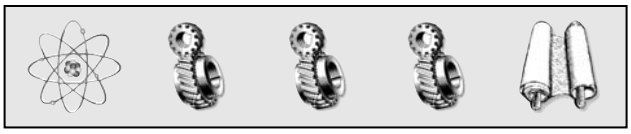
Name: _____

Date: _____ Grade: _____

SECTION QUIZ 6-3



Remember:
Score an average of 85% or higher on all three quizzes and you may be exempt from the chapter test!



Congratulations! You have completed this section!
Answer the following questions to test your understanding of the material. When you are finished, hand in your quiz to your teacher. Each answer is worth 2.5 points.

Fill in the blank or circle True or False.

1. For the light from an automobile headlight to go out in a parallel bundle, the bulb should be put at the _____ of the reflector.
   (a) center of curvature (b) focal point (c) infinity focus (d) side

2. Light has its greatest speed in diamond.
   (a) True or (b) False

3. The _____ is determined by the speed of light in a vacuum divided by the speed of light in the medium.

4. A change in the speed of light usually causes the light to change: _____.
   (a) color (b) density (c) direction (d) temperature

5. Light will be bent toward the normal if it goes from glass into air.
   (a) True or (b) False

6. If light enters a medium straight along the normal, only the _____ changes.

7. A mirage looks like water because air presents the sky to our eyes.
   (a) True or (b) False

8. The lens that causes parallel rays of light to converge is a _____ lens.

9. A magnifying glass can form a real image.
   (a) True or (b) False

10. Light enters the eye through the _____.

11. A person who can see distant objects but not those nearby is nearsighted.
    (a) True or (b) False

12. Eyeglasses with lenses that help converge light are used to correct _____.

13. The correction for a person that is nearsighted is a lens that _____ light.
    (a) converges (b) diverges (c) submerges (d) supplies

14. Loss of accommodation is caused when the _____ cannot change shape.
    (a) cornea (b) iris (c) retina (d) lens

15. Most people experience difficulty holding a pair binoculars steady that has a magnification greater than: _____.
    (a) 1x (b) 2.5x (c) 10x (d) 40x

16. An object 5 cm tall but appears 50 cm tall has been magnified: _____.
    (a) 10x (b) 1x (c) 2.5x (d) 100x

17. The formula for the magnification of a simple lens is _____.

18. A magnifying glass with a focal length of 10 cm has a magnification of: _____.
    (a) 1x (b) 2.5x (c) 7x (d) 10x

19. Anton van Leeuwenhoek found living organisms so small they could only be seen in a microscope.
    (a) True or (b) False

20. _____ means *small life*.

21. _____ is the size of the image divided by the size of the object; $m = Si/So$.

22. If *Do* is the distance from lens to object and *Di* is the distance from lens to image, magnification is given by: _____.
    (a) *Di/Do* (b) *Do + Di* (c) *Do/Di* (d) *Do * Di*

23. The distance from the lens to the object is 3 inches, while the distance from the lens to the image of the object is 36 inches. The magnification is _____.

24. The formula for the magnification of a microscope objective is $m = Di/Do$.
    (a) True or (b) False

25. _____ use electrons, magnetic and electric fields to form an image.

26. The magnification of a _____ depends on focal length of the main objective and the focal length of the eyepiece.

27. _____ is the ability to separate two objects that are close together.

28. If an optical instrument, such as a microscope or telescope, is used beyond its resolution of fine detail, the magnification is empty.
    (a) True or (b) False

29. The index of refraction is the ratio of the _____ of light in a substance compared to its _____ in a vacuum (same word).

30. Separating light into the colors is: _____.
    (a) declination (b) refraction (c) reflection (d) dispersion

31. The index of refraction is the same for all colors.
    (a) True or (b) False

32. Total internal reflection has found a practical application in _____.

33. Diamond sparkles because of dispersion and: _____.
    (a) total internal reflection (b) density (c) reduction (d) facets

SECTION QUIZ 6-3

34. A _____ reflects each color by the same amount.

35. The primary objective of a refracting telescope is a _____ lens.
    (a) convex (b) reflexive (c) concave (d) refractive

36. *"The _____ are like the lights of an oncoming automobile—they only seem more glaring than our own."*

37. "*We live in a wonderful world that is full of beauty, charm and adventure. There is no end to the adventures that we can have if only we seek them with our _____ open."*

38. *"Great discoveries are made when we search out and study the _____ by experiments."*

39. *"It is best to view the faults of others with the naked eye, while using a _____ to examine our own."*

40. *"It is never too _____ to give up our prejudices."*