_\_ kJ.

- A) -343.9                  B) 145.7                  C) 343.9                  D) 17.5                  E) -145.7

48) The value of  $\Delta H^\circ$  for the reaction below is -186 kJ.

48) \_\_\_\_\_

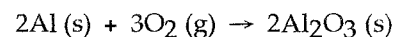


The value of  $\Delta H_f^\circ$  for HCl (g) is \_\_\_\_\_ kJ/mol.

- A) +186  
B)  $-3.72 \times 10^2$   
C) -93.0  
D)  $-1.27 \times 10^2$   
E) -186

49) The value of  $\Delta H^\circ$  for the following reaction is -3351 kJ:

49) \_\_\_\_\_

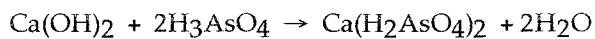


The value of  $\Delta H_f^\circ$  for  $\text{Al}_2\text{O}_3(\text{s})$  is \_\_\_\_\_ kJ.

- A) -16.43                  B) -1676                  C) -32.86                  D) -3351                  E) +3351

50) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

50) \_\_\_\_\_



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
Ca(OH) <sub>2</sub>	-986.6
H <sub>3</sub> AsO <sub>4</sub>	-900.4
Ca(H <sub>2</sub> AsO <sub>4</sub> ) <sub>2</sub>	-2346.0
H <sub>2</sub> O	-285.9

A) -744.9

B) -130.4

C) -4219

D) -76.4

E) -4519

51) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

51) \_\_\_\_\_



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
H <sub>2</sub> O (l)	-286
NO (g)	90
NO <sub>2</sub> (g)	34
HNO <sub>3</sub> (aq)	-207
NH <sub>3</sub> (g)	-46

A) -1540

B) -1892

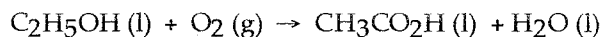
C) -150

D) -1172

E) The  $\Delta H_f^\circ$  of O<sub>2</sub> (g) is needed for the calculation.

52) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

52) \_\_\_\_\_



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
$\text{C}_2\text{H}_4$ (g)	52.3
$\text{C}_2\text{H}_5\text{OH}$ (l)	-277.7
$\text{CH}_3\text{CO}_2\text{H}$ (l)	-484.5
$\text{H}_2\text{O}$ (l)	-285.8

A) -492.6

B) -1048.0

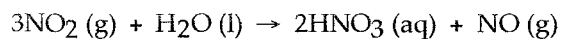
C) -79.0

D) -476.4

E) The value of  $\Delta H_f^\circ$  of  $\text{O}_2$  (g) is required for the calculation.

53) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

53) \_\_\_\_\_



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
$\text{H}_2\text{O}$ (l)	-286
$\text{NO}$ (g)	90
$\text{NO}_2$ (g)	34
$\text{HNO}_3$ (aq)	-207
$\text{NH}_3$ (g)	-46

A) 64

B) -508

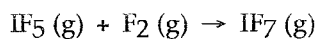
C) 140

D) -140

E) -64

54) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

54) \_\_\_\_\_



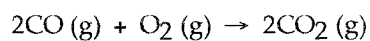
is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
IF (g)	-95
IF <sub>5</sub> (g)	-840
IF <sub>7</sub> (g)	-941

- A) 1801                  B) 121                  C) -1801                  D) -121                  E) -101

55) Given the data in the table below,  $\Delta H^\circ$  for the reaction

55) \_\_\_\_\_



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
CO (g)	-110.5
CO <sub>2</sub> (g)	-393.7
CaCO <sub>3</sub> (s)	-1207.0

- A) -283.3  
B) -566.4  
C) -677.0  
D) 283.3  
E) The  $\Delta H_f^\circ$  of O<sub>2</sub> (g) is needed for the calculation.

56) The value of  $\Delta H^\circ$  for the following reaction is 177.8 kJ. The value of  $\Delta H_f^\circ$  for CaO(s) is \_\_\_\_\_ kJ/mol.

56) \_\_\_\_\_

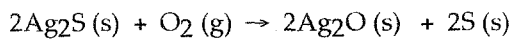


Substance	$\Delta H_f^\circ$ (kJ/mol)
CO (g)	-110.5
CO <sub>2</sub> (g)	-393.7
CaCO <sub>3</sub> (s)	-1207.0

- A) 813.4                  B) -813.4                  C) 177.8                  D) -1600                  E) -635.5

57) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

57) \_\_\_\_\_



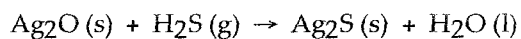
is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
$\text{Ag}_2\text{O}(\text{s})$	-31.0
$\text{Ag}_2\text{S}(\text{s})$	-32.6
$\text{H}_2\text{S}(\text{g})$	-20.6
$\text{H}_2\text{O}(\text{l})$	-286

- A) +1.6
- B) -1.6
- C) -3.2
- D) +3.2
- E) The  $\Delta H_f^\circ$  of S (s) and of  $\text{O}_2$  (g) are needed for the calculation.

58) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

58) \_\_\_\_\_



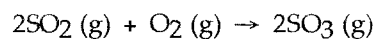
is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
$\text{Ag}_2\text{O}(\text{s})$	-31.0
$\text{Ag}_2\text{S}(\text{s})$	-32.6
$\text{H}_2\text{S}(\text{g})$	-20.6
$\text{H}_2\text{O}(\text{l})$	-286

- A) -308
- B) -370
- C) -202
- D) -267
- E) More data are needed to complete the calculation.

59) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

59) \_\_\_\_\_



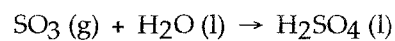
is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
SO <sub>2</sub> (g)	-297
SO <sub>3</sub> (g)	-396
SO <sub>2</sub> Cl <sub>2</sub> (g)	-364
H <sub>2</sub> SO <sub>4</sub> (l)	-814
H <sub>2</sub> O (l)	-286

- A) 198
- B) -198
- C) 99
- D) -99
- E) The  $\Delta H_f^\circ$  of O<sub>2</sub> (g) is needed for the calculation.

60) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

60) \_\_\_\_\_



is \_\_\_\_\_ kJ.

Substance	$\Delta H_f^\circ$ (kJ/mol)
SO <sub>2</sub> (g)	-297
SO <sub>3</sub> (g)	-396
SO <sub>2</sub> Cl <sub>2</sub> (g)	-364
H <sub>2</sub> SO <sub>4</sub> (l)	-814
H <sub>2</sub> O (l)	-286

- A) -132
- B) -704
- C) 1496
- D) 704
- E)  $-2.16 \times 10^3$

61) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

61) \_\_\_\_\_



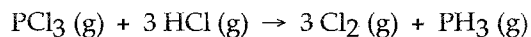
is \_\_\_\_\_ kJ.

Compound	$\Delta H_f^\circ$ (kJ/mol)
$\text{PCl}_3 (\text{g})$	-288.07
$\text{HCl} (\text{g})$	-92.30
$\text{PH}_3 (\text{g})$	5.4

- A) -570.37
- B) 385.77
- C) 570.37
- D) -385.77
- E) The  $\Delta H_f^\circ$  of  $\text{Cl}_2 (\text{g})$  is needed for the calculation.

62) Given the data in the table below,  $\Delta H^\circ_{\text{rxn}}$  for the reaction

62) \_\_\_\_\_



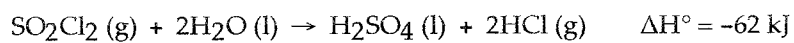
is \_\_\_\_\_ kJ.

Compound	$\Delta H_f^\circ$ (kJ/mol)
$\text{PCl}_3 (\text{g})$	-288.07
$\text{HCl} (\text{g})$	-92.30
$\text{PH}_3 (\text{g})$	5.4

- A) 570.37
- B) -570.37
- C) 385.77
- D) -385.77
- E) The  $\Delta H_f^\circ$  of  $\text{Cl}_2 (\text{g})$  is needed for the calculation.

63) Given the data in the table below and  $\Delta H^\circ_{\text{rxn}}$  for the reaction

63) \_\_\_\_\_



$\Delta H^\circ_f$  of HCl (g) is \_\_\_\_\_ kJ/mol.

Substance	$\Delta H^\circ_f$ (kJ/mol)
SO <sub>2</sub> (g)	-297
SO <sub>3</sub> (g)	-396
SO <sub>2</sub> Cl <sub>2</sub> (g)	-364
H <sub>2</sub> SO <sub>4</sub> (l)	-814
H <sub>2</sub> O (l)	-286

- A) -184
- B) 30
- C) -92
- D) 60
- E) Insufficient data are given.



## Answer Key

Testname: SAMPLE QUESTIONS CHAPTER 5

- 1) B
- 2) D
- 3) C
- 4) E
- 5) D
- 6) D
- 7) D
- 8) A
- 9) B
- 10) A
- 11) A
- 12) B
- 13) C
- 14) A
- 15) E
- 16) D
- 17) A
- 18) A
- 19) D
- 20) D
- 21) B
- 22) A
- 23) D
- 24) D
- 25) D
- 26) B
- 27) D
- 28) B
- 29) D
- 30) C
- 31) A
- 32) E
- 33) C
- 34) D
- 35) E
- 36) A
- 37) B
- 38) E
- 39) C
- 40) A
- 41) E
- 42) D
- 43) B
- 44) A
- 45) B
- 46) B
- 47) D
- 48) C
- 49) B
- 50) B

Answer Key

Testname: SAMPLE QUESTIONS CHAPTER 5

- 51) D
- 52) A
- 53) D
- 54) E
- 55) B
- 56) E
- 57) D
- 58) D
- 59) B
- 60) A
- 61) A
- 62) A
- 63) C