اختبار مطابق لمخرجات الهيكل الوزاري الجديد منهج انسباير القسم الالكتروني

تم تحميل هذا الملف من موقع المناهج الإماراتية	
موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الثاني عشر المتقدم ⇦ فيزياء ⇦ الفصل الأول ⇦ ملفات متنوعة ⇦ الملف	
تاريخ إضافة الملف على موقع المناهج: 12-11-2025 13:34:09	
ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس	المزيد من مادة فيزياء:
إعداد: عبد الرحمن عصام	

التواصل الاجتماعي بحسب الصف الثاني عشر المتقدم					
صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف الثاني عشر المتقدم والمادة فيزياء في الفصل الأول	
كراسة تدريبية مراجعة وفق الهيكل الوزاري الجديد منهج بريدج	1
شرح دروس الوحدة الثانية المجال الكهربائي وقانون جاوس مع تدريبات متبوعة بالإجابات	2
أوراق عمل مراجعة الوحدة الثانية المجال الكهربائي وقانون جاوس	3
نموذج إجابة تجميعة أسئلة مراجعة وفق الهيكل الوزاري الجديد المسار C منهج انسباير	4
تجميعة أسئلة مراجعة وفق الهيكل الوزاري الجديد المسار C منهج انسباير	5

تربية وتعليم

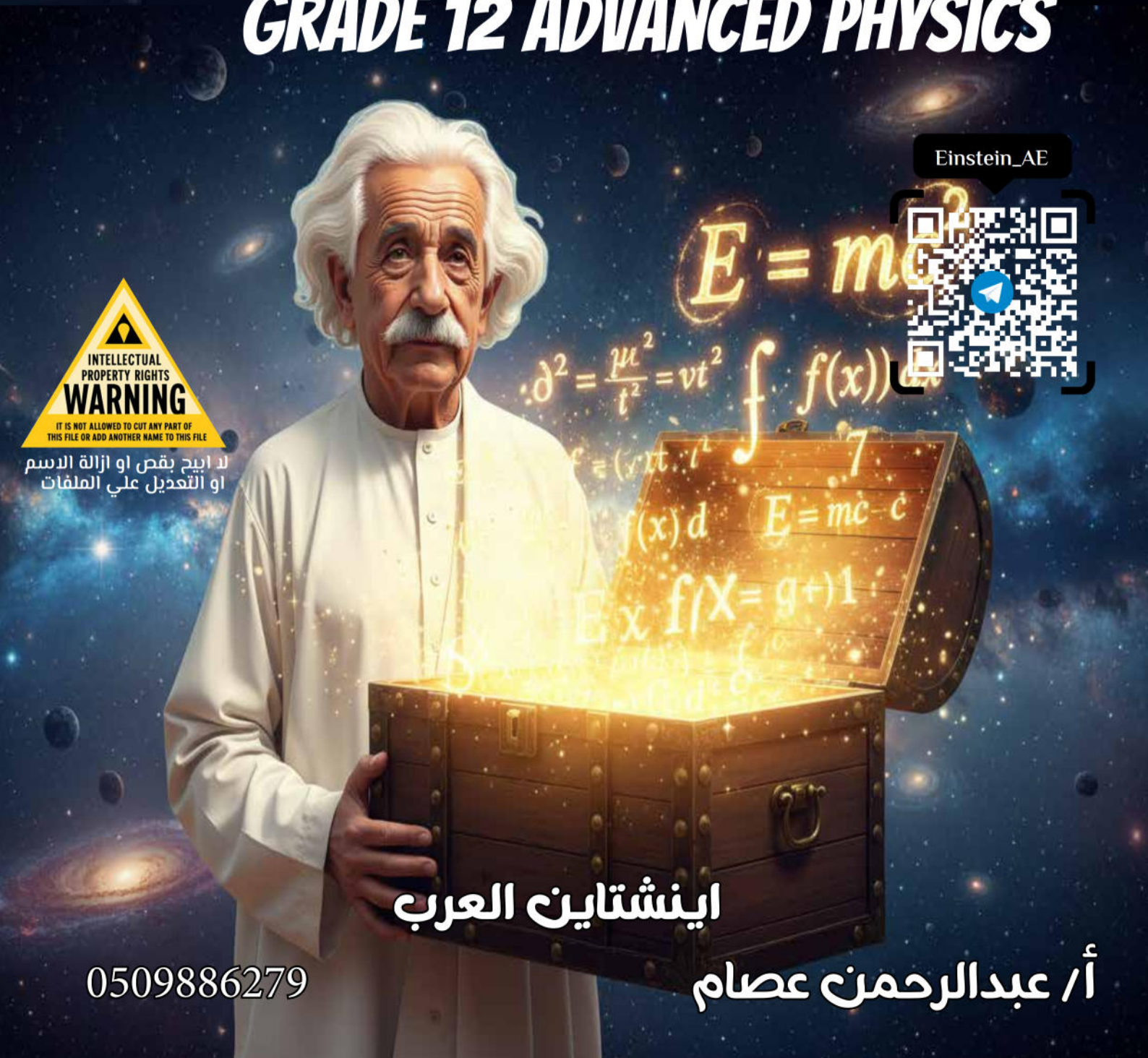
PHYSICS 2025 2026 exam

Term 1

2026-2025

MOCK EXAM

EOT1 COVERAGE EXAM FOR GRADE 12 ADVANCED PHYSICS



اينشتاين العرب
أ/ عبدالرحمن عصام
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Whenever necessary, use the following physical formulas.		
Module 15: Fundamentals of Light	**Module 16: Reflection and Refraction**	
	Reflection and Mirrors	**Refraction and Lenses**
$E = \frac{P}{4\pi r^2}$	$\theta_i = \theta_r$	$\sin\theta_c = \frac{n_2}{n_1}$
		$n = \frac{c}{v}$
$I_2 = I_1 \cos^2\theta$	$f = \frac{r}{2}$	$n_1 \sin\theta_1 = n_2 \sin\theta_2$
$f_{obs} = f(1 \pm \frac{v}{c})$	$\frac{1}{f} = \frac{1}{x_i} + \frac{1}{x_o}$	$\frac{1}{f} = \frac{1}{x_i} + \frac{1}{x_o}$
