



**VIDYA BHARATI SCHOOL**

**OLYMPIAD WORKSHEET (JAN-2017)**

**SUBJECT:SCIENCE**

**GRADE : X**

## **The Human Eye and the Colourful World**



**Q1: By which optical phenomenon, the splitting of white light into seven constituent colours occur?**

- (a) Refraction
- (b) Reflection
- (c) Dispersion
- (d) Interference

**Q2: A human eye can focus on objects at different distances by adjusting the focal length of the eye lens. This phenomenon is due to:**

- (a) near sightedness
- (b) long sightedness
- (c) accomodation
- (d) persistence of vision

**\*Q3: Which of the following are the primary colours?**

- (a) Red, Blue, Yellow
- (b) Red, Green, Violet.
- (c) Yellow, Green Blue
- (d) Red, Green, Blue

**Q4: The human eye forms the image of an object at its**

- (a) cornea
- (b) iris
- (c) pupil
- (d) retina

**Q5: The least distance of distinct vision for a young adult with normal vision is about**

- (a) 25 m
- (b) 2.5 cm
- (c) 25 cm
- (d) 2.5 m

**Q6: A person cannot see objects clearly beyond 50 cm. The power of lens to correct the vision is:**

- (a) +5 D
- (b) -0.5 D
- (c) -2 D
- (d) +2 D

**Q7: Which phenomenon is responsible for the twinkling of stars?**

- (a) Atmosphere reflection
- (b) Atmosphere refraction
- (c) Reflection
- (d) Total internal reflection

**Q8: The change in focal length of an eye lens is caused by the action of the**

- (a) pupil
- (b) retina
- (c) ciliary muscles
- (d) iris

**Q9: What is the time difference between actual sunset and apparent sunset?**

- (a) 2 s
- (b) 20 s
- (c) 2 minute
- (d) 20 minute

**Q10: When light passes through a prism, the colour which deviates the least is:**

- (a) red
- (b) blue
- (c) violet
- (d) green

**Q11: Which of the following optical phenomenon is used in cinematography or movie projectors?**

- (a) accommodation
- (b) persistence of vision
- (c) interference
- (d) short sightedness

**Q12: The change in focal length of an eye lens to focus the image of objects at varying distances is done by the action of \_\_\_\_\_.**

1. pupil
2. ciliary muscles
3. retina
4. blind spot

**Q13: Far point of a normal eye is situated at \_\_\_\_\_.**

1. 25 cm
2. infinity
3. 50 cm
4. 400 cm

**Q14:** A long-sighted person cannot see objects nearer to his eye than 50 cm. To enable him to read a book 25 cm away, he should use spectacle lenses whose power in dioptres is \_\_\_\_\_.

1. -6
2. -4
3. -2
4. + 4

**Q15:** The process by which a beam of white light splits into its constituent colours is known as \_\_\_\_\_.

1. reflection
2. dispersion
3. divergence
4. convergence

**Q16:** The band of colours obtained due to dispersion is known as \_\_\_\_\_.

1. spectrum
2. rainbow
3. image
4. mirage

**Q17:** Power of a lens is expressed in

1. dioptre
2. cm
3. metre
4. millimetre

**Q18:** 1 D is the power of a lens of focal length \_\_\_\_\_ cm.

1. 100
2. 10
3. 1/100
4. 1/10

**Q19:** Hypermetropia is rectified by using

1. convex lens
2. concave lens
3. cylindrical lens
4. progressive lens

**Q20: Reciprocal of focal length in metres is known as the \_\_\_\_\_ of a lens.**

1. focus
2. power
3. power of accommodation
4. far point

\*For more practice material please click:[www.brilliant.org](http://www.brilliant.org);[www.sofolympiadtrainer.com](http://www.sofolympiadtrainer.com);

[www.olympiadhelper.com](http://www.olympiadhelper.com)