تم تحميل هذا الملف من موقع المناهج الإماراتية

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موقع المناهج الإماراتية

الملف بوب كويز نموذج ثاني مع الإجابات

روابط مواقع التواصل الاجتماعي بحسب الصف العاشر المتقدم



روابط مواد الصف العاشر المتقدم على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

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

1	تلخيص مبسط لأول أربع واحدات 20182017
2	تحميل دليل المعلم اساسيات الضوء
3	التوزيع الزمني للخطة الفصلية
4	ملخص شامل للفصل الرابع (القوى في بعد واحد)
5	ملخص الوحدة 1234 مدخل الى علم ال

POP QUIZ- Physics Grade 10

Student Name		Date	

Choose the best answer

1	**Kepler's third law of planetary motion states that the ratio of _____.**	
	A	The orbital period to the to the orbital radius is the same for all planets.
	B	The orbital periods of any two planets equals the ratio of the orbital radii.
	C	All planets would orbit with the same orbital period.
	D	The period squared to the radius cubed is the same ratio for all planets.

2	**A bullet and a truck _____ have the same momentum because _____.**		
	A	can	when the bullet has a lower velocity because the two masses are not the same.
	B	can't	the two masses are not the same.
	C	can	when the bullet has a higher velocity because the two masses are not the same.
	D	can't	the two velocities cannot be the same.

3	**Neptune orbits the Sun at an average distance (r, meter) from the centre of the Sun. The period of Neptune will depend on which of the following factors:** I. Mass of the Sun II. Mass of Neptune III. Temperature of Neptune IV. The distance between Neptune and the Sun Select the correct answer from the codes given below:	
	A	I and II
	B	II and IV
	C	I and IV
	D	I, III and IV

4	**Momentum is a(n) _____ quantity**	
	A	energy
	B	scalar
	C	vector
	D	science

5	**If the distance between two bodies is doubled, the force of attraction, F, between them will be _____.**	
	A	$\frac{1}{4}F$
	B	$\frac{1}{2}F$
	C	F
	D	$2F$

6	**The force of attraction between a proton of mass 1.7×10^{-27} kg and an electron of mass 9.1×10^{-31} kg when they are at 1.5×10^{-10} m apart is _____.**	
	A	4.5×10^{-26} N
	B	4.6×10^{-48} N
	C	6.7×10^{-37} N
	D	6.9×10^{-58} N

7	**The gravitational field strength at the surface of the Moon is _____. Given that (Mass of Moon= 7.3×10^{22} kg; radius of the Moon = 1.7×10^{6} m)**	
	A	1.7 N/kg
	B	2.4 N/kg
	C	3.1 N/kg
	D	9.8 N/kg

8	**The orbital time period of the Earth about the Sun is 3.2×10^{7} s. Calculate the orbital period of Mars. (radius of Earth orbit = 1.5×10^{11} m; radius of Mars orbit = 2.3×10^{11} m)**	
	A	about 1.1 years
	B	about 1.3 years
	C	about 1.5 years
	D	about 1.9 years

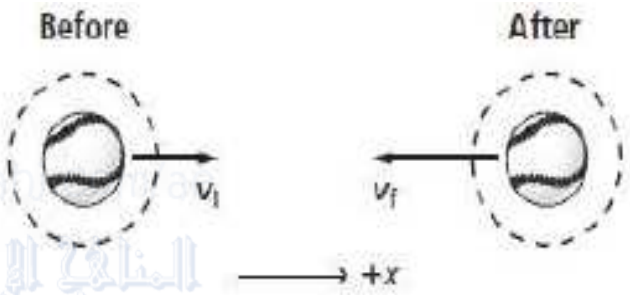
9	**A ball of mass 0.25 kg is moving to the right at a speed of 7.4 m/s. Calculate the momentum of the ball.**	
	A	1.85 kg m/s to the Left
	B	1.85 kg m/s to the right
	C	-1.85 kg m/s to the right
	D	-1.85 kg m/s to the Left

10	**The change in momentum is 1.52 N s for a ball that strikes the floor for 1.05×10^{-2} s. Find the value force applied to the ball.**	
	A	1.60×10^{-2} N
	B	1.44×10^{2} N
	C	1.60 N
	D	23.8 N

Section II – Performance Task: Answer all the questions below.

