Mohamud Harbi Primary and secondary school		**Grade: Form four**
Subject: Physics		**Date: 25/2/2019**
Chapter (7): Dispersion of light		**Teacher: Mohamed Hassan Abdullahi (Daacad)**

1) What is the dispersion ?

- Dispersion is the phenomenon due to which a white light splits into its component colours, when passed through a prism.

2) What is the spectrum ?

- Spectrum is the band of seven colours obtained on the screen, when a white light splits into its component colours.

3) List the seven colors ?

- The seven colors are: violet, indigo, blue, green, yellow, orange and red.

4) Tell the word that the order of colours can be easily remembered ?

- The order of colours can be easily remembered by the word VIBGYOR.

5) What is the monochromatic light ?

- Monochromatic light is the light of a single colour or single wavelength.

6) What is the polychromatic light ?

- Polychromatic light is a light which made of two or more colours.

7) How to rainbow is produced ?

- The rainbow is produced due to the dispersion of sunlight by tiny droplets of water suspended in air, just after rain.

8) What is the maximum wavelength of seven colours ?

- The maximum wavelength of seven colours is red.

9) What is the minimum wavelength of seven colours ?

- ❖ The minimum wavelength of seven colours is violet.

10) Why does not appear bigger during sunset or sunrises ?

- ❖ Because of atmospheric refraction.

11) Why do planets not twinkle ?

- ❖ Because they are very large.

12) What is the scattering ?

- ❖ Scattering is the phenomenon due to which a particular wave of light is absorbed by a particle, which is greater in diameter than the wavelength of light and then transmits it in all possible directions.

13) Why does sky appear blue ?

- ❖ Because when the white sunlight passes through the atmosphere, the violet, indigo and blue wavelengths, encounter suspended particles in air whose diameter is more than their wavelengths.

14) Why is the sunlight reaching the earth yellowish ?

- ❖ Because when the white sunlight passes through upper atmosphere, the violet, indigo and blue colours scatter which makes the sky to appear blue.

15) Why does the sun appears yellowish ?

- ❖ Because when the violet, indigo and blue colours scatter in the upper atmosphere, the resultant sunlight is yellowish in colour.

16) Why does the sky appears dark instead of blue to an astronaut ?

- ❖ Because in space no particles are present. Thus, no scattering of light takes place.

17) Why do the sun and the horizon appear reddish during sunset or sunrise ?

- ❖ Because during sunset and sunrise, the sun light travels the maximum distance through the atmosphere. With the increase in distance, the size and number of particles suspended in air increases.

18) Why do the distant hills appear blue ?

- ❖ Because in the thick growth of trees on the hills there are always present some amount of tiny droplets of water in the air.

19) Why is red light used as a universal danger signal ?

- ❖ Because the red light has largest wavelength among the spectral colours, and hence, is least scattered.

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