

الهيكل الوزاري الجديد 2025 منهج انسابير المسار المتقدم



تم تحميل هذا الملف من موقع المناهج الإماراتية

موقع المناهج ← المناهج الإماراتية ← الصف العاشر المتقدم ← فيزياء ← الفصل الثالث ← ملفات متنوعة ← الملف

تاريخ إضافة الملف على موقع المناهج: 15-05-2025 07:53:37

ملفات اكتب للمعلم اكتب للطالب | اختبارات الكترونية | اختبارات حلول | عروض بوربوينت | أوراق عمل
منهج إنجليزي | ملخصات وتقارير | مذكرات وبنوك | الامتحان النهائي | للمدرس

المزيد من مادة
فيزياء:

التواصل الاجتماعي بحسب الصف العاشر المتقدم



الرياضيات



اللغة الانجليزية



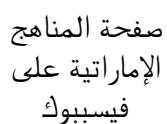
اللغة العربية



ال التربية الاسلامية



المواد على Telegram



صفحة المناهج
الإماراتية على
فيسبوك

المزيد من الملفات بحسب الصف العاشر المتقدم والمادة فيزياء في الفصل الثالث

حل أسئلة الامتحان النهائي القسم الالكتروني منهج انسابير

1

دليل تصحيح أسئلة الامتحان النهائي القسم الورقي منهج بريدج

2

أسئلة الامتحان النهائي القسم الورقي منهج انسابير

3

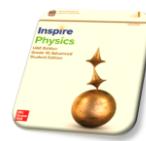
أسئلة الامتحان النهائي القسم الورقي منهج بريدج

4

حل النموذج التدريبي للامتحان النهائي

5

Exam Coverage العين على الامتحاني



PHYSICS
الفيزياء

Academic Year	2024/2025
العام الدراسي	
Term	3
الفصل	
Subject	Physics/Inspire
المادة	الفيزياء/إنسپر
Grade	10
الفصل	
Stream	Advanced
الفصل	المتقدم
Number of MCQ نحوة الأسئلة المختارة	15
Marks of MCQ نحوة الأسئلة المختارة	4
Number of FRQ نحوة الأسئلة المفتوحة	5
Marks per FRQ نحوة كل سؤال مفتوح	8
Type of All Questions نحوة كل الأسئلة	MCQ/ الأسئلة المختارة FRQ/ الأسئلة المفتوحة
Maximum Overall Grade نحوة المجموع الكلية	100
Exam Duration - Total Time	150 minutes
Mode of Implementation - Digital Mode	SwiftAssess & Paper-Based
Calculator المحمولة	Allowed محتملة

