بنك أسئلة اختبار نهاية الفصل في المتقدمة



تم تحميل هذا الملف من موقع المناهج الإماراتية	
موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الحادي عشر المتقدم ⇦ كيمياء ⇦ الفصل الأول ⇦ اختبارات ⇦ الملف	
تاريخ إضافة الملف على موقع المناهج: 2026-11-21 22:50:22	
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
إعداد: Malik Aasia	

التواصل الاجتماعي بحسب الصف الحادي عشر المتقدم					
صفحة المناهج الإماراتية على فيسبوك					
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المزيد من الملفات بحسب الصف الحادي عشر المتقدم والمادة كيمياء في الفصل الأول	
1	بنك أسئلة اختبار نهاية الفصل في المتقدمة
2	مراجعة وفق هيكل اختبار نهاية الفصل - بريدج
3	ملزمة مراجعة الهيكل
4	مراجعة الهيكل
5	هيكل مراجعة – الجزء الأول

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Al Dhaid Secondary School for Boys – Cycle 3

Principal: **Mohamed Sulaiman Mohamed Yousif Alhouti** Teacher: **Aasia Malik**

CHEMISTRY · GRADE 11 ADVANCED · INSPIRE · END OF TERM 1 · 2026–2027

End of Term 1 Practice Exam · MCQ Bank

184 MCQs | All 30 blueprint outcomes | Mock: 30 questions · 100 marks

2, 3 or 4 marks per question | 120 minutes | Scientific calculator allowed

Student name: Type your full name

Mock exam | Question bank | Exam blueprint | Teacher results

Answered **0 / 30** Timer starts with your first answer

Mock exam · 30 questions · 100 marks

One question is drawn from the bank for each of the 30 blueprint outcomes. Answer all of them (you can change your mind), then press **Submit exam**. Press **New mock exam** afterwards for a different set of questions. Click any figure to enlarge it.

UNIT 1 Energy and Heat

1 **4 marks** Blueprint Q1 · p. 5–6

Drink Y contains 150 Cal and drink X contains 5.0×10^5 J. Which statement is true?

(A) The energy in Y is 3.6×10^5 J.

(B) The energy in X is greater than in Y.

(C) The energy in Y is greater than in X.

(D) The energy in X is 355 Cal.

2 **3 marks** Blueprint Q2 · p. 7–9

Equal masses of calcium (0.647), strontium (0.301), lead (0.129) and magnesium (1.023 J/(g·°C)) sit in the sun for the same time. What is the order of temperature increase from smallest to largest?

(A) Calcium, strontium, magnesium, lead

(B) Lead, strontium, magnesium, calcium

(C) Calcium, magnesium, lead, strontium

(D) Magnesium, calcium, strontium, lead

3 **4 marks** Blueprint Q3 · p. 7–9

A 355-g sample is heated from 22.4 °C to 43.6 °C and absorbs 6.75 kJ. Using gold 0.129, silver 0.235, aluminium 0.897 and iron 0.449 J/(g·°C), what is the substance?

(A) Silver

(B) Iron

(C) Gold

(D) Aluminium

4 **4 marks** Blueprint Q4 · p. 7–9

A 10.0-g block of lead (c = 0.129 J/(g·°C)) cools from 120.0 °C to 20.0 °C. How much heat does it release?

(A) 12.9 J

(B) 155 J

(C) 129 J

(D) 1290 J

5 **4 marks** Blueprint Q5 · p. 8–9

A 10.0-g sample of a metal absorbs 44.9 J as its temperature rises from 20.0 °C to 30.0 °C. Using Table 2, which metal is it?

TABLE 2 SPECIFIC HEATS AT 298 K (25°C)

Substance	Specific heat J/(g·°C)	Substance	Specific heat J/(g·°C)
Water(l)	4.184	Granite(s)	0.803
Ethanol(l)	2.44	Calcium(s)	0.647
Water(s)	2.03	Iron(s)	0.449
Water(g)	2.01	Strontium(s)	0.301
Beryllium(s)	1.825	Silver(s)	0.235
Magnesium(s)	1.023	Barium(s)	0.204
Aluminum(s)	0.897	Lead(s)	0.129
Concrete(s)	0.84	Gold(s)	0.129

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Table 2: specific heats at 298 K · click to enlarge

A Silver

B Lead

C Aluminium

D Iron

UNIT 2 Thermochemical Equations

6 **2 marks** Blueprint Q6 · p. 14

Thermochemistry is the study of:

A the structure of atoms

B the rates of chemical reactions

C the naming of compounds

D heat changes that accompany chemical reactions and phase changes

7 **2 marks** Blueprint Q7 · p. 14

In the endothermic reaction in Figure 7, which statement is correct?

