Quiz N0.2

**NATURE OF LIGHT**

**Part 1. Write the word or group of words that describe the best answer.**

1. What is light?

A. Light is a type of energy that moves like a longitudinal wave.

B. Light is a type of energy that travels as a transverse wave.

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ light is light that human's can't see.

A.Visible

B.Ultraviolet

3. What is the Electromagnetic Spectrum?

A. The range of EM waves according to their frequencies

B. The vibration of electrically charged particles that surround the electric field

4. Radio waves produce to type of modulations. What are the two types

A. AM and PM

B. AM and FM

5. The Radio uses AM waves because it holds more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A. information

B. pictures

6. Infrared waves are waves that are tranmitted by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A. water

B. sun

7. Visible light is light that human can see. What is the range of colors in order?

A. Red, Orange, Yellow, Blue, Violet, Green, Indigo

B. Red, Orange, Yellow, Green, Blue, Indigo, and Violet

8. Ultraviolet light uses what type of vitamin that is produced by the sun?

A. vitamin D

B. Vitamin B

9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are when light or other Em Waves bounce off an object.

A. Reflections

B. Absorption

10. There are 2 types of reflections. Which one describes that light reflects off all points at the same angle because of a smooth surface.

A. Diffuse Reflection

B. Regular Reflection

**Part 2**

11-13 Rank these parts of the electromagnetic spectrum from lowest energy (1) to highest (7):

Gamma Infrared Microwave Radio Visible Ultraviolet X-ray

14-16 Rank these parts of the electromagnetic spectrum from lowest frequency (a) to highest (g):

Gamma Infrared Microwave Radio Visible Ultraviolet X-ray

17-19 Rank these parts of the electromagnetic spectrum from shortest wavelength (A) to longest (G):

Gamma Infrared Microwave Radio Visible Ultraviolet X-ray

**Part 3**

Solve for the following.

1. Green light has a frequency of 6.01 x 1014 Hz. What is the wavelength?

2. A helium laser emits light with a wavelength of 633 nm. What is the frequency of the light?

3. An FM radio station broadcasts at a frequency of 107.9 MHz. What is the wavelength of the radio signal?

4. Calculate the energy of a gamma ray photon whose frequency is 5.02 x 1020 Hz?

5. What is the energy of light whose wavelength is 4.06 x 10-11 m?

Prepared by:spdl....

**Quiz No.2**

Nature of Light

**Identification**

1.It states that light behaves like particles and as waves.

2. Who is the scientist who proposed the corpuscle/particle theory of light?

3. What type of wave is light?

4. Sources of light differ in how they provide energy to the charged particles, such as electrons, whose motion creates the light. What is the source of light if the energy comes from heat?

5. It is particles of matter in that *they have no mass and always move at the constant speed of about 300,000 km/sec (186,000 mi/sec) when they are in a vacuum.*

*6. At this speed it can go around the world 8 times in one second.*

7. \_\_\_\_\_\_\_\_\_\_\_\_\_ produced when when different wavelengths are combined.

8. Phenomenon of which white light being separated after passing a prism.

9-12 Rank these parts of the electromagnetic spectrum from lowest energy (1) to highest (7):

Gamma Infrared Microwave Radio Visible Ultraviolet X-ray

13-15 Rank these parts of the electromagnetic spectrum from lowest frequency (a) to highest (g):

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16-18.Rank these parts of the electromagnetic spectrum from shortest wavelength (A) to longest (G):

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