$(\lambda_{obs} - \lambda) = \Delta\lambda = \pm\frac{v}{c}\lambda$	$m = \frac{h_i}{h_o} = -\frac{x_i}{x_o}$	$m = \frac{h_i}{h_o} = -\frac{x_i}{x_o}$
Whenever necessary, use the following physical constants.		
$c = 3 \times 10^8$ m/s		

This exam is fully aligned with the learning outcomes outlined in EOT1 coverage – Grade 12 Advanced Physics (INSPIRE). It includes questions that follow the official ministry format and incorporates examples from previous years' exams to ensure comprehensive coverage and practice on ministry-style questions. The exam is designed to reflect the same structure, level of difficulty, and question types found in standardized assessments, providing students with an authentic and realistic training experience.

Prepared by Mr. Abdelrahman Essam Eid, Physics Teacher, United Arab Emirates.

هذا الاختبار مطابق تمامًا لمخرجات التعلم الواردة في *EOT1 coverage – الصف الثاني عشر فيزياء متقدم (INSPIRE)* .

يحتوي على أسئلة تتبع نمط الوزارة ، ويشمل أمثلة من اختبارات السنوات السابقة لضمان تغطية شاملة والتدريب على أفكار الوزاري.

تم تصميم الاختبار ليعكس نفس الهيكل ومستوى الصعوبة وأنواع الأسئلة الموجودة في الاختبارات القياسية، مما يوفر للطلاب تجربة تدريبية واقعية.

اعداد أستاذ عبد الرحمن عصام عيد مدرس الفيزياء الامارات العربية المتحدة

1. The quantities of light

According to the equation

$$X = E \times 4\pi r^2$$

What does the symbol **X** represent, and what is its SI unit?

ⓐ

Physical Quantity	SI Unit
Luminance	cd/m²

ⓑ

Physical Quantity	SI Unit
Luminous Flux	lm

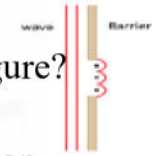
ⓒ

Physical Quantity	SI Unit
Illuminance	lx

ⓓ

Physical Quantity	SI Unit
Luminous Intensity	cd

2. The bending of a wave



What is the **name of the phenomenon** of the waves after passing the barrier in the figure?

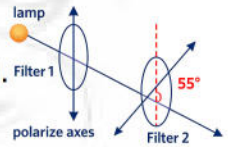
ⓐ Reflection ⓑ Diffraction ⓒ Polarization ⓓ Refraction

3. The color of light

Which of these colors of light has **Lowest frequency of Color.**

ⓐ Red ⓑ Green ⓒ Black ⓓ Violet

4. Malus's law



In the figure, the intensity of the polarized light coming out from **Polarizer 2** is (75 W/m^2).
Calculate the intensity of the polarized light coming out from filter 1?

ⓐ 228 W/m^2 ⓑ 112 W/m^2 ⓒ 92 W/m^2 ⓓ 130 W/m^2

5. Doppler effect of light

An astronomer knows that the light at the source of a star has a frequency of 4.6×10^{14} *Hz*.
The frequency of the observed light from the approaching star is 6.5×10^{14} *Hz*.
What is the velocity of the star relative to Earth?

ⓐ 2.3×10^8 m/s ⓑ 1.2×10^8 m/s ⓒ 8.8×10^7 m/s ⓓ -1.2×10^8 m/s

6. The law of reflection

A ray of light strikes a plane mirror at an angle of incidence of 30°
It is reflected from the mirror and then strikes a second plane mirror placed so that the angle between the mirrors is 45°
What is the **angle of reflection at the second mirror**?

ⓐ 45° ⓑ 75° ⓒ 60° ⓓ 15°

7. plane mirror

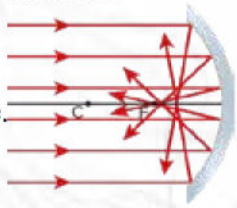
Salem is 1.30 $m$tall. As shown in the figure, his image appears 25.0 cm away from him in a plane mirror.
What is the image's type and how far away is it from the mirror?

ⓐ (Real, 25.0 cm) ⓑ (Virtual, 1.30 m) ⓒ (Virtual, 12.5 cm) ⓓ (Virtual, 50.0 cm)

8. The defects in concave mirrors

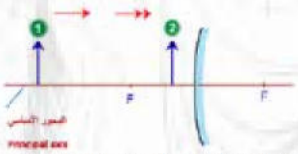
Abdelrahman has a concave spherical mirror, and when he looks into it, the image appears blurred and unclear. The reason is an optical defect called *spherical aberration*,
Which of the following statements **is not correct** about the spherical aberration of concave mirrors?

ⓐ It does not occur for parabolic mirrors.
ⓑ It does not occur for spherical mirrors.
ⓒ We can reduce it by reducing the ratio of the mirror's diameter to its radius of curvature.
ⓓ Occurs because the reflected light rays do not converge at a focal point.



9. The image of an object

When an object is placed in front of a convex mirror at position (1) as shown in the figure, an upright, virtual, and reduced image is formed by the mirror.
As the **object moves closer** to the mirror to position (2),
what **happens** to the **image**?



ⓐ The image becomes inverted, virtual, and reduced.
ⓑ The image becomes upright, real, and enlarged.
ⓒ The image remains upright, virtual, and reduced.
ⓓ The image becomes inverted, real, and enlarged.

10. The mirror equation

An object is placed **60 cm** in front of a **concave mirror** with a **focal length of 40 cm**.
The image formed is **real and inverted**.
What is the distance between the image and the mirror?
Which of the following **equations** is used to solve this?

ⓐ $\frac{1}{x_i}=\frac{1}{40}-\frac{1}{60}$ ⓑ $\frac{1}{x_i}=\frac{1}{60}-\frac{1}{40}$ ⓒ $\frac{1}{x_i}=\frac{1}{40}+\frac{1}{60}$ ⓓ $x_i = 40 + 60$

11. The magnification

A mirror has a magnification of (+3.6).
Which are **the correct properties** for the image produced by this mirror?

ⓐ virtual and upright ⓑ real and upright ⓒ virtual and inverted ⓓ real and inverted

12. plane, concave, and convex mirrors

Four students are facing four different mirrors, and their reflections appear as shown in the table below:

Student	Saif	Hamad	Saeed	Rashid
Image's Type	Reduced-upright	Reduced-inverted	Same size-upright	Enlarged-upright

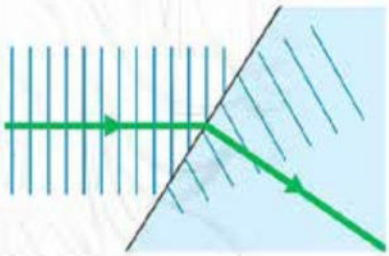
Which student(s) is (are) facing a convex mirror?