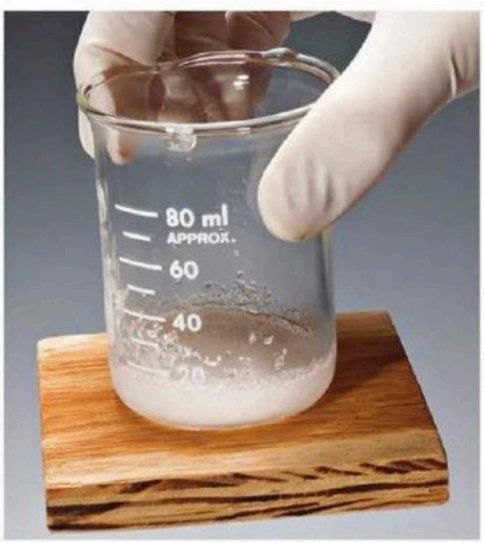


Figure 7 In this endothermic reaction, the reacting mixture draws enough energy from the water and the wet board to cause the wet board to freeze to the beaker.

Figure 7: an endothermic reaction freezes the wet board to the beaker · click to enlarge

(A) The system is releasing heat into the surroundings.

(B) The temperature of the system increases.

(C) The surroundings are gaining heat from the system.

(D) The system is absorbing heat from the surroundings.

8 **3 marks** Blueprint Q8 · p. 14

A metal sample is heated and dropped into water in a calorimeter. Which quantity must be measured to find the heat absorbed by the water?

(A) The volume of the calorimeter

(B) The mass of water and its temperature change

(C) The pressure of the air

(D) The colour of the metal

9 **4 marks** Blueprint Q9 · p. 15–17

An enthalpy diagram shows the products ABOVE the reactants. Which is correct?

(A) It represents the reaction that occurs in a cold pack.

(B) The reaction is exothermic.

(C) The enthalpy of the products is less than that of the reactants.

(D) Heat flows to the surroundings.

10 **3 marks** Blueprint Q10 · p. 15–17

The enthalpy change of a reaction, ΔHrxn, is defined as:

(A) ΔHrxn = H(reactants) – H(products)

(B) ΔHrxn = H(products) – H(reactants)

C ΔHrxn = H(products) × H(reactants)

D ΔHrxn = H(products) + H(reactants)

11 **4 marks** Blueprint Q11 · p. 19, 21

Using Table 3, how much heat is released when 54.0 g of glucose (180.18 g/mol) burns?

Substance	Formula	ΔH°_{comb} (kJ/mol)
Sucrose (table sugar)	$C_{12}H_{22}O_{11}$ (s)	–5644
Octane (a component of gasoline)	C_8H_{18} (l)	–5471
Glucose (a simple sugar found in fruit)	$C_6H_{12}O_6$ (s)	–2808
Propane (a gaseous fuel)	C_3H_8 (g)	–2219
Methane (a gaseous fuel)	CH_4 (g)	–891

Table 3: standard enthalpies of combustion · click to enlarge

A 52.0 kJ

B 1516 kJ

C 842 kJ

D 2808 kJ

12 **3 marks** Blueprint Q12 · p. 18–19

A thermochemical equation is a balanced chemical equation that:

A includes the physical states of all substances and the energy change

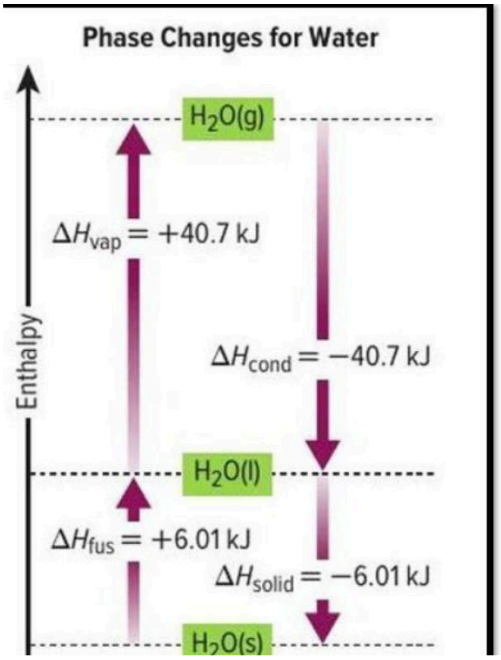
B shows the rate of the reaction

C has no states of matter

D shows only the reactants

13 **2 marks** Blueprint Q13 · p. 19–20

Using the diagram, which statement is NOT correct?



