

الهيكل الوزاري الجديد 2025 منهج انسابير المسار المتقدم



تم تحميل هذا الملف من موقع المناهج الإماراتية

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

تاريخ إضافة الملف على موقع المناهج: 09:12:14 2025-05-15

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

المزيد من مادة
فيزياء:

التواصل الاجتماعي بحسب الصف التاسع المتقدم



صفحة المناهج
الإماراتية على
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

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

الهيكل الوزاري الجديد 2025 منهج بريدج المسار المتقدم

1

ورقة عمل Energy and Work منهج انسابير بدون الحل

2

ورقة عمل مراجعة الوحدة التاسعة (الطاقة الحرارية)

3

حل أسئلة الامتحان النهائي القسم الورقي والالكتروني منهج انسابير

4

حل الوحدة العاشرة conservation its and Energy منهج انسابير

5



Testing and Assessment Department

إدارة الاختبارات والتقييم للتعليم العام

Exam Coverage
الهيكل الامتحاني

PHYSICS

الفيزياء

Academic Year	2024/2025
السنة الدراسية	
Term	3
الفصل	
Subject	Physics/فيزياء
المادة	
Grade	9
الصف	
Stream	Advanced
المسار	
Number of MCQ	15
عدد الأسئلة الموضوعية	
Marks of MCQ	4
حجم الأسئلة الموضوعية	
Number of FRQ	5
عدد الأسئلة التوضيحية	
Marks per FRQ	8
حجم الأسئلة التوضيحية	
Type of All Questions	MCQ / الموضوعية / FRQ / التوضيحية
نوع كافة الأسئلة	
Maximum Overall Grade	100
الدرجة القصوى المحتملة	
Exam Duration	150 minutes
مدة الامتحان	
Mode of Implementation	Paper-Based
طريقة التطبيق	
Calculator	Allowed
الآلة الحاسبة	مسموحة