Question* السؤال*	Learning Outcome/Performance Criteria** النتائج المترتبة على الأداء	Reference(s) In the Student Book (English Version) المراجع في كتاب الطالب (النسخة الإنجليزية)	
		Example/Exercise مثال/جذع	Page الصفحة
1	Explain how the relative motion between a conductor such as a wire and a magnetic field causes an induced emf.	Student Book Q.(1 - 3)	P.151
2	1. Explain how the relative motion between a conductor such as a wire and a magnetic field causes an induced emf. 2. Apply the right-hand rule to determine the direction of the induced emf and thus the direction of induced current in a wire moved in a magnetic field.	Student Book Figure 2	P.149
3	Relate effective current and effective potential to the maximum values of current and potential in an AC circuit, and calculate the maximum and effective values of current, potential, and power for an AC generator.	Student Book Q.(5 - 8)	P.155
4	Explain how transformers are used in the National Grid System to transmit power through long distances with minimal power losses.	Student Book Q.(20 - 23)	P.163
5	Relate the turn's ratio of a transformer to its corresponding voltage ratio and apply the ideal transformer equation to solve numerical problems.	Student Book Q.(16 - 17)	P.162
6	Define electromotive force emf and specify its unit as volts (V).	Student Book Content	P.149
7	Explain how the speed of propagation of electromagnetic waves vary through different materials.	student Book Q.(42 - 45)	P.176 P.177
8	Apply the wave equation to calculate the wavelength, frequency, or speed of electromagnetic waves.	Student Book Figure 23; Q.(38 - 41)	P.173; P.174
9	Determine the optimal length or orientation of an antenna for the best reception of a given wave.	Student Book Q.(49, 51)	P.179 - 180 P.181
10	Recall the concepts of constructive and destructive interference and define interference fringes of light.	Student Book Figure 6	P.191 P.191
11	Explain how bright and dark interference fringes (bands) are created in a double-slit interference investigation with monochromatic light.	Student Book Content	P.195 P.195
12	Discuss the phenomenon of thin-film interference as one example of light interference in nature, and explain how the refractive indexes of the mediums that make the thin film control wave inversion.	Student Book Figure 8; Q.(5 - 9)	P.193 - 194 P.193; P.195
13	1. Explain the formation of a colored spectra when white light is used in a double-slit investigation. 2. Explain how coherent light is generated by passing monochromatic light through slits.	Student Book Figure 3	P.189 P.189
14	Explain the diffraction of light according to Huygen's principle (all the points of a wavefront of light can be thought of as new sources of smaller waves called wavelets), to form a diffraction pattern.	Student Book PHYSICS Challenge Q.(1 - 2)	P.197 - 199 P.199;
15	Define diffraction as the bending of a wave as it passes the edge of a barrier, and how the diffraction pattern that is created when light (green, red, white...) passes through a single slit, with illustration by Huygen's wavelets the diffraction patterns.	Student Book Text Book	P.197 - 199 P.197 - 199
* Questions might appear in a different order in the actual exam.			
** As it appears in the textbook, LMS, and (Main IP).			
*** Physical units are distinctive for any physical quantity, and a distinguishing mark for it. Therefore, care must be taken to guide students by giving the appropriate physical unit for each quantity.			
**** Focusing on science processes (scientific thinking skills), especially basic ones.			
FRQ - الأسئلة المفتوحة	Q1 1. Apply the equation $EMF=BLv(\sin \theta)$ to determine the magnitude of induced emf for a wire moving through a magnetic field. 2. Apply the equation $I=EMF/R$ to calculate the magnitude of induced current in a wire that is part of a closed circuit.	Student Book Q.(1 - 3)	P.149 - 150 P.151
	Part A: Define electromagnetic induction, identify its types, self-induction and mutual induction, and relate them to Faraday's law of electromagnetic induction.	Student Book	P.148, 159 - 160 P.161 P.148 - 149
	Q2 Part B: Differentiate between step-up and step-down transformers. Part C: Explain how the relative motion between a conductor such as a wire and a magnetic field causes an induced emf.	Table "CONNECTING MATH to Physics"; Q.(20 - 23)	P.155; P.163 P.163 Q.4 P.151
	Q3 Part A: Define electromagnetic induction, identify its types, self-induction and mutual induction, and relate them to Faraday's law of electromagnetic induction. Part B: 1. Describe how Lenz's Law affects the operation of electric motors and generators. 2. Describe magnetic levitation and the braking effect through eddy currents as applications on Lenz's Law. 3. Differentiate between AC and DC currents	Student Book Figure 10 (Apply); Q.18 All Terms / Concepts	P.156 - 157 P.154, 157 - 159 P.157; P.163 P.154, 157 - 159
	Q4 Part A: 1. Apply the relation $(\lambda=sd/L)$ to calculate the wavelength or to find an unknown distance in a double-slit investigation given the other values. 2. Show that the intensity of bright bands decreases as you go farther from the central band (double-slit interference with monochromatic light). 3. Explain the formation of a colored spectra when white light is used in a double-slit investigation. Part B: Explain how optical discs act as diffraction gratings, and using the constructive interference equation ($m\lambda = ds\sin\theta$ where $m=1,2,3...$) in a diffraction grating to calculate the wavelength of light.	Student Book Q.(1 - 4) Q.(20 - 24)	P.191 - 192 P.200 - 202 P.192 P.203
Q5 Part A: 1. Explain how bright and dark interference fringes are created in a double-slit interference investigation with monochromatic light. 2. Recall the concepts of constructive and destructive interference and define interference fringes of light.	Student Book Figure 5 Figure 1	P.189 - 190 P.188 P.190 P.188	