

Academic Year	2023/2024
العام الدراسي	
Term	2
الفصل	
Subject	Physics- Bridge
المادة	
Grade	10
الصف	
Stream	General
المسار	
Number of MCQ	15
عدد الأسئلة الموضوعية	
Marks of MCQ	4
درجة الأسئلة الموضوعية	
Number of FRQ	5
عدد الأسئلة المقالية	
Marks per FRQ	
الدرجات للأسئلة المقالية	
Type of All Questions	MCQ/ الأسئلة الموضوعية
نوع كافة الأسئلة	FRQ/ الأسئلة المقالية
Maximum Overall Grade	100
الدرجة القصوى الممكنة	
Exam Duration	150 minutes
مدة الامتحان	
Mode of Implementation	SwiftAssess & Paper-Based
طريقة التطبيق	
Calculator	Allowed
آلة الحاسبة	مسموحة

Question*	Learning Outcome/Performance Criteria**	Reference(s) in the Student Book		
		المراجع في كتاب الطالب		
		Example/Exercise	Page	
السؤال*	نتائج التعلم/ معايير الأداء**	مثال/تمرين	الصفحة	
الأسئلة الموضوعية - MCQ	1	State the conditions for an object to be in equilibrium	figure 9	99
	2	Define the friction force as a type of force between two touching surfaces, and determine its direction.	figure 10	130
	3	Recall that for an object to be in equilibrium, the net force acting on it should be zero.	as mentioned in the book	136
	4	Solve problems related to friction	22,23	135
	5	Determine the components of a vector in cartesian coordinate system using trigonometry	example 2	128
	6	Use free body diagrams to compare the direction of an object's acceleration with the direction of the unbalanced force exerted on the object	1,2,3,4	93
	7	Combine forces to find the net force acting on an object Relate the direction of the acceleration to the direction of the net force	34, 36,37	111
	8	Relate the direction of the acceleration to the direction of the net force	figure 5	94
	9	Resolve a vector into two orthogonal vectors in cartesian coordinate system.	11, 12,13	129
	10	Relate graphically the frictional force to the normal force and find the coefficient of kinetic friction.	figure 12	131
	11	Apply the relationships that relate the normal force to maximum static friction and to kinetic friction to calculate unknown parameters like friction force, coefficient of friction or the normal force ($F_{f,static}= \mu N$ and $F_{f,kinetic}= \mu N$).	example 3, Q15,16	133
	12	Describe the apparent weight for an object accelerating vertically upward or downward (starts from rest, reaches a constant speed, then comes to a stop)	figure 11, example 3	102, 103
	13	Define the coefficients of kinetic and static friction.	as mentioned in the book	130
	14	Determine the magnitude and direction of the resultant of two vectors in two dimensions using trigonometry, the Pythagorean theorem (case of perpendicular vectors), and the laws of sines and cosines.	example 1, Q1 &2	124
	15	Determine the resultant of two or more vectors algebraically by adding the components of the vectors and find its magnitude ($R^2=R_x^2+R_y^2$)	figure 6	127
الأسئلة المقالية - FRQ	16	Classify forces as either contact forces or field forces and realize that they result from interactions caused by agents	12	99
	17	Apply Newton's Second Law to solve numerical problems	37, 38	141
	18	List the characteristics of the interaction pair and identify the action-reaction pairs for different situations	figure 17 and 18	109
	19	Apply Newton's laws to solve problems involving normal and tension forces including systems of objects connected by strings and Atwood's machine	example 5	110
	20	Apply Newton's Laws along x and y axes for an object that moves on an inclined plane with and without friction.	example 5, Q29, 31	139
* Questions might appear in a different order in the actual exam, or on the exam paper in the case of G3 and G4.				
* قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي، أو على ورقة الامتحان في حالة الصفين G3 وG4.				
** As it appears in the textbook, LMS, and (Main_IP).				
** كما وردت في كتاب الطالب ولMS والخطة الفصلية.				