Question*	Learning Outcome/Performance Criteria** لأجل التعلم / معايير الأداء**	Reference(s) in the Student Book (English Version) المراجع في كتاب الطالب (النسخة الانجليزية)	
		Example/Exercise مثال / تمرين	Page الصفحة
الأسئلة الموضوعية - MCQ	1 Explain Kepler's Second Law which states that an imaginary line from the Sun to a planet sweeps out equal areas in equal time intervals.	Student Book Q.(1 - 7)	P.(160 - 161) P.162
	2 Explain Kepler's Third Law which states that the square of the ratio of the periods of any two planets revolving about the Sun is equal to the cube of the ratio of their average distances from the Sun and write it in equation form $((T_2/T_1)^2 = (r_2/r_1)^3)$.	Student Book Q.(1 - 7)	P.(160 - 161) P.162
	3 Explore the gravitational force between objects and the parameters affecting that force, and explain the insignificance of such force between objects.	Student Book Figure 5	P.163 P.163
	4 Define gravitational force as the force of attraction between two or more objects with given masses, with an explanation of the law of universal gravitation as a form of Newton's second law, and writing it in the form of an equation $(F_g = (Gm_1 m_2)/r^2)$.	Student Book Figure 6; Q.9	P.163 P.163; P.167
	5 Explain Kepler's First Law which states that the planets follow elliptical paths with the sun at one focus.	Student Book Get It: Describe, Figure 2	P.160 P.160
	6 1. Show that work is done when a force is applied through a displacement. 2. Recall that a perpendicular force (perpendicular to the direction of motion) does no work, but only changes the direction of motion of an object.	Student Book Figure 1	P.(182 - 183) P.182
	7 1. Determine the mechanical work done on a body by a constant force divided by a displacement as the dot product of the force vector and the displacement vector, and explain that the work done by a variable force is represented by the area under the force-displacement graph. 2. Illustrate when work is positive, negative or zero with suitable examples.	Student Book Q.(1 - 9)	P.185 P.(186 - 187)
	8 Apply the relationship between power, the work done by a force, and the time interval in which that work is done $(P=W/t)$.	Student Book Q.(14 - 18); Q.(25 - 26)	P.(190 - 192) P.191; P.192
	9 1. Define energy as the ability of a system to do work or produce a change in itself or in the surrounding world, measured in Joules. 2. Determine the international unit by which all types and forms of energy are measured.	Student Book Content	P.188 P.188
	10 1. Calculate the work done by the gravitational force when an object is lifted or lowered from a reference level. 2. Discuss energy transformations in situations where an object moves vertically upward or downward.	Student Book Figure 15 & 16; Q.(30 - 34)	P.(196 - 198) P.(196 - 197); P.199
	11 1. Define kinetic energy and apply the relationship between a particle's kinetic energy, mass, and speed $(KE=1/2mv^2)$. 2. Solve problems related to work and kinetic energy.	Student Book Get It? Explain; Q.49	P.194 P.194; P.211
	12 1. Relate the rotational kinetic energy to the object's moment of inertia and its angular velocity: $[KE]_{rot} = 1/2 I \omega^2$. 2. Calculate the translational and rotational kinetic energies for objects.	Student Book Q.37	P.195 P.201
	13 Apply the equation $(P=\rho gh)$ to calculate the pressure exerted by a column of fluid on a body where ρ is the density of the fluid, g is the gravitational acceleration, and h is the height of the column of fluid.	Student Book Figure 11	P.238 P.238
	14 Apply Pascal's principle to hydraulic systems to solve problems.	Student Book Figure 10; Q.(24 - 26); Q.(33, 36)	P.(237 - 238) P.237; P.238; P.244
	15 1. Verify, through experimental demonstration, Bernoulli equation [dependence of pressure at some point inside a dynamic fluid on the speed of the fluid at that point and the height of the point], and develop mathematical models for special cases of fluid flow. 2. Explain the change of speed of flow of a fluid passing through a pipe with a variable cross - section.	Student Book Figure 15; Q.(12 - 16); Q.38	P.(242 - 243) P.243; P.147; P.244
* Questions might appear in a different order in the actual exam. قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي.			
** As it appears in the textbook, LMS, and (Main IP). كما ورد في كتاب الطالب وLMS والنسخة الفعلية.			
*** 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.		الوحدات الفيزيائية مميزة لأي كمية فيزيائية، وعلامة فارقة لها، لهذا يجب الاهتمام بتوجيه الطلاب باعطاء الوحدة الفيزيائية المناسبة لكل كمية.	
**** Focusing on science processes (scientific thinking skills), especially basic ones.		التركيز على عمليات العلم (مهارات التفكير العلمي) وخاصة الأساسية منها.	
الأسئلة التوضيحية - FRQ	Q1 Part A: Determine the free-fall acceleration of objects on the surface of the Earth and at higher altitudes. Part B: Calculate the orbital speed of a satellite.	Student Book Figure 6; Get It: Calculate & Get It: Explain; Q.(18 - 20) Q.(14 - 17); Q.21	P.163 P.169 P.163; P.(171 - 173); P.176 P.170; P.176
	Q2 1. State and explain the law of conservation of energy 2. Define mechanical energy as the sum of all kinetic and potential energies of the system; $ME=KE+PE$. 3. Apply the law of conservation of mechanical energy $(KE+PE_{int}=KE+PE_{ext})$ to solve problems on different physical situations like roller coaster rides, skiing on ski slopes, motion on inclined planes/hills, motion of pendulums, or others.	Student Book Q.(39 - 43); Q.(44 - 53)	P.(202 - 206) P.207; P.211
	Q3 1. Apply the relationship between a force F and the work done on a system by the force when the system undergoes a displacement d : $W=Fd \cos \theta$, where θ is the angle between the direction of the force and the direction of displacement. 2. Determine graphically the work done by a force from the area of force versus displacement graph. 3. Apply the work-energy theorem to relate the net work done on a system and the resulting change in kinetic energy.	Student Book Q.(1 - 13)	P.(182 - 190) P.(182 - 190)
	Q4 1. Analyze the forces acting on an object immersed in a fluid and calculate the net force $(F_{net} = F_g - F_{buoyant})$ to predict whether it will float, sink, or remain in its place (neutral buoyancy). 2. Explain why some objects float while others sink by comparing the density of an object and the density of the fluid in which it is placed.	Student Book Q.(27 - 31)	P.(241 - 239) P.241
	Q5 Part A: Clarify the meaning of the important terms and concepts contained in the GRAVITATION Module. Part B: Define kinetic energy and apply the relationship between a particle's kinetic energy, mass, and speed $(KE=1/2 mv^2)$.	Student Book All Terms / Concepts Get It: Explain; Q.(10 - 13)	P.(159 - 165 & 168 - 173 & 175 - 176) P.194 P.(159 - 165 & 168 - 173 & 175 - 176) P.194; P.190