

pared with yellow and green, the fact that the former are out of focus at the retina is not of importance, and the chromatic aberration is not noticed in ordinary vision. Chromatism is more frequently noticed by ametropes than by emmetropes, as, for instance, the colored fringes that an astigmat sometimes sees on the bars of the astigmatic chart.

There must also be a spherical aberration in the eye, but this is to a very large degree rectified by the peculiar formation of the crystalline, which is denser at the nucleus, and, therefore, has a higher refractive index than at the periphery, and by the iris, which, acting as a diaphragm, cuts off the marginal rays. The pupil becomes smaller in near vision, which would compensate for any increased spherical aberration resulting from the increased obliquity of the incident rays.—*The Watchmaker, Jeweler and Silversmith.*

British Optical Association.

The following questions submitted at the May examinations will give our readers an idea of the test for students of the B. O. A.:

QUESTIONS SET FOR THE WRITTEN EXAMINATION OF THE OPHTHALMETRIC GRADE. MAY, 1900.

1. Define the terms "spasm of" "paralysis of" and "paralysis of" accommodation.

2. Give an explanation of Helmholtz's and Ischering's theories of accommodation.

3. For what purpose is the operation of iridectomy performed? Give a diagram of the appearance of the iris after operation.

4. Define the terms myosis and mydriasis. What is the effect of these conditions on vision?

Show the cause of the shadow movements in a case of myopia by retinoscopic examination with either a plane or a concave mirror?

6. For what cases can you suggest the use of prisms?

7. What is meant by the term nystagmus?

8. How would you diagnose tobacco amblyopia, and what course would you advise for its correction?

9. What are the subjective and objective symptoms of cataract?

10. Give briefly the meaning of the following:—

- (a) Amblyopia. (f) Orthophoria.
(b) Europia. (g) Cycloplegia.

- (c) Sootoma. (h) Anisometropia.
(d) Hemiopia. (i) Eathopia.
(e) Nyctalopia. (j) Megalopsia.

QUESTIONS SET AT THE WRITTEN EXAMINATION OF THE DIOPTRIC GRADE. MAY, 1900

1. What is the "angle gamma," and for what purpose is the expression used?

2. For what cases of visual anomalies can the employment of prisms be suggested?

3. What are the optical conditions necessary for good visual acuity.

4. Give the physiological process of the action of accommodation.

5. What is anisometropia and what general rules for its correction?

6. Are you acquainted with any refraction test having the theory of color dispersion for a principle, and, if so, how is it employed?

7. Give a brief description of the following methods of testing in a case of simple hypermetropia:

(a) Scheiner's method.

(b) The fogging system.

8. What are the rods and cones of the retina?

9. What is the purpose of a Maddox rod?

10. What rule do you employ for the correction of presbyopia?

EXAMINATIONS, MAY, 1900, OPTIC GRADE.

1. Give an illustration of a refracted ray of light.

2. In how many ways can the direction of a ray of light be altered?

3. What is the reciprocal of a lens?

4. Describe the position and size of an image formed by a convex lens 8 inches focus, where the object is (a) 8 inches, (b) 4 inches distant.

5. What is meant by (a) caustic surface, (b) a homogenous medium?

6. Describe the action of a Tourmaline pebble-tester.

7. Make a sketch of the front of a spectacle frame of the following dimensions; $2\frac{1}{8}$ centres W bridged $\frac{1}{8}$ above $\frac{1}{8}$ out; oval eyes $5\frac{1}{2}$ inches long.

8. What length of side would be proportionate to the above front?

9. Transpose:

(a) +1.00 sph. and +1.45 cyl. ax. 25°.

(b) +2.75 sph. and -1.50 cyl. ax. 30°.

(c) +2.50 sph. and -4.50 cyl. ax. horiz.

10. Give the rule for the transposition of crossed cylinders.

The Falls of Niagara.

GREATEST AUXILIARY ATTRACTION TO THE PAN-AMERICAN EXPOSITION.

The importance of the great Falls, Rapids and Gorge of the Niagara River as auxiliaries to the many and varied attractions of the Pan American Exposition to be held in Buffalo, May 1st to Nov. 1st, 1901, cannot well be over-estimated. In its immense flow of water, its grand scenery and its historic lore, the Niagara is one of the most renowned rivers of the world. Its great cataract has defied the descriptive powers of poets and philosophers, and baffled the delineative skill of painters and photographers. The grandeur of their environment renders the Falls perennially interesting at all seasons of the year, and very few of those who visit the Pan-American Exposition but will desire also to visit them. The trip from Buffalo can be made in half-an-hour. There are many points of view and places of interest, and the visitor can plan his itinerary according to the leisure time at his disposal. If time will permit, the cataract should be viewed from both sides of the river, and trips should be made the length of the Gorge, either along the cliffs above or over the trolley road which runs close to the water's edge. Perhaps the most comprehensive near-views of the Falls are those obtained on the Canadian side of the Gorge, especially that from Falls View station. Here is seen a complete panorama, embracing the rushing and turbulent currents of the upper rapids and the whole sweep of the falling waters, reaching from end to end, nearly four-fifths of a mile, with the great Horse-shoe Fall in the foreground, separated by Goat Island from the American Fall, which is 158 feet high, and 1,881 feet wide. In the river below plies the little steamer, "The Maid of the Mist," carrying visitors close to the foot of the Falls at various points and affording splendid views of the descending waters. The State Reservation on the American side, and Queen Victoria Park, across the river in Canada, are delightful observation grounds, both open for the enjoyment of the public free of any charge. To the scientific visitor the electrical power development at the Falls will be especially interesting. On the American side there are two great corporations utilizing the current of the Niagara river for developing electric power used in many industries at the Falls. The power thus generated by one of these corpora-