ⓐ Only Rashid ⓑ Rashid and Hamad ⓒ Saif and Hamad ⓓ Only Saif

13. The refraction of wave

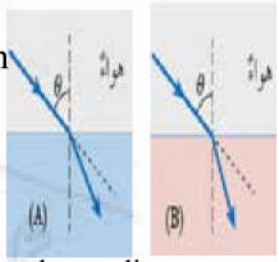
A light beam with frequency f and wavelength λ travels from one transparent medium to another. If its speed in the first medium is v_1 and its speed in the second medium is v_2, which row in the following table **correctly** shows Phenomenon Speed in second medium Frequency in second medium Wavelength in second medium ?

Row	Phenomenon	Speed	Frequency in second medium	Wavelength in second medium
ⓐ	Diffraction	Decreases	f / 2	λ
ⓑ	Refraction	Increased	f	2λ
ⓒ	Refraction	Decreases	f	λ
ⓓ	Diffraction	Increased	2f	λ / 2



14. The index of refraction

The Figure shows a light ray traveling from the air to a transparent medium (A)and to another transparent medium (B), at the same angle of incidence. Which medium (A) or (B) has the speed of light **greater**?



ⓐ Medium (A) ⓑ Medium (B)

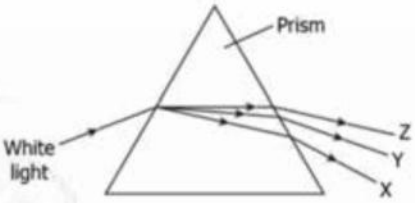
ⓒ It depends on the speed of light in air ⓓ Speed of light does not depend on the medium

15. Natural phenomena

Which one of the items below is **not involved** in the formation of rainbows?

ⓐ Refraction ⓑ Reflection ⓒ Diffraction ⓓ Dispersion

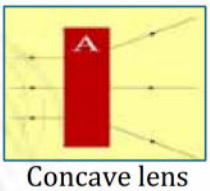
16. The dispersion of light through a prism



The image shows the dispersion of the white light in the prism.
What will be the **colours** of the X, Y and Z?

ⓐ X: red; Y: violet; Z: green
ⓑ X: violet; Y: green; Z: red
ⓒ X: green; Y: violet; Z: red
ⓓ X: red; Y: green; Z: violet

17. Optical devices



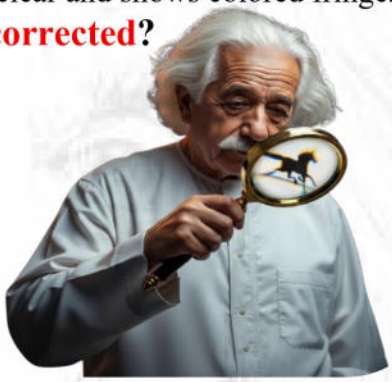
Which of the following optical devices can be found hidden under piece A?

ⓐ Convex lens ⓑ Convex mirror ⓒ Plane mirror ⓓ Concave lens

18. The defects in spherical lenses

Mr. Abdelrahman uses a lens, but the image formed appears unclear and shows colored fringes.
What is the name of this defect, and how can it be corrected?

	Defect Name	Correction Method
ⓐ	Spherical Aberration	Use a parabolic lens
ⓑ	Chromatic Aberration	Use achromatic lenses
ⓒ	Chromatic Aberration	Use a parabolic lens
ⓓ	Spherical Aberration	Use a achromatic lens

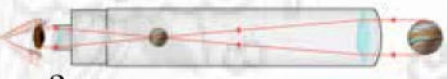


19. The defects in vision

Objects at a distance to a person are blurred.
What is the name of a person's visual defect and what type of lens is used to correct it?

	Defect Name	Type of Lens Used to Correct
ⓐ	Near-sightedness	Concave lens
ⓑ	Near-sightedness	Convex lens
ⓒ	Farsightedness	Convex lens
ⓓ	Farsightedness	Concave lens

20. The optical systems



You have two convex lenses of focal lengths 10 cm and 60 cm.
Which lens is **the best eyepiece lens** to make a refracting telescope?

ⓐ The lens with a focal length of 60 cm
ⓑ Any of the two lenses
ⓒ The lens with a focal length of 10 cm
ⓓ Both lenses are not suitable