شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية

مراجعة الوحدة الرابعة مع الحل

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	ملخص شامل مع حلول للاختبارات المقننة
2	حل أسئلة الامتحان النهائي
3	ملخص أهم قوانين المادة
4	حل تجميعة أسئلة وفق الهيكل الوزاري انسباير
5	حل أسئلة نموذج امتحان وفق الهيكل الوزاري

G10 Physics Chapter 4 - Revision Problems – Answer Key

Multiple Choice Questions.

Q1.	The potential energy in a spring is equal to ……..
a.	One-half times the square of the spring constant and the square of the displacement.
b.	One-half times the product of the force and the square of the displacement.
c.	One-half times the product of the spring constant and the square of the displacement.
d.	One-half times the product of the square of the force and displacement.

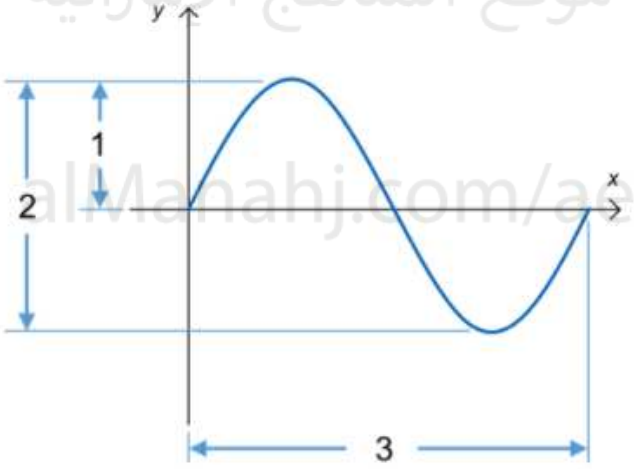
Q2.	What is the value of the spring constant of a spring with a potential energy of 8.67 J when it is stretched 300 mm?
a.	70.2 N/m
b.	71.1 N/m
c.	142 N/m
d.	193 N/m

Q3.	What is the magnitude of the force acting on a spring with a spring constant of 300 N/m that is stretched 15.3cm?
a.	2.81 N
b.	19.2 N
c.	39.3 N
d.	45.9 N

Q4.	Simple harmonic motion is defined as ……
a.	motion in which the velocity acting to restore an object to its equilibrium position is directly proportional to its displacement.
b.	motion in which the force acting to restore an object to its equilibrium position is directly proportional to its displacement.
c.	motion in which the displacement acting to restore an object to its equilibrium position is inversely proportional to its force.
d.	motion in which the acceleration acting to restore an object to its equilibrium position is inversely proportional to its displacement.

Q5.	Determine the length of a pendulum that has a period of 3.52 seconds.
a.	3.1 m
b.	5.9 m
c.	11.1 m
d.	19.3 m

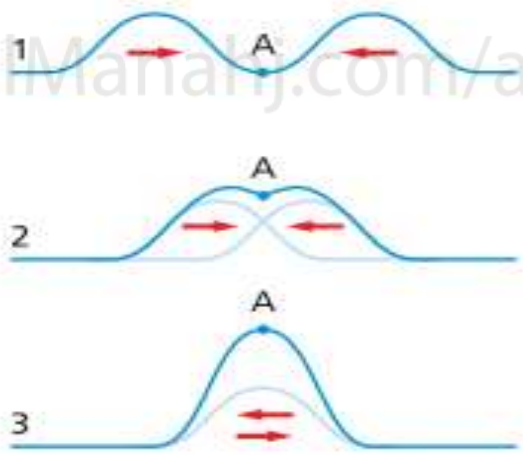
Q6.	Which of the following best describe transverse waves?
a.	Oscillations that occur in line with the direction of wave travel.
b.	Oscillations that occur opposite to the direction of wave travel.
c.	Oscillations that occur perpendicular to the direction of wave travel.
d.	Oscillations that occur parallel to the direction of wave travel.

Q7.	The graph below represents a wave. What do the numbers 1,2, and 3 represent? 
a.	1 = frequency, 2 = amplitude, 3 = wavelength
b.	1 = amplitude, 2 = wavelength, 3 = frequency
c.	1 = crest to trough, 2 = amplitude, 3 = wavelength
d.	1 = amplitude, 2 = crest to trough, 3 = wavelength

Q8.	Wave speed can be calculated using the which equation?
a.	$v = f \lambda$
b.	$v = \lambda / f$
c.	$v = f / \lambda$
d.	$v = f / \lambda^2$

Q9.	Under which conditions are particles in a medium said to be in phase with one another?
a.	When they have the same frequency from equilibrium position and the same wavelength.
b.	When they have the same displacement from the equilibrium position and the same velocity.
c.	When they have the same displacement from the equilibrium position but different velocities.
d.	When they have the same frequency from the equilibrium position but different velocities.

Q10.	Which of the following best describe the frequency of a wave?
a.	The number of half oscillations a point on a wave makes each minute
b.	The number of half oscillations a point on a wave makes each second
c.	The number of quarter oscillations a point on a wave makes each minute
d.	The number of complete oscillations a point on a wave makes each second

Q11.	The diagram below shows two waves with equal but opposite displacements. What type of interference is exhibited? 
a.	Horizontal
b.	Destructive
c.	Constructive
d.	Antinode

Q12.	Which characteristic(s) remain unchanged when a wave crosses a boundary into a different medium?
a.	Frequency only
b.	Frequency and amplitude only
c.	Amplitude only
d.	Amplitude and wavelength only

Q13.	When a wave changes direction as it passes from one medium to another is known as _____.
a.	Superposition
b.	Reflection
c.	Diffraction
d.	Refraction

Q14.	How does a wave pulse reflected from a rigid wall differ from the incident pulse?
a.	The relected pulse is exactly the same
b.	The reflected pulse is longer
c.	The reflected pulse is inverted
d.	The reflected pulse is shorter

Q15.	If a standing wave is vibrating in four parts, there are points where it can be touched without disturbing its motion (nodes). How many of these point exist?
a.	2
b.	3
c.	4
d.	5

Constructed Response Questions.

Q1	**Hamdan shouts toward a vertical cliff 500 meters away from him. The echo is heard 3 seconds later.**
a.	**What is the average speed of sound of Hamdan's voice in air?** **Using v = Δd/Δt** **Total distance is 500 x 2 = 1000 m** **V = 1000/3 = 333 m/s**
b.	**The wavelength of the sound is 0.780 m. What is the frequency?** **Using v = f λ we can rearrange to get f = v / λ** **f = 333/0.780 = 427 Hz**
c.	**What is the period of the wave?** **Using T = 1 / f we get 1 / 427 = 0.0023 s**

Q2	**Wavefronts pass at an angle from one medium into a second medium, where they travel at a different speed.**
a.	**Describe two changes in the wavefront.** **The wavelength and direction of the wave fronts change due to refraction.**
b.	**What does not change?** **The frequency does not change/remains the same.**