

VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)
B.OPTOMETRY DEGREE EXAMINATION – March 2019
Second Year
VISUAL OPTICS

Time: Three hours

Maximum: 80 marks

I. Choose the best answer:

(10 x 1 = 10)

1. The image formed by convex lens, when object is at infinity, is
 - a) Real
 - b) Virtual
 - c) Erect
 - d) Same size
2. The total refractive power of eye is
 - a) +40D
 - b) +20D
 - c) +60D
 - d) +50D
3. If the working distance is 50cm, the power of working distance lens is
 - a) -1.00D
 - b) -2.00D
 - c) -0.50D
 - d) +0.50D
4. Scissoring reflex is seen in
 - a) Cataract
 - b) Aphakia
 - c) