

Academic Year	2025/2026
العام الدراسي	
Term	2
الفصل	
Subject	Physics/ Inspire
المادة	الفيزياء/ إنسباير
Grade	10
الصف	
Stream	Advanced
المسار	المتقدم
Number of MCQ	15
الموضوعية عدد الأسئلة	
Marks of MCQ	4
الموضوعية درجة الأسئلة	
Number of FRQ	4
عدد الأسئلة المقالية	
Marks per FRQ	10
الدرجات للأسئلة المقالية	
Type of All Questions	MCQ/ الموضوعية FRQ/ المقالية
نوع كافة الأسئلة	
Maximum Overall Grade	100
الدرجة القصوى الممكنة	
Exam Duration - مدة الامتحان	60 minutes
طريقة التطبيق - Mode of Implementation	Paper-Based
Calculator	Allowed
الآلة الحاسبة	مسموحة

Question*	Learning Outcome/Performance Criteria**	Reference(s) in the Student Book ( English Version)	
		المرجع في كتاب الطالب (النسخة الانجليزية)	
السؤال *	نتائج التعلم / معايير الأداء**	Example/Exercise	Page
		مثال / تمرين	الصفحة
1	Define diffraction as the bending of a wave as it passes the edge of a barrier. State and explain Huygen's principle.	Figure 12	59
2	Describe that the color of light is related to its wavelength and frequency. Describe white light as a combination of the spectrum of colors, each having a different wavelength.	Figure 14	60
3	Describe primary and secondary pigments and the effects of mixing pigments or dyes.	Student Textbook	60
4	State and explain Malus's law. Apply Malus's law to light filtered by polarizer and analyzer filters.	PHYSICS Challenge	65-63
5	Relate the speed of light to its wavelength and frequency.	PRACTICE Problems 16	67
6	Relate frequency change (fobs - f) and doppler shift ( $\lambda_{obs} - \lambda$ ) to actual frequency and wavelength using mathematical equations. Apply mathematical equations to calculate unknown physical quantities (wavelengths, frequencies, or speeds) when light waves are doppler shifted based on the relative speed of the observer and the light source.	Student Textbook PRACTICE Problems	67-66
7	Describe the law of reflection. Apply the law of reflection in drawing ray diagrams and solving numerical problems	Student Textbook	75
8	Differentiate between diffuse and specular reflection and give examples.	Figure 4	76
9	Describe the properties of an image formed by a plane mirror.	Student Textbook	78
10	Represent mathematically the relation between image position and object position, as well as the image height and object height for a plane mirror.	Check Your Progress 8	79
11	Define the principal axis, the focal point, and the focal length of a spherical mirror.	Figure 10	80
12	Relate the focal length to the radius of curvature of a spherical mirror.	Student Textbook	81
13	Draw a ray diagram to find the image of an object located at a distance greater than twice the focal length of a concave mirror, and determine the properties of the formed image.	Student Textbook	83-82
14	Describe defects in concave mirrors, such as spherical aberration, and how they can be corrected.	Student Textbook	85
15	Define magnification as the ratio of the image height to the object height. Calculate the magnification produced by a spherical mirror.	Student Textbook	87-86
16	Describe primary and secondary colors and the effects of mixing colors .	Figure 14	60
17	Apply Malus's law to light filtered by polarizer and analyzer filters.	PHYSICS Challenge	65-63
18	Apply mathematical equations to calculate unknown physical quantities (wavelengths, frequencies, or speeds) when light waves are doppler shifted based on the relative speed of the observer and the light source.	PRACTICE Problems 16-17-18-19	67
19	Apply the mirror equation to calculate the image distance, the object distance, or the focal length of a spherical mirror using appropriate algebraic signs for focal length and corresponding distances	EXAMPLE Problem 2	88-86
*	Questions might appear in a different order in the actual exam, or on the exam paper		
*	قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي، أو على ورقة الامتحان		
**	As it appears in the textbook, LMS, and (Main_IP).		
**	والخطة الفصلية . LMS كما وردت في كتاب الطالب و		