

Academic Year	2024/2025
السنة الدراسية	
Term	1
الفصل	
Subject	Chemistry /INSPIRE
المادة	الكيمياء / التميز
Grade	12
الصف	
Stream	Advanced
المتخصص	
PLAN C181	
Number of MCQ	20
عدد الأسئلة المتعددة الخيارات	
Marks of MCQ	5
درجة الأسئلة المتعددة الخيارات	
Number of FRQ	0
عدد الأسئلة المفتوحة	
Marks per FRQ	0
الدرجة لكل أسئلة مفتوحة	
Type of All Questions	MCQ الأسئلة المتعددة الخيارات
نوع أسئلة الأسئلة	
Maximum Overall Grade	100
الدرجة القصوى الممكنة	
Exam Duration	150 minutes
مدة الامتحان -	
Mode of Implementation	SwiftAssess
طريقة التطبيق -	
Calculator	Allowed
الآلة الحاسبة	مسموحة

Question**	Learning Outcome/Performance Criteria**	Reference(s) in the Student Book (English Version)	
		ExampleExercise	Page
السؤال*	نتائج التعلم /معايير الأداء**	مثالتمرين	الصفحة
الأسئلة المتعددة الخيارات - MCQ	1	Solve problems involving changes in temperature and state using the equations (e.g. $Q=mc\Delta T$)	Example Problem1,2 + Practice problems
	2	Describe the relationship between the specific heat capacity of a substance and the resistance to change in temperature	Text book+ example Problem3 + practice problems
	3	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	Text book +figures 8 & 9
	4	Write thermochemical equation for the changes of state (vaporization, fusion, condensation and solidification)	Text book +figure 10
	5	Perform calculations using enthalpy of combustion	Example Problem 4 + Practice problems
	6	Calculate, using Hess's law, the ΔH of a reaction	Text book+ example Problem 5 + practice problems
	7	Identify the standard enthalpy (heat) of formation of a free element in its standard state	Text book +figure 15 +table 5
	8	Predict the change in the entropy of a system, ΔS_{System} (According to a set of rules)	Text book+ Practice problems
	9	Calculate standard Gibb's free energy change using the table of standard values	Text book+ example Problem 7 + practice problems
	10	Calculate the average reaction rate using the rate of consumption of reactants or the rate of production of products	Text book+ example Problem 1 + practice problems
	11	Interpret exothermic and endothermic reactions using the collision theory	Text book +figures 4 &5&6
	12	Describe the relationship between reactant concentration and reaction rate	Text book
	13	Use the method of initial rates to write rate law of reaction	Text book+ Practice problems
	14	Calculate the instantaneous rate of a reaction from experimental data	Text book+ example Problem 2 + practice problems
	15	Determine, using a given reaction mechanism, the rate determining step (the slowest step),complex reaction and the intermediate steps	Text book
	16	Write chemical equilibrium expression for a homogeneous or a heterogeneous equilibrium systems (K _{eq})	Example Problem1,2+ Practice problems
	17	Explain the effect of changing (the concentration , temperature ,the volume ,the pressure and the catalyst)on an equilibrium system	Text book +figures 12 ,13,14
	18	Solve problems related to equilibrium by performing calculations involving concentrations of reactants and products	Text book +Example Problem 4+ Practice problems
	19	Calculate the molar solubility (concentration) of a sparingly soluble ionic compound using the solubility product constant, K _{sp}	Text book +table 6+Example Problem 5, 6 + Practice problems
	20	Identify whether a precipitate will form or not (by calculation and using relation between K _{sp} and Q _{sp})	Text book +Example Problem 7+ Practice problems
* Questions might appear in a different order in the actual exam.			
قد تظهر الأسئلة بأترتيب مختلف في الامتحان الفعلي			
As it appears in the textbook(UAE Edition Grade 12 Advance Student Edition) , LMS, and (Main .IP)academic year 2024-2025			
كما ورت في كتاب الطالب(كتاب الطالب الصف الثاني عشر المتقدم طعة بركة الامارات العربية المتحدة) و LMS والخطة الفعلية - . تمام 2024-2025 م			