

Academic Year	2025/2026
المعام الدراسي	
Term	1
الفضل	
Subject	Chemistry /Inspire
المادة	الكيمياء /إسباير
Grade	12
الصف	
Stream	Advanced
المسار	المتقدم
Number of MCQ	30
عدد الأسئلة الموضوعية	
Marks of MCQ	from 2 to 4
درجة الأسئلة الموضوعية	
Number of FRQ	0
عدد الأسئلة المقالية	
Marks per FRQ	0
الدرجات الأسئلة المقالية	
Type of All Questions	MCQ/ الموضوعية
نوع كافة الأسئلة	
Maximum Overall Grade	100
الدرجة القصوى الممكنة	
Exam Duration	120 minutes
مدة الامتحان	
Mode of Implementation	SwiftAssess
طريقة التطبيق	
Calculator	Allowed
أداة الحاسبة	مسموحة

Question*	Learning Outcome/Performance Criteria**	Reference(s) in the Student Book (English Version& Arabic Version)	
		Example/Exercise	Page
		مثال/تمرين	الصفحة
1	CHM.5.5.01.001.07 Perform interconversion between units of temperature and heat	Textbook + table 1 + Example problem 1 + Practice problems	5, 6
2	CHM.5.5.01.002.02 Calculate the amount of heat released by a substance as its temperature changes	Textbook + Example problem2 + Practice problems	8,9
3	CHM.5.5.01.001.09 Describe how the same amount of heat affects the temperature of different objects of the same mass	Textbook + Example problem2 + Practice problems+ check your progress	8 , 9,10
4	CHM.5.5.01.002.03 Calculate the specific heat capacity of a sample given its mass and temperature change	Textbook + Example problem 3 + Practice problems	13,14
5	CHM.5.5.01.004.02 Differentiate among the system, the surrounding and the universe	Textbook	14
6	CHM.5.5.01.004.03 Identify direction of heat flow (for Exothermic and endothermic processes)	Textbook + figures 8,9	15,16, 17
7	CHM.5.5.01.004.04 Compare and contrast potential energy diagrams of exothermic and endothermic reactions in terms of general shape, enthalpy of reactants and products, activation energy of forward and backward reactions, and enthalpy of reaction and its sign	Textbook + figures 8,9 + check your progress	15,16 , 17, 22
8	CHM.5.5.01.006.10 Write thermochemical equation for the changes of state (vaporization, fusion, condensation and solidification)	Textbook	19,20
9	CHM.5.5.01.003.05 Perform phase-change calculations using enthalpy of fusion, vaporization, condensation and solidification	figure 10 + Practice problems + check your progress	20, 21
10	CHM.5.5.01.003.04 Define molar enthalpy (heat) of solidification, deaolid	Textbook	20
11	CHM.5.5.01.006.09 Perform calculations using enthalpy of combustion	Example problem 4 + Practice problems	21
12	CHM.5.5.02.002.01 Calculate, using Hess's law, the ΔH of a reaction	Textbook + Example problem 5 + Practice problems	23, 24, 25, 26
13	CHM.5.5.02.004.03 Calculate, using the standard enthalpies of formation, the Enthalpy of a reaction, ΔHrxn	Textbook + Example problem 6 + Practice problems	29, 30
14	CHM.5.5.02.001.01 State Hess's Law - CHM.5.5.02.001.02 Describe the rules to be followed to apply Hess's Law	Textbook	23
15	CHM.5.5.02.006.02 Identify the standard enthalpy (heat) of formation of a free element in its standard state	Textbook+ figure15	19 , 27 ,28
16	CHM.5.4.01.020.01 Calculate the average reaction rate using the experimental data	Textbook + Example problem 1 + Practice problems	46, 47, 48, 49
17	CHM.5.4.01.002.03 List the two conditions, according to the collision theory, that must be met for a collision between reactant molecules to be effective in producing new chemical species	Textbook + figures 3 , 4	49, 50
18	CHM.5.4.01.022.03 Describe the relationship between activation energy and rate of the reaction	Textbook + figure 5, 6	52
19	CHM.5.4.01.005.05 Explain how the exponents in the rate equation for a chemical reaction relate to the coefficients in the chemical equation	Textbook	65
20	CHM.5.4.01.006.02 Use the method of initial rates to write rate law of reaction	Textbook + Practice problems	65, 66
21	CHM.5.4.01.005.02 Explain the function of the specific rate constant (k) in rate law equation	Textbook	63
22	CHM.5.4.01.020.08 Calculate the instantaneous rate of a reaction from experimental data - calculate the concentration of a reactant using the instantaneous rate of a reaction	Textbook + Example problem 2 + Practice problems	67, 68
23	CHM.5.4.01.020.08 Calculate the instantaneous rate of a reaction from experimental data	Textbook + Example problem 2 + Practice problems	67, 68
24	CHM.5.4.02.001.05 Describe chemical equilibrium using reactant and product concentration-time graph or particulate diagrams	Textbook	77, 78
25	CHM.5.4.02.005.02 Write chemical equilibrium expression for a heterogeneous equilibrium system (K _{eq})	Textbook + Example problem 2 + Practice problems	85 , 86 , 87
26	CHM.5.4.02.006.02 Calculate the equilibrium concentration of a reactant given the concentration of other reactants, products and equilibrium constant at a certain temperature	Textbook + Example problem 3 + Practice problems	87 , 88, 89
27	CHM.5.4.02.003.04 Explain the effect of changing temperature on an equilibrium system	Textbook + figure 14	94,95
28	CHM.5.4.02.003.03 Explain the effect of changing the volume and pressure on an equilibrium system	Textbook + figure 13	93
29	CHM.5.4.02.003.02 Explain the effect of changing the concentration (Adding reactants or removing products or adding products) on an equilibrium system	Textbook + figure 12	91, 92
30	CHM.5.4.02.003.06 Explain the effect of a catalyst on an equilibrium system	Textbook	95
* Questions might appear in a different order in the actual exam			
قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي			
** As it appears in the textbook(UAE Edition Grade 12 Advanced - Inspire - Student Edition), LMS, and (Main_IP).			
كما وُضعت في كتاب الطالب/ كتاب الطالب الصف الثاني عشر المتقدم - إسباير - طبعة دولة الامارات العربية المتحدة) LMS والطبعة القصصية .			