

## Unit 1 test

**1) Complete:**

- 1- The velocity of the oscillating body ..... as the kinetic energy increases.
- 2- ....., ....., ..... are examples of oscillatory motion.
- 3- The transverse wave is composed of ..... & .....
- 4- The complete oscillation include ..... amplitude.
- 5- As the periodic time increases, the frequency .....

**2) Write the scientific term:**

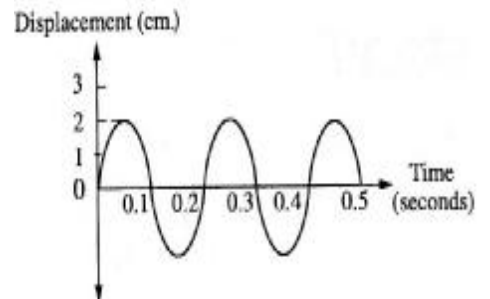
- 1- It's the lowest point in the transverse wave. (.....)
- 2- It's the product of frequency & wave length. (.....)
- 3- The no. of complete oscillations done by the oscillating body in one second. (.....)
- 4- The motion done by an oscillating body when it passes by its point of rest 2 consecutive times . (.....)
- 5- The device which depends on very short waves. (.....)

**3) Give reasons for:**

- 1- We don't hear the sound of the sun explosions  
.....
- 2- Radio waves are considered as electromagnetic transverse waves.  
.....
- 3- The sound waves are mechanical longitudinal waves.  
.....
- 4- The movement of the rotary bee is not considered as an oscillatory motion.  
.....
- 5- We don't use metallic pots in microwave oven.  
.....

**4) a- From the opposite figure of the oscillatory motion of a simple pendulum, calculate;**

- 1) Amplitude .....
- 2) Periodic time .....
- 3) Frequency .....



- b- What happens if:
- 1- The wave length of the wave decreases  
.....
  - 2- Sound is produced under the water surface.

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2- Calculate the time required for hearing the echo after reflection from a mountain at a distance of 1360 meters from the sound source if the velocity of sound through air is 340 m/sec.

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### Unit 3 test

**1) Write the scientific term:**

- 1- A short stem whose leaves have modified to carry out the reproductive organ.
- 2- Small particles that spread in the air to fertilize the ovules in plant.
- 3- Two glands that produce the female cells in human female.
- 4- Organ in which the fetus is formed and protected until birth.
- 5- A process of transferring pollen grains from the flowers anther to the flower stigma.

**2) Give reasons for:**

- 1- The scrotum is hanging down outside the body.  
.....
- 2- The associated glands secrete alkaline fluid.  
.....
- 3- Bean's flower is a typical bisexual flower.  
.....
- 4- The nucleus of the egg cell contains one half of the hereditary substance.  
.....
- 5- The petals of flower are colored and mostly contain nectar.  
.....

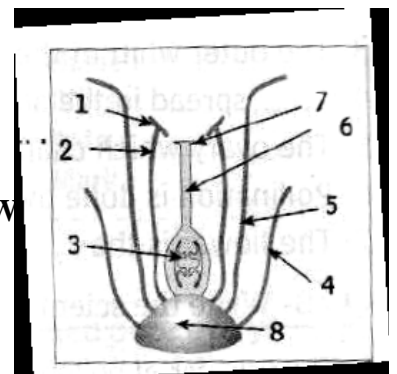
**3) Complete the following statements:**

- 1- After fertilization, the egg cell converts to ..... whereas the ovary forms.....
- 2- The calyx is a group of ..... Leafs, each of them is called .....
- 3- The female reproduction organs in the flower are .....
- 4- The genital system in human male consists of ....., ..... and .....
- 5- The hormone that responsible for the initiation and continuity of pregnancy is .....

**4- Look at the opposite figure and answer the questions:**

- 1- This flower is called bisexual because it contains, ..... and .....
- 2- Write the names of parts;

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- |          |          |
|----------|----------|
| 1- ..... | 2- ..... |
| 3- ..... | 4- ..... |
| 5- ..... | 6- ..... |
| 7- ..... | 8- ..... |

Second term tests

Science, 2 nd prep.

### Second term test

**1) Write the scientific term for each of the following:**

- (1) A disturbance that propagates and transfers energy along the direction of propagation.
- (2) The return (recoil) of a light ray when it is incident in a medium of larger optical density by an angle larger than critical angle for this medium. (.....)
- (3) The tones accompanying the fundamental tone are higher in the pitch and less in intensity.
- (4) Two glands that produce the female cells in human females. (.....)

