Academic Year العام الدراسي	2023/2024
Term الفصل	2
Subject المادة	Chemistry /Inspire الكيمياء / إنسباير
Grade الصف	12
Stream المسار	Advanced المتقدم
Number of MCQ عدد الأسئلة الموضوعية	20
Marks of MCQ درجة الأسئلة الموضوعية	5
Number of FRQ عدد الأسئلة المقالية	0
Marks per FRQ الدرجات للأسئلة المقالية	0
Type of All Questions نوع كافة الأسئلة	MCQ/ الأسئلة الموضوعية
Maximum Overall Grade الدرجة القصوى الممكنة	100
Exam Duration - مدة الامتحان	120 minutes
Mode of Implementation- طريقة التطبيق	SwiftAssess
Calculator	Allowed
الآلة الحاسبة	مسموحة

Question* السؤال*	Learning Outcome/Performance Criteria** نتائج التعلم/ معايير الأداء**	Reference(s) in the Student Book (English Version& Arabic Version) المرجع في كتاب الطالب (النسخة الإنجليزية والنسخة العربية)	
		Example/Exercise مثال/تمرين	Page الصفحة
MCQ- الأسئلة الموضوعية			
1	CHM.5.3.04.001.02 List five general properties of aqueous bases and acids (taste, color of indicators, how it feels, reactions and electrical conductivity)	Text book	Text book 116 , 117
2	CHM.5.3.04.001.11 Define acids and bases according to Lewis theory	Table 2	Text book123 , 124 + Table 2
3	CHM.5.3.04.006.01 Define acid ionization constant, Ka, while writing the ionization constant expression for different weak acids	Example Problem 5 + Practice Problems	Text book 139 + Example Problem 5 + Practice Problems
4	CHM.5.3.04.003.04 Identify the relationship between the strength of an acid and its conjugate base and the strength of a base and its conjugate acid		Text book 128 , 129
5	CHM.5.3.04.003.05 Relate the strength of weak bases to the numerical values of Kb and the strength of weak acids to the numerical values of Ka	Table 6 + Practice Problems	Text book 130 , 131 , Table 6 + Practice Problems
6	CHM.5.3.04.007.01 Use Kw to calculate the hydronium ion and hydroxide ion concentration at a given temperature and vice versa		Text book 132 , 133
7	CHM.5.3.04.007.02 Describe the relation between pH and pOH and perform calculations involving this relation	Example 1 + Practice Problems	Text book 134 , 134 + Example 1 + Practice Problems
8	CHM.5.3.04.006.03 Relate the acidity and basicity of an aqueous solution to the hydronium and hydroxide ion concentration and pH at 25oC or K 298	Figures 12 , 13 + Example Problems 2 ,3 + Practice Problems	Text book 134 , 135 +136 + Figures 12 , 13 + Example Problems 2 ,3 + Practice Problems
9	,CHM.5.3.04.009.01 Describe the titration curves of different acids and bases with respect to pH and nature of solution at equivalence point indicator used and its color change and volume of titrant needed for changing color of indicator		Text book 141 , 142 , 143, 144 , 145
10	CHM.5.3.04.004.06 Calculate the molarity (concentration) and volume of a solution using titration data	Example Problem 6 + Practice Problems	Text book 145 , 146 + Example Problem 6 + Practice Problems
11	CHM.5.3.05.001.04 Distinguish between oxidation and reduction in terms of change in oxidation number		Text book 156 , 157
12	CHM.5.3.05.001.08 Identify oxidizing agent and reducing agent in a redox reaction	Table 2	Text book 159 + Table 2
13	CHM.5.3.05.001.02 Define oxidation number of a compound	Table 3 + Example Problem 2 + Practice Problems	Text book 162 , 163 , 164 + Table 3 + Example Problem 2 + Practice Problems
14	CHM.5.3.05.001.10 Write oxidation-half reaction and reduction-half reaction for a redox reaction		Text book 169 , 170
15	CHM.5.3.05.002 Balance redox reaction using half–reaction method in acidic medium	Example Problem 5 + Practice Problems + Problem Solving Strategy	Text book 169 , 170, 171 + Example Problem 5 + Practice Problems + Problem Solving Strategy
16	CHM.5.3.05.002.05 Balance redox reaction in basic medium using half–reaction method	Example Problem 5 + Practice Problems + Problem Solving Strategy	Text book 169 , 170, 171 + Example Problem 5 + Practice Problems + Problem Solving Strategy
17	CHM.5.3.05.007.02 Identify components of a voltaic or galvanic cell (anode, cathode, salt bridge, wires, electrolyte compartments); while explaining the role of each component, when does the reaction start and determining the direction of electron and current flow	Figures 1 , 2 , 3	Text book 178 , 179 + Figures 1 , 2 , 3
18	CHM.5.3.05.007.05 Use the half-cell standard reduction potentials to calculate the electrochemical cell standard potential, while determining whether the redox reactions are spontaneous or non-spontaneous	Example Problem 1 + Practice Problems	Text book, 181 , 182 , 183 , 184 , 185 , 186, 187+ Example Problem1 + Practice Problems
19	CHM.5.3.05.011.03 Compare between electrolytic cell and voltaic cell in terms of identifying where will reduction and oxidation processes take place, anode, cathode, direction of electron flow and current flow and spontaneity of the reaction occurring	Figure 18	Text book 200 , 201 + Figure 18
20	CHM.5.3.05.011.05 Define electroplating while describing how it works, identifying anode, cathode and electrolyte needed for an electrolytic cell in which a selected metal is to be plated on an object	Figure 22 ,23	Text book 204 +205 + Figure 22 , 23

* Questions might appear in a different order in the actual exam

* قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي

** Pages numbers as in student book (Dewan Version 2023 - 2024)

** أرقام الصفحات حسب ما ورد في كتاب الطالب نسخة الديوان 2023 - 2024