هيكل اختبار نهاية الفصل



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: 2026-11-07 23:35:28

المزيد من مادة فيزياء:	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

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	
1	حل أسئلة اختبار نهاية الفصل (محلول)
2	شرح ومسائل تدريبية على أمواج المادة
3	شرح النموذج الكمي للذرة والليزر
4	أسئلة وزارية سابقة
5	شرح ومسائل محلولة حول قانون كولوم وقانون نيوتن في الجذب

تحميل تطبيق المناهج للهواتف الذكية	
تطبيق المناهج على App Store (آبل)	تطبيق المناهج على Play Google (أندرويد)

UNITED ARAB EMIRATES
MINISTRY OF EDUCATION

الإمارات العربية المتحدة
وزارة التربية والتعليم

End of Term 1 Exam Coverage	هيكل اختبار نهاية الفصل الدراسي الأول
Grade 12 Advanced - Physics	**الصف الثاني عشر - متقدم - الفيزياء**
Academic Year 2026-2027	العام الدراسي 2027-2026
Inspire	**انسباير**

Number of questions/ عدد الأسئلة		Marks Per Question درجة السؤال	Maximum grade الدرجة القصوى
[1⇢16]	Number Of MCQ (16) عدد الاسئلة الموضوعية	2 ,3, 4	100
[17⇢20]	Number of FRQs (4) عدد الاسئلة المقالية	8 ~11	

Exam duration مدة الاختبار	Mode of implementation طريقة التطبيق	Calculator الآلة الحاسبة
150 minutes 150دقيقة	Electronic & Paper إلكتروني وورقي	Allowed مسموح بها

APPROVED

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

⚠ قد تظهر الأسئلة بترتيب مختلف في الاختبار الفعلي.

Q. T	Q.Nº	Learning outcome	Reference	Page
أسئلة اختيار من متعدد Multiple Choice Question	1	• -Define potential energy and gravitational potential energy. • -Relate gravitational potential energy to mass and height (GPE = mgh). • -Show that work done by gravity is opposite to the change in gravitational potential energy. • -Discuss energy transformations when an object moves vertically upward or downward.	Student Textbook Example Problem 4 Check Your Progress Practice problems 31,32,33,34 Get it	14-18 19 22 20 25
	2	• -Define elastic potential energy and give examples. • -Interpret mass as rest energy ($E = mc^2$) and identify other forms of energy.	Student Textbook Check Your Progress 35	20-22 22
	3	• -Compare elastic and inelastic collisions. • -Explain the loss of kinetic energy in inelastic collisions. • -Use conservation principles to distinguish and analyze elastic and inelastic collisions.	Student Textbook Example Problem 6 Practice problems 44	29-31 31 32
	4	• -Describe thermal radiation and the emission spectrum of an object. • -Relate the frequency at which the emission spectrum peaks to the object's temperature. • -Describe where classical electromagnetic wave theory agrees with and fails to explain thermal-radiation data.	Student Textbook	46-48
	5	• -Explain Planck's concept of quantization of energy. • -Describe that emitted or absorbed radiation corresponds to a change in vibrational energy. • -Calculate quantized energy using E = nhf.	Student Textbook Practice Problems 1,2,3,4	48 52
	6	• -Define the photoelectric effect, photoelectrons, photons, and threshold frequency. • -Explain how the photoelectric effect occurs when light shines on a metal surface. • -Define the electron volt (eV).	Student Textbook Check Your Progress 16,17,20,21	49-51 58
	7	• -Calculate photon energy from wavelength or frequency. • -Explain that maximum photoelectron kinetic energy is independent of incident-light intensity, while photoelectric current is proportional to intensity.	Student Textbook Example Problems 1,2 Practice Problems	51-56 54,56,56
	8	• -Calculate photon energy, maximum kinetic energy of emitted electrons, and the work function in photoelectric-effect problems. • -Interpret the graph of maximum kinetic energy versus photon frequency and identify threshold frequency and Planck's constant.	Student Textbook Check Your Progress 20 Example problem 1 Practice problem 5-11	50,53 55 54 54
	9	• -Calculate the momentum of a photon. • -Explain the Compton effect and how it supports the particle theory of light. • -Describe that photon-particle collisions obey conservation of energy and momentum.	Student Textbook Check Your Progress 18,24	57,58 58
	10	• -Describe de Broglie's hypothesis of the wave nature of matter and its experimental verification by electron diffraction. • -Define and calculate the de Broglie wavelength of a moving particle.	Student Textbook Example Problem 3 Practice Problems 25-28 Check Your Progress 29,31	59 60 60 61
	11	• -State Heisenberg's uncertainty principle. • -Describe the limitation on simultaneously measuring a particle's position and momentum.	Student Textbook Check Your Progress 32	61 61
	12	• -Describe electron distribution according to Thomson's model and how Rutherford's alpha-particle scattering experiment led to the nuclear model. • -Explain why Rutherford's planetary model cannot explain atomic stability and observed line-emission spectra.	Student Textbook Check Your Progress 41	62-63 74
	13	• -Describe emission from gas-discharge sources and the use of a spectroscope. • -Distinguish continuous emission spectra from discrete line spectra. • -Explain how emission and absorption spectra act as unique fingerprints and can identify unknown samples.	Student Textbook Get it Check Your Progress 40,42,43, 44	64-66 65, 66 74
	14	• -Describe Bohr's model: stationary states, quantized energy levels, ground state, and excited states. • -Explain absorption or emission of a photon during transitions between energy levels and describe key limitations of the Bohr model.	Student Textbook Practice Problems 33, 35 Check Your Progress 45	67-69 72 74
	15	• Describe quantized orbital radii and total energies in the Hydrogen atom and their dependence on principal quantum number n. • -Explain the zero-energy reference and negative bound-state energy. • -Distinguish the Lyman, Balmer, and Paschen spectral series.	Student Textbook Get it Check Your Progress 46	69-71 70,71 74
	16	• Describe the quantum model using electron clouds, de Broglie wave-particle duality, and Heisenberg's uncertainty principle. • -Describe spontaneous and stimulated emission, coherent light, and the operation and applications of lasers.	Student Textbook Get it Check Your Progress 47-50	75-79 76-79 79
أسئلة مقالية Free Response Questions	17	• -Calculate translational and rotational kinetic energies and solve problems involving rotational kinetic energy. • -Calculate gravitational work and relate it to the change in gravitational potential energy. • -Apply conservation of mechanical energy to solve problems in physical situations.	Student Textbook Example Problem 4,5 Practice Problems 39-43 Check Your Progress 47, 50,51	23-25 19,27 28 32
	18	• -Analyze one-dimensional collisions to calculate momenta, velocities, kinetic energies, and other physical quantities before or after the collision. • -Use conservation principles to distinguish and analyze elastic and inelastic collisions.	Example Problem 6 Practice Problems 45, 46 Check Your Progress 49	31 32 32
	19	• -Calculate photon energy, maximum kinetic energy of emitted electrons, and the work function in photoelectric-effect problems. • -Interpret a graph of maximum kinetic energy versus incident-photon frequency to determine threshold frequency and Planck's constant.	Student Textbook Example Problem 2 Practice problems 12-15 Check Your Progress 20,21	55 56 56 58
	20	• -Calculate the change in an atom's energy during transitions between Bohr energy levels. • -Calculate the energy, frequency, and wavelength of emitted or absorbed photons. • -Calculate Hydrogen orbital radius and total energy for a given principal quantum number n.	Get it Example Problem 4 Example Problem 5 Practice Problems 37-39 Check Your Progress 42	74 72 73 73 74