أسئلة اختبار تجريبي وفق الهيكل الوزاري الخطة M101

موقع المناهج ← المناهج الإماراتية ← الصف الحادي عشر المتقدم ← كيمياء ← الفصل الأول ← اختبارات ← الملف

تاريخ إضافة الملف على موقع المناهج: 2024-12-05 18:35:12

المزيد من مادة كيمياء:	ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس

التواصل الاجتماعي بحسب الصف الحادي عشر المتقدم

صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف الحادي عشر المتقدم والمادة كيمياء في الفصل الأول

1-A fruit-and-oatmeal bar contains 142 nutritional Calories. Convert this energy to calories

1. **142 Kcal**
2. **142 cal**
3. **130 Cal**
4. **0.142 cal**

2-the amount of heat required to raise the temperature of one gram of that substance by one degree Celsius.

1. **Joule**
2. **Calorie**
3. **Calorie**
4. **Specific heat**

3-If two substances with equal masses absorb the same amount of energy, how will their temperature changes compare?

A) The substance with a higher specific heat will have a larger temperature increase.

B) The substance with a lower specific heat will have a larger temperature increase.

C) Both substances will have the same temperature increase.

D) The temperature change depends only on the type of substance, not its specific heat.

| 4- A 155-g sample of an unknown substance was heated from 25.0°C to 40.0°C and absorbed 5696 J of energy. What is the specific heat of the substance? |
| --- |
| A) 3.75 J/g°C |
| B) 2.45 J/g°C |
| C) 1.25 J/g°C |
| D) 4.50 J/g°C |

Bomb Calorimeter
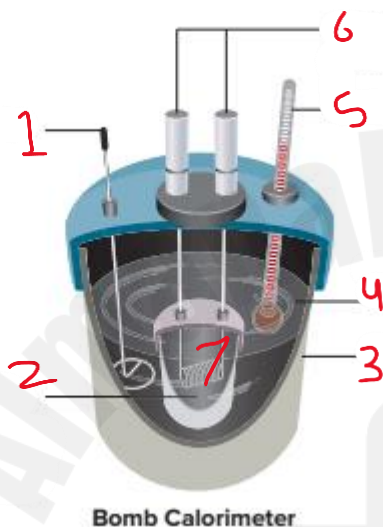
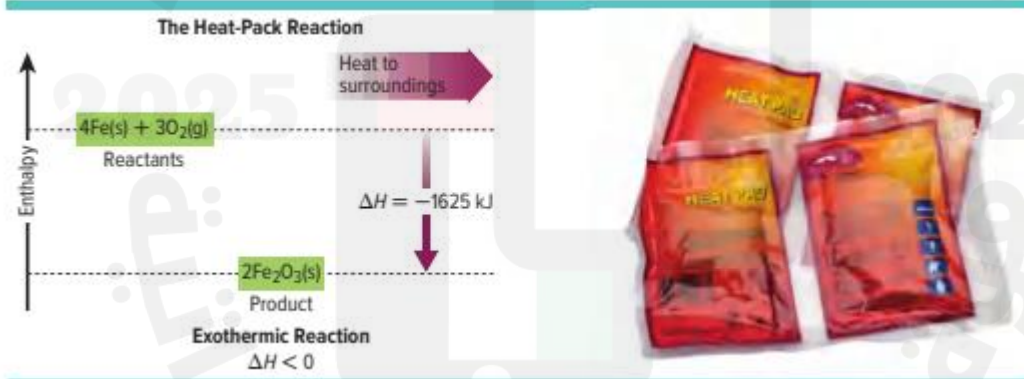| 5- |
| --- |
| a-high pressured oxygen in 7 |
| b- stirrer is 6 |
| c- ignition terminals are 1 |
| d- used under open atmosphere |

6-The temperature of a sample of water increases from 20.0°C to 46.6°C as it absorbs 5650 J of heat. What is the mass of the sample?
A) 25.2 g
B) 50.5 g
C) 75.8 g
D) 100.0 g
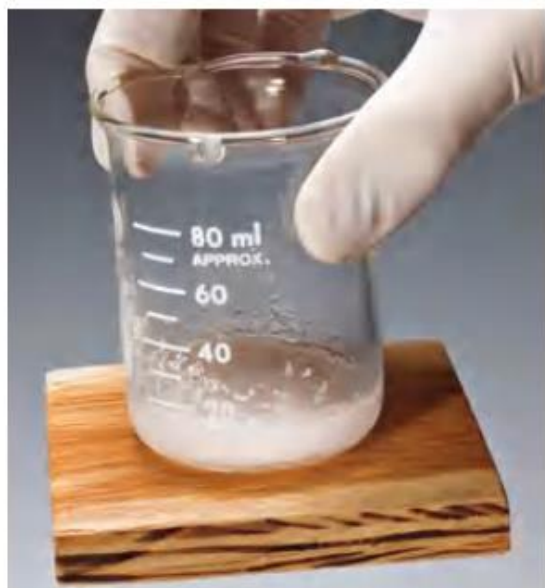
7-

A) Heat flows from the system to the surroundings.