Phase changes for water · click to enlarge

(A) ΔHcond and ΔHvap have the same numerical value with the same sign.

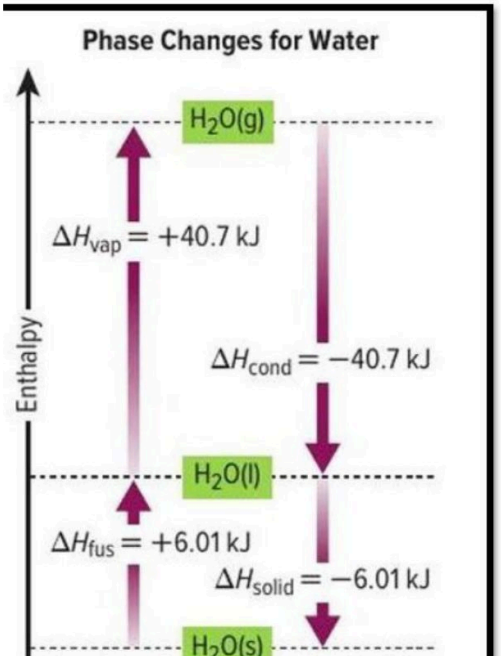
(B) ΔHsolid and ΔHfus have the same numerical value with opposite signs.

(C) ΔHcond and ΔHsolid are negative.

(D) ΔHvap and ΔHfus are positive.

14 **2 marks** Blueprint Q14 · p. 19–20

Using the diagram, which statement is correct?



Phase changes for water · click to enlarge

(A) The system energy increases as water vapour condenses and then solidifies.

(B) The condensation and solidification of water are exothermic.

(C) The system energy decreases as ice melts and then evaporates.

(D) The vaporization of water and melting of ice are exothermic.

15 **4 marks** Blueprint Q15 · p. 20–21

Calculate the heat required to melt 25.7 g of solid methanol (CH_3OH, 32.04 g/mol) at its melting point. (Table 4)

TABLE 4 STANDARD ENTHALPIES OF COMBUSTION

Substance	Formula	ΔH°_{vap} (kJ/mol)	ΔH°_{fus} (kJ/mol)
Water	H_2O	40.7	6.01
Ethanol	C_2H_5OH	38.6	4.94
Methanol	CH_3OH	35.2	3.22
Acetic acid	CH_3COOH	23.4	11.7
Ammonia	NH_3	23.3	5.66

Table 4: ΔH°vap and ΔH°fus · click to enlarge

(A) 82.8 kJ

(B) 3.22 kJ

(C) 2.58 kJ

(D) 28.2 kJ

UNIT 3 Calculating Enthalpy Change

16 **4 marks** Blueprint Q16 · p. 23–26

Given $2CO + O_2 \rightarrow 2CO_2$, $\Delta H = -566.0$ kJ and $N_2 + O_2 \rightarrow 2NO$, $\Delta H = -180.6$ kJ, what is ΔH for $2CO + 2NO \rightarrow 2CO_2 + N_2$?

(A) −746.6 kJ

(B) −466.0 kJ

(C) −192.7 kJ

(D) −385.4 kJ

17 **3 marks** Blueprint Q17 · p. 26–28

Which reaction represents the standard enthalpy of formation of its product?

(A) $\frac{1}{2}H_2(g) + \frac{1}{2}F_2(g) \rightarrow HF(g)$, $\Delta H = -273$ kJ

(B) $2CO(g) + O_2(g) \rightarrow 2CO_2(g)$, $\Delta H = -568$ kJ

(C) $N_2(g) + 2O_2(g) \rightarrow 2NO_2(g)$, $\Delta H = +66.4$ kJ

(D) $SO_3(g) + H_2O(l) \rightarrow H_2SO_4(l)$, $\Delta H = -814$ kJ

18 **3 marks** Blueprint Q18 · p. 28

Which form of carbon has ΔHf° = 0 at 298 K?

(A) $CO_2(g)$

(B) C(s, graphite)

(C) $CO(g)$

(D) $CH_4(g)$

19 **4 marks** Blueprint Q19 · p. 28–30

Using Table 5, what is ΔH°rxn for $H_2S(g) + 4F_2(g) \rightarrow 2HF(g) + SF_6(g)$?