1	**A 0.150-kg ball, moving in the positive direction at 12 m/s, is acted on by the impulse illustrated in the graph bellow.**  **a) Calculate the impulse on the ball.** **b) Find the ball's speed at 4.0 s.**	**5 marks**

2	**A car moving at 10.0 m/s crashes into a barrier and stops in 0.050 s. There is a 20.0-kg child in the car. Assume that the child's velocity is changed by the same amount as that of the car, and in the same time period.** **a) What is the impulse needed to stop the child?** **b) What is the average force on the child?**	**5 marks**

3	**A 0.174-kg softball is pitched horizontally at 26.0 m/s. The ball moves in the opposite direction at 38.0 m/s after it is hit by the bat as shown below.**  **a) Calculate the change in momentum of the ball?** **b) What is the impulse delivered by the bat?** **c) If the bat and ball are in contact for 0.80ms, what is the average force the bat exerts on the ball?**	**5 marks**

Feedback

Tested Learning outcomes	Question(s)	√	X	Action (extra practice question)
State and discuss the consequences, and perform calculations using Kepler's third Law	1			
State and discuss the consequences, and perform calculations using Newton's law of universal gravitation.	5 & 6			
Explain and make calculations related to satellite and planetary movements, including: o Speed o Orbital movement	3 &8			
Deduce the value of earth's surface gravity acceleration (g)-also known as the gravitational field value.	7			
Define and mathematically evaluate: o Impulse (vector quantity) o Momentum (vector quantity)	2 &4			
Derive and explain the impulse momentum theorem.	12 & 13			
Apply the impulse momentum theorem conceptually and mathematically.	9 & 10 &11			
Student Comments				
Parent Signature				

Answer Key

Multiple Choice	
Q1	D
Q2	C
Q3	C
Q4	C
Q5	A
Q6	B
Q7	A
Q8	D
Q9	B
Q10	B

Structured Response Answer Key

Question		Correct Answer	Allocation of Marks
Q11	a)	$F\Delta t$ = Area under the graph (triangle)	1 mark
		$= \frac{1}{2}\ (2.0\ N)(2.0\ s) = 2.0\ N.s$	1 mark
	b)	$F\Delta t = m\Delta v$	1 mark
		$2.0\ N.s\ = m(v_f - v_i)$	1 mark
		$2.0\ N.s\ = (0.150\ kg)(v_f - 12\ m/s)$	1 mark
		$v_f = \frac{2.0\ kg.m/s}{0.150\ kg} + \frac{12m}{s} = 25m/s$	1 mark
Q12	a)	$F\Delta t = m\Delta v = m(v_f - v_i)$	1 mark
		$= (20.0\ kg)(0.0 - 10) = -2.0 \times 10^2\ kg.m/s$	1 mark
	b)	$F\Delta t = m\Delta v = m(v_f - v_i)$	1 mark
		$F = \frac{m(v_f - v_i)}{\Delta t}$	1 mark
		$F = \frac{(20.0\ )(0.0 - 10)}{0.05} = -4.0 \times 10^3\ N$	1 mark

Q13	a)	$\Delta p = m(v_f - v_i)$ $(0.174) \times (-38.0 - 26.0) = -11.1\ kg.m/s$	1 mark
	b)	$F\Delta t = p_f - p_i = \Delta p = -11.1\ kg.m/s\ (N.s)$	1 mark
	c)	$F = \frac{m(v_f - v_i)}{\Delta t}$ $= \frac{(0.174)\times(-38.0-26.0)}{(0.80\ ms)(\frac{1\ s}{1000 ms})} = -1.4 \times 10^4\ N$	1 mark 2 marks