شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية

حل أسئلة امتحان نهائي وفق الهيكل الوزاري نخبة

التواصل الاجتماعي بحسب الصف الثامن

روابط مواد الصف الثامن على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الثامن والمادة علوم في الفصل الأول

1	ملخص وشرح الدرس الأول Lesson1 travels light how مع امتحانات السنوات السابقة
2	ملخص وشرح الدرس الأول Properties Wave خصائص الموجة
3	أسئلة الامتحان النهائي بريدج
4	حل أسئلة الامتحان النهائي - انسباير
5	حل مراجعة الدروس المطلوبة وفق الهيكل الوزاري انسباير

G8 Elite EOT1 Example Questions 2022-23

مؤسسة الإمارات للتعليم المدرسي
EMIRATES SCHOOLS ESTABLISHMENT

Question 1 A
What is the mathematical relationship between amplitude and energy of a wave? $E=A^2$
Question 1 B
How energy carried by a wave corresponds to its amplitude? As the amplitude increases the Energy increases too.

Question 2 A
How does the wavelength change if the frequency of a wave decreases? The wavelength increases.
Question 2 B
What is the difference between wavelength and frequency? Wavelength: is the distance from a crest to crest. Frequency: number of waves that passes through fixed point in one second.

Question 3 A
What are the ways in which waves interact with matter? 1. Reflection 2. Diffraction 3. Absorption 4. Transmission 5. Refraction.
Question 3 B
What do you think happens when a wave hits a hard surface? The wave will be reflected at the same angle of incident.

Question 4 A
What is diffraction of sound? When sound is traveling by the edge of an object or through an opening.
Question 4 B
Explain the phenomenon diffraction. It's a way of the waves interact with matter. The wave will be diffracted when its travel through an opening hole.

Question 5 A
How does the energy of a light wave depend on its frequency?
Question 5 B
What happens to the energy of an electromagnetic wave if its frequency increases? As the frequency of an Electromagnetic wave increases, the energy of the wave increases.

Question 6 A
Why does an apple look red? It's absorbing all colors and reflects only the red one.
Question 6 B
Explain how different colors of light affect how you see color. It depends on how the colors will absorb or reflect the colors.

Question 7 A
How does the index of refraction of a medium affect the speed of light? As the index of refraction is more, the speed of light will be more refracted. (The speed of light will be low)
Question 7 B
Why does the speed of light change when it travels from one medium to another? Because each medium has a different index of refraction factor.

Question 8 A
Describe each section of the human ear and its role in hearing. Student text book-Pg. 255+ 256 The Ear.
Question 8 B
Explain the functions of outer ear in the process of hearing. Gathers the sound waves.

Question 9 A
The loudness of a sound wave is related to its intensity and the pitch of a sound wave is related to its frequency .
Question 9 B
Compare and contrast loudness and pitch. Student textbook-Pg. 258+260

Question 10 A
What are the advantages of using electromagnetic waves for transmitting information through long distances? They do not permanently move matter. They can travel over long distances. They can be varied to hold information.
Question 10 B
What are the disadvantages of using electromagnetic waves for transmitting information through long distances? They lose energy as they travel through mediums.

Question 11 A
Why does sound travel faster through a solid than through a gas? Sound travels faster through solids than through gases because the individual molecules in a solid are closer together than the molecules in a gas. When molecules are close together, they can transmit energy from one to another more rapidly.
Question 11 B
Identify two reasons why sounds usually travel slower through gases than through solids. Sound travels faster through solids than through gases because the individual molecules in a solid are closer together than the molecules in a gas. When molecules are close together, they can transmit energy from one to another more rapidly.

Question 12 A
Define Doppler effect. The change in wave frequency due to a wave source moving relative to an observer or an observer moving relative to a wave source.
Question 12 B
A change in pitch or wave frequency due to a moving wave source is an instance of the _doppler effect_.

Question 13 A
What is the frequency of the second overtone if the fundamental frequency is 308 Hz? Fundamental is 308 Hz, First overtone is 616 Hz while the second overtone will be 924

Hz.

Question 13 B
If the frequency of the first overtone of a guitar string is 524 Hz, what is its fundamental frequency? The first is 524 Hz then the Fundamental will be 262 Hz.

Question 14 A
Identify the range of human hearing in decibels and the level at which sound can damage human ears. Sustained sounds above 90 dB can cause permanent hearing loss. Even short sudden sound with intensity levels od 120 dB may cause pain and permanent hearing loss.
Question 14 B
What is the range of audible frequency for a human teenager? Same answer as above.

Question 15 A
Explain how two instruments could be used to produce a pulsing sound and identify the name for this pulsing sound. One instrument could be set to play a note at a slightly different frequency from the other instrument. The resulting pulsing sounds are called beats.
Question 15 B
One flute plays a note with a frequency of 443 Hz, and another flute plays a note with a frequency 440Hz. What is the frequency of the beats that the flute players hear? If two waves of different frequencies interfere, a new wave is produced that has a different frequency. The frequency of this wave is the differenc between the frequencies of the two component waves. The frequency of the beats that you hear decreases as the two waves become closer in frequency. If two flutes play a note at the same frequency, no beats are heard. 443-440= 3Hz

Question 16 A
What is reverberation and what are the ways to reduce it in a concert hall? Reverberation: The echoing effect produced by many reflections of sound. Cloth drapes, cushioned seats, and carpeted floors help reduce reverberation in a concert hall.
Question 16 B
The echoing effect produced by many reflections of sound is called _. Reverberation

Question 17 A
Describe how sonar detects underwater objects. by emitting a sound pulse and measuring the time for the pulse to travel to the object and return
Question 17 B
Sound travels at about 1500 m/s in seawater. How far will a sonar pulse travel in 46 s? Speed=Distance/Time Distance= Speed ✖ Time Distance= 1500 ✖ 46 ⟶ **69,000 m or 69 km**

Question 18 A
Whether or not electrons will be ejected from metal when light shines on the metal depends on _**the frequency of the light.**
Question 18 B
Describe how electromagnetic waves transfer energy to matter. by causing charged particles within objects to move

Question 19 A
What is a photon? Photon is a massless bundle of energy that behaves like a particle.
Question 19 B
When light behaves like a particle, it is called a photon.

Question 20 A
Identify the beneficial effects and the harmful effects of human exposure to ultraviolet waves. beneficial effects: production of vitamin D in human body; harmful effects: damage to cell proteins and DNA, causing skin damage and cancer
Question 20 B
How would a change in the amount of ozone in the ozone layer affect the amount of the ultraviolet and visible light waves emitted by the Sun that reach Earth's surface? Many scientists think that certain chemicals, such as (CFCs), caused the reduction of ozone in the ozone layer. Textbook Pg.289