B) Heat flows from the surroundings to the system.

C) The temperature of the system increases, and the surroundings cool down.

D) The system and surroundings both heat up.

The Heat-Pack Reaction

Heat to surroundings

$4Fe(s) + 3O_2(g)$

Reactants

$\Delta H = -1625 \text{ kJ}$

$2Fe_2O_3(s)$

Product

Exothermic Reaction

$\Delta H < 0$

Enthalpy

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A) The arrow points upwards, indicating heat is absorbed from the surroundings.

B) The arrow points downward, indicating heat is released to the surroundings.

C) The arrow points sideways, showing no change in heat.
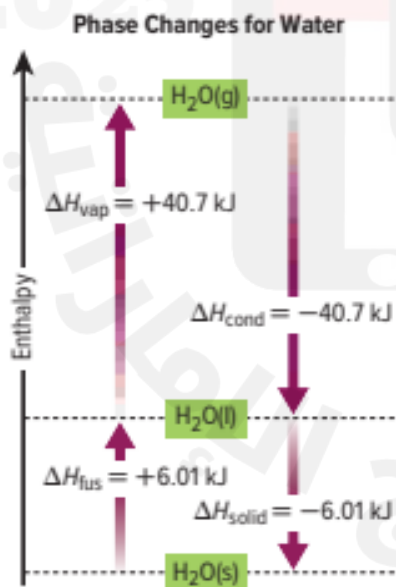
D) The diagram shows no energy change at all.

9- What does the positive value of ΔHrxn indicate in an endothermic reaction?

The Cold-Pack Process

Enthalpy

Heat from surroundings

$NH_4^+(aq) + NO_3^-(aq)$
Products

$\Delta H = +27\ kJ$

$NH_4NO_3(s)$
Reactant

Endothermic Process
$\Delta H > 0$

A) Heat is released to the surroundings.

B) Heat is absorbed from the surroundings.

C) There is no change in heat.

D) The reaction is at equilibrium.

10-For which of the following processes would the enthalpy change (ΔH) be positive?

A) Combustion of methane

B) Vaporization of water

C) Freezing of water

D) Condensation of steam

Phase Changes for Water

Enthalpy

$H_2O(g)$

$\Delta H_{vap} = +40.7\ kJ$

$\Delta H_{cond} = -40.7\ kJ$

$H_2O(l)$

$\Delta H_{fus} = +6.01\ kJ$

$\Delta H_{solid} = -6.01\ kJ$

$H_2O(s)$

11- What is the value of ΔHvap for the vaporization of one mole of water?

A) –40.7 kJ
B) 40.7 kJ
C) –6.01 kJ
D) 6.01 kJ

12-Use Equations a and b to determine ΔH for the following reaction.
2CO(g) + 2NO(g) → 2CO2(g) + N2(g)   ΔH =?

a. 2CO(g) + O2(g) → 2CO2(g)   ΔH = -566.0 kJ
b. N2(g) + O2(g) → 2NO(g)   ΔH = -180.6 kJ

A) -385.4 kJ
B) -566.0 kJ
C) +385.4 kJ
D) +180.6 kJ

13- Which of the following statements is true regarding the standard enthalpies of formation of nitrogen (N_2) and oxygen (O_2)?