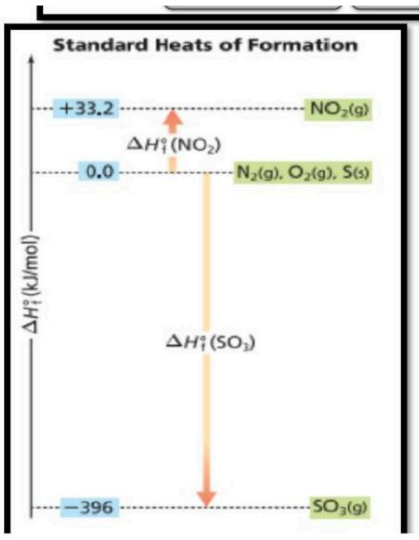


Table 5 Standard Enthalpies of Formation

Compound	Formation Equation	ΔH_f° (kJ/mol)
$H_2S(g)$	$H_2(g) + S(s) \rightarrow H_2S(g)$	−21
$HF(g)$	$\frac{1}{2}H_2(g) + \frac{1}{2}F_2(g) \rightarrow HF(g)$	−273
$SO_3(g)$	$S(s) + \frac{3}{2}O_2(g) \rightarrow SO_3(g)$	−396
$SF_6(g)$	$S(s) + 3F_2(g) \rightarrow SF_6(g)$	−1220

Standard heats of formation — Table 5 — click to enlarge

Standard heats of formation + Table 5 · click to enlarge

(A) −1745 kJ

(B) +1745 kJ

(C) −1514 kJ

(D) −1787 kJ

20 **4 marks** Blueprint Q20 · p. 29–30

Using ΔHf°: NO_2 +33.2 and N_2O_4 +9.2 kJ/mol, what is ΔH°rxn for $2NO_2(g) \rightarrow N_2O_4(g)$?

(A) −24.0 kJ, exothermic

(B) −57.2 kJ, exothermic

(C) +57.2 kJ, endothermic

(D) +42.4 kJ, endothermic

UNIT 4 Reaction Rates and Rate Laws

21 **4 marks** Blueprint Q21 · p. 46–49

Why is a negative sign used when the average rate is calculated from a reactant?

(A) The time interval is negative.

(B) Reactants are always negative ions.

(C) The reactant concentration decreases, and reaction rates must be positive.

(D) Products are consumed during a reaction.

22 **3 marks** Blueprint Q22 · p. 49–51

When the concentration of reacting particles increases, which two statements are true?

(A) The particles collide more often and the reaction rate increases.

(B) The particles collide more slowly and the rate decreases.

C The reaction stops and the particles stop colliding.

D The rate decreases and the particles collide less often.

23 **2 marks** Blueprint Q23 · p. 51–52

On an energy diagram, the activated complex is found:

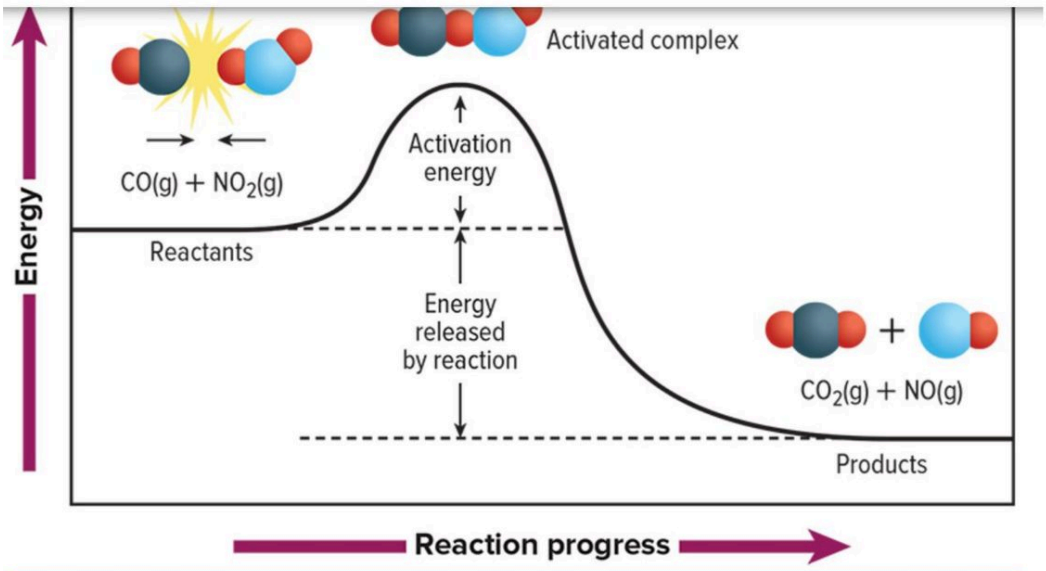


Figure 5 When an exothermic reaction occurs, molecules collide with enough energy to overcome the

