شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية

نموذج الهيكل الوزاري بريدج المسار المتقدم

تاريخ نشر الملف على موقع المناهج: 2024-02-22 12:26:24

التواصل الاجتماعي بحسب الصف الحادي عشر المتقدم

روابط مواد الصف الحادي عشر المتقدم على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الحادي عشر المتقدم والمادة فيزياء في الفصل الثاني

1	حل أوراق عمل شاملة الوحدة الخامسة Work Energy Kinetic and Power
2	تجميعة مهمة لكل القوانين المستخدمة في الفصل
3	مراجعة وحدة الشغل والطاقة والقدرة
4	حل مذكرة الوحدة الخامسة الطاقة الحركية والشغل والقدرة
5	مذكرة الوحدة الخامسة الطاقة الحركية والشغل والقدرة

Academic Year العام الدراسي	2024/2023
Term الفصل	2nd
Subject الموضوع	Physics(Bridge)
Grade الصف	11
Stream	Advanced/المتقدم
Code	PHY-C-101
Number Of MCQ عدد الأسئلة الموضوعية	15
Markes of MCQ	4
Number of FRQ عدد الأسئلة المقالية	5
Marks Per FRQ	8
Type of All Questions نوع كافة الأسئلة	MCQ/ الأسئلة الموضوعية FRQ/ الأسئلة المقالية
Maximum Overall Grade	100
Exam Duration	150 min.
Mode of Implementation طريقة التطبيق	Swift Assess & Paper-Based
Calculator	Allowed

	Question* السؤال*	Learning Outcome/Performance Criteria** ناتج التعلم/ معايير الأداء**	المرجع في كتاب الطالب (النسخة الانجليزية) Reference(s) in the Student Book (English Version) Example/Exercise/مثال/تمرين	 Page/صفحة
MCQ/الأسئلة الموضوعية	1	Apply the relationship between a particle's kinetic energy, mass, and speed as $K=\frac{1}{2}mv^2$, measured in joules (j) or N.m or $\frac{kgm^2}{s^2}$	Example 5.1	131
			Q.[5.11/5.19]	150
	2	Identify that electron-volt (eV), is the kinetic energy that an electron gains when accelerated by an electric potential of 1volt	Student Book	131
	3	Show that the work done on a particle by a force $\boldsymbol{F}$ when the particle undergoes a displacement $\boldsymbol{\Delta r}$, is given by the scalar product: $W=F\cdot\Delta r=F\Delta r\ cos\alpha$.	Figure5.9	134
			Concept Check5.1	134
			Q.[5.9/5.15/5.17]	150
	4	Define power as the rate at which work is done or energy is transferred.	Student Book	144
	5	Relate the work done by the gravitational force and the gravitational potential energy for an object lifted from rest to a height h as: $\Delta U_g = -W_g$	Student Book	135
	6	Apply Hook's Law to calculate the spring force, the spring constant, or the displacement of the end of the spring knowing the other two quantities.	Example 5.3	141
			Solved Problem 5.2	142
			Q.[5.42/5.43/5.44]	151
	7	(1) Calculate the gravitational potential energy of a particle -Earth system ($U_g = mgy$). (2) Relate the work done by the gravitational force and the gravitational potential energy for an object lifted from rest to a height h as: $\Delta U_g = -W_g$.	Example 6.1	155
			Solved Problem 6.1	156-157
	8	(1) Identify that the work done by a conservative force along a closed path is zero: $W_{(A\rightarrow B)} + W_{(B\rightarrow A)} = 0$. (2) Identify that for a particle moving between two points, the work done by a conservative force does not depend on the path taken by the particle : $W_{(A\rightarrow B),path①} = W_{(A\rightarrow B),path②}$	Student Book	157-159
	9	State the law of conservation of mechanical energy: "For a mechanical process that occurs inside an isolated system and involves only conservative forces, the total mechanical energy is conserved; $\Delta E_{mech} = \Delta K + \Delta U = 0 \quad or \quad K + U = K_o + U_o$.	Student Book	157-159
	10	Solve problems related to work and energy for the spring force	Student Book	168
			Solved Problem 6.4	169
			Q.[6.48/6.49]	184
	11	Apply the law of conservation of mechanical energy for an isolated system (no external forces) with no dissipative forces involved, to calculate different physics quantities.	Student Book	167
			Figure 6.11	167
	12	Show that for a one-dimensional case, the work-kinetic energy theorem is equivalent to newton's second law $\left([(\frac{1}{2}mv_x^2) - (\frac{1}{2}mv_o^2)] = ma_x(x - x_o) = F_x\Delta x = W\right)$.	Student Book	135
	13	Relate momentum to kinetic energy $K=\frac{P^2}{2m}$	Student Book	190
			Q.(7.25]	217
	14	Apply the conservation of linear momenta for an isolated system of particles to relate the initial momenta of the particles to their final momenta at any later instant.	Student Book	194-195
	15	Apply the conservation laws of momentum and total kinetic energy for elastic collisions in one dimension to relate the initial kinetic energies and momenta of the two colliding bodies before collision to their final kinetic energies and momenta after collision.	Student Book	196
			Q.(7.51]	219
FRQ - الأسئلة المقالية	16	(1) Apply the equation ($W=F\cdot\Delta r=F\Delta r cos\alpha$) to calculate the work done on an object by a constant force by taking the dot product of the force vector F and the displacement vector Δr. (2) Apply the relationship between average power, the work done by a force or the associated energy transfer, and the time interval in which that work is done, or energy is transferred ($Pavg = \frac{W}{\Delta t}$).	Q.(5.26/5.30/5.32/5.33]	151
	17	(1) Calculate graphically the work done on an object from an initial to a final position using a force versus position graph. (2) Solve problems related to work done by a general variable force. (3) Apply the work–kinetic energy theorem to situations where an object is moved by a variable force.	Figure 5.13	139
			Q.[6.78]	186
	18	(1) Determine the instantaneous power by taking the dot product of the force vector and an object's velocity vector. (2) Relate the total energy to the mechanical energy plus the other forms of energy in the presence of nonconservative forces: $E_{total} = E_{mechanical} + E_{other} = K + U + E_{other}$. (3) Generalize the work-energy theorem, in the presence of nonconservative forces: $W_f = \Delta K + \Delta U$	Solved Problem (5.4)	147
			Solved Problem (6.6)	176
			Q.[6.55/6.56]	184
	19	(1) Calculate the elastic potential energy of a mass–spring system: $U=\frac{1}{2}kx^2$ (2) Apply the law of conservation of mechanical energy to a mass-spring system to calculate different physical quantities (spring constant, displacement from equilibrium position or velocity at any time, or other).	Solved Problem (5.2)	174
			Q.[6.48/6.49/6.50(a)]	184
	20	Apply the relationship between impulse, change in momentum, average force, and the time interval over which the impulse acts on the object to calculate unknown physical quantities.	Figure7.3	191
			Example7.1	192
			Q.[7.30]	217/218
*	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)./كما وردت في كتاب الطالب وLMS والخطة الفصلية.			