A) The standard enthalpies of formation of nitrogen and oxygen are both positive.
B) The standard enthalpies of formation of nitrogen and oxygen are both zero.
C) The standard enthalpy of formation of nitrogen is zero, while the standard enthalpy of formation of oxygen is positive.
D) The standard enthalpy of formation of nitrogen is positive, while the standard enthalpy of formation of oxygen is zero.
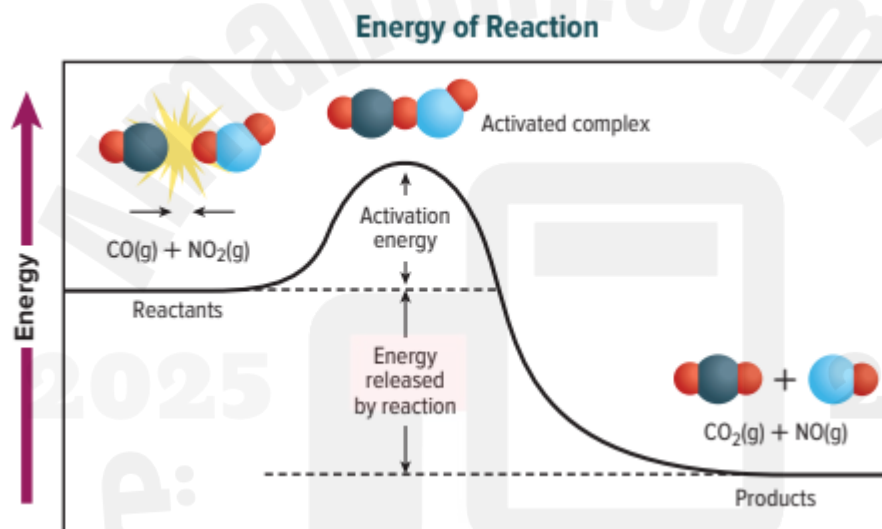
14- Which of the following reactions corresponds to the enthalpy of formation of $NO_2(g)$

A) $N_2(g) + O_2(g) \rightarrow 2NO(g)$

B) $N_2(g) + 2O_2(g) \rightarrow 2NO_2(g)$

C) $2NO(g) + O_2(g) \rightarrow 2NO_2(g)$

D) $2NO_2(g) \rightarrow N_2(g) + 2O_2(g)$

Time (s)	$[H_2]$ (M)	$[Cl_2]$ (M)	[HCl] (M)
0.00	0.030	0.050	0.000
4.00	0.020	0.040	

15-Calculate the average reaction rate expressed in moles H2 consumed per liter per second.

a--0.0025

b- 0.0025

c- 0.025

d-0.25

16-

a-exothermic Reaction

b- endothermic Reaction

c- ΔH

d- H of products higher than H of reactants

| Trial	Initial [A] (M)	Initial [B] (M)	Initial Rate (mol/(L·s))
1	0.100	0.100	2.00×10^{-3}
2	0.200	0.100	4.00×10^{-3}
3	0.200	0.200	1.60×10^{-2}

17-What is the order of the Reaction A+B→C

a-2
b-3
c-4
d-1

18- The following reaction is first order in H2 and second order in NO with a rate constant of 2.90 × 102 (L2/(mol2·s)).
2NO(g) + H2(g) → N2O(g) + H2O(g)
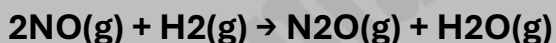
Calculate the instantaneous rate when the reactant concentrations are [NO] = 0.00200M and [H2] = 0.00400M

a-4.64×10−6 mol/(L\s).
b-4.64×10 mol/(L\s).
c-4.64×10−5 mol/(L\s).
d-4.54×10−6 mol/(L\s).
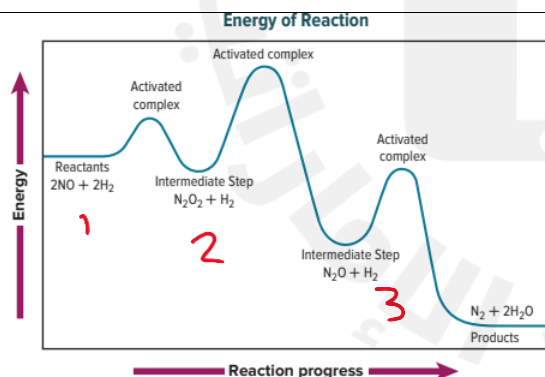
19-

a-first reaction is the slowest
b- second reaction is the slowest
c- first and second reaction are the slowest
d- third reaction is the slowest

20- **Predict whether a precipitate of PbCl2 will form if 100 mL of 0.0100M NaCl is added to 100 mL of 0.0200M Pb(NO3)2**

Using the experimental data in the following table, what is the rate law for the reaction?

مُستخدمًا البيانات التجريبية في الجدول التالي، ما قانون السرعة للتفاعل؟

السرعة الابتدائية Initial Rate (mol/(L.s))	التركيز الابتدائي Initial concentration $[B]$ (M)	التركيز الابتدائي Initial concentration $[A]$ (M)	التجربة Trial
$aA + bB \rightarrow$ products			
3.00×10^{-3}	0.273	0.273	1
3.00×10^{-3}	0.273	0.546	2
6.00×10^{-3}	0.546	0.546	3

$$\text{Rate} = k[A]$$

$$\text{Rate} = k[A]^2[B]$$

$$\text{Rate} = k[A][B]$$

$$\text{Rate} = k[B]$$