Figure 5: an exothermic reaction · click to enlarge

A at the reactant level

B at the product level

C below the products

D at the top of the energy barrier

24 **3 marks** Blueprint Q24 · p. 51–52

A reaction with a low activation energy:

A never reaches the activated complex

B is always endothermic

C has a higher ΔH

D has more collisions with sufficient energy, so it is faster

25 **3 marks** Blueprint Q25 · p. 51–52

In Figure 5 (exothermic reaction), the reactants:

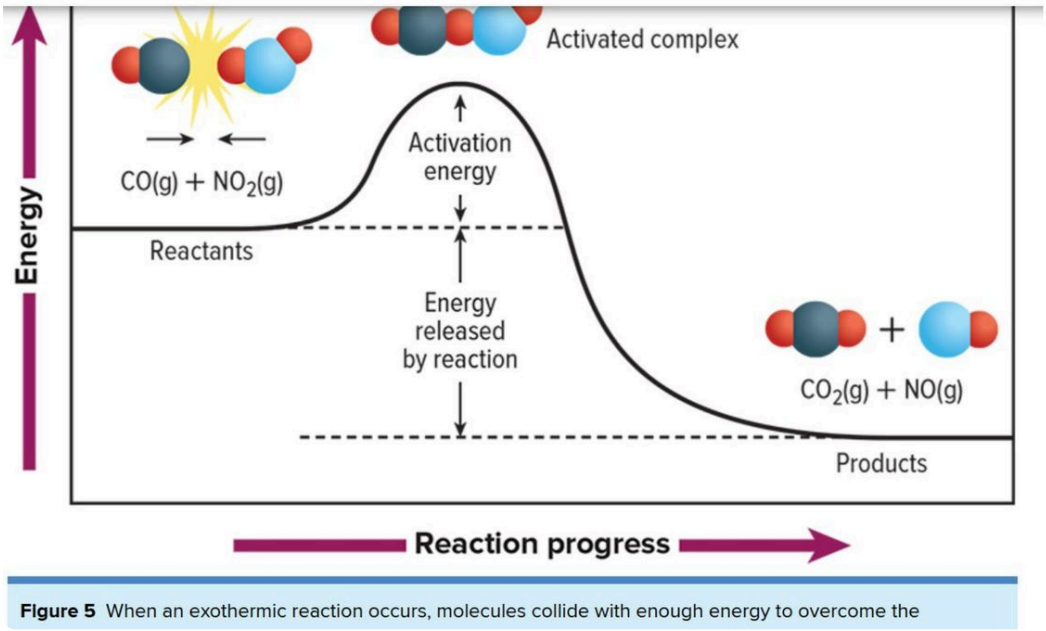


Figure 5 When an exothermic reaction occurs, molecules collide with enough energy to overcome the

Figure 5: an exothermic reaction · click to enlarge

(A) do not need activation energy

(B) absorb energy and form higher-energy products

(C) collide with enough energy to overcome the barrier, then release energy and form lower-energy products

(D) form products of equal energy

26 **3 marks** Blueprint Q26 · p. 62–65

Write the rate law for aA → bB if the reaction is third order in A.

(A) rate = k[A]^a

(B) rate = $k[A]^3$

(C) rate = k[A]

(D) rate = $k[B]^3$

27 **4 marks** Blueprint Q27 · p. 64–66

For A + B → C, doubling [A] doubles the rate and doubling [B] quadruples the rate. Which is the rate law?

(A) rate = k[A][B]

(B) rate = $k[A]^2[B]^2$

(C) rate = $k[A]^2[B]$

(D) rate = $k[A][B]^2$

28 **4 marks** Blueprint Q28 · p. 63–64

For $2N_2O_5 \rightarrow 4NO_2 + O_2$, rate = $k[N_2O_5]$. When $[N_2O_5] = 0.350$ M, the rate is 3.5×10^{-6} mol/(L·s). What is k?

(A) $3.5 \times 10^{-6}\ s^{-1}$

(B) 1.0×10^{-5} L/(mol·s)

(C) $1.2 \times 10^{-6}\ s^{-1}$

(D) $1.0 \times 10^{-5}\ s^{-1}$

29 **4 marks** Blueprint Q29 · p. 63–66

For rate = $k[CH_3CHO]^2$ with $k = 6.75 \times 10^{-6}$ L/(mol·s), what initial concentration gives a rate of 6.75×10^{-10} mol/(L·s)?