**2) Complete the following statements:**

- (1) A complete oscillation comprises.....successive displacements, each of which is called.....
- (2) Sound intensity at a certain point is.....proportional to the square of the distance between this point and the sound source, and is..... proportional with the square of the amplitude.
- (3) When you look at a coin in a glass of water, it's.....position appears to be lower than the .....position.
- (4) Hermaphrodite flowers take the symbol.....while male flowers take the symbol.....

**3) Mention one function or importance for each of the following:**

- (1) sonar set .....
- (2) Savart's wheel .....
- (3) The mid piece of a sperm .....
- (4) Optical fibers .....

**4) What happens in the following cases?**

- (1) The decrease in the frequency and velocity of propagation of a wave to quarter its value with respect to the wavelength.  
.....
- (2) If the time separating the original sounds produced and its echo was less than 0.1 seconds.  
.....
- (3) The distance between a light source and a surface was doubled with respect to light intensity.  
.....
- (4) A pollen grain falls on the stigma of a flower.  
.....

**5) Give reasons for each of the following:**

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- (1) Sound can be heard from all surrounding directions.  
.....
- (2) The difference in frequency between the musical note and noise.  
.....
- (3) The absolute refractive index for any transparent medium is larger than 1.  
.....
- (4) A new mother should avoid air currents after delivery.  
.....

Second term tests

Science, 2nd prep.

### Unit 2 test

**1) Choose the correct answer from those between brackets:**

- (a) Light waves are .....  
(mechanical transverse – electromagnetic longitudinal – electromagnetic transverse)
- (b) The human skin is considered .....medium.  
(transparent – opaque – translucent)
- (c) The quantum of energy of green light is.....the quantum of energy of yellow light.  
(greater than – equal to – less than)

**2) Give reasons for each of the following:**

- (a) The energy of red light photon is less than that of orange light photon.  
.....
- (b) The inability to see the impurities present in black honey.  
.....
- (c) Occurrence of mirage phenomenon in desert regions at noon.  
.....
- (d) The light ray that is incident perpendicular on a glistening surface reflects on itself.  
.....

**3) Write down the scientific term for each of the following statements:-**

- (a) The ability of the medium to refract light rays. (.....)
- (b) The reflection in which the light rays recoil in one direction when incident on a glistening surface. (.....)

**4) Complete the following statements:-**

- (a) Optical.....is used in medical.....that are used to perform dangerous operations without surgery.
- (b) Angle of .....is the angle between the refracted light ray and .....at the point of incidence on the separating surface.

**5)a- What is meant by?**

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(a) Absolute refractive index of water is 1.33

(b) The critical angle of transparent medium with respect to air equal  $40^\circ$

**b- Calculate the absolute refractive index of diamond given that the speed of light in it =  $1.25 \times 10^8$  m/s.**

Second term tests

Science, 2 nd prep.

### Second term test

**1) Write the scientific term for each of the following:**

- (1) A disturbance that propagates and transfers energy along the direction of propagation.
- (2) The return (recoil) of a light ray when it is incident in a medium of larger optical density by an angle larger than critical angle for this medium. (.....)
- (3) The time taken by the body to make one complete vibration. (.....)
- (4) The ratio between the speeds of light through air to another medium. (.....)

**2) Complete the following statements:**

- (1) A complete oscillation comprises.....successive displacements, each of which is called.....
- (2) Light intensity at a certain point is.....proportional to the square of ..... between this point and the light source.
- (3) When you look at a coin in a glass of water, it's.....position appears to be lower than the .....position.
- (4) The human skin is ..... medium while ..... Is transparent one.

**3) Mention one function or importance for each of the following:**

- (1) Microwave oven .....
- (2) Periscope .....
- (3) Optical fibers .....

**4) What happens in the following cases?**

- (1) The decrease in the frequency and velocity of propagation of a wave to quarter its value with respect to the wavelength.  
.....
- (2) The maximum displacement of the oscillating body is 2 Cm.  
.....
- (3) The distance between a light source and a surface was doubled with respect to light intensity.  
.....
- (4) The light ray falls perpendicular to reflecting surface.

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.....  
**5) Give reasons for each of the following:**

(1) We cannot hear the solar explosions.  
.....

(2) The light waves are electromagnetic waves.  
.....

(3) The absolute refractive index for any transparent medium is larger than 1.  
.....

(4) The motion of simple pendulum is oscillating motion.  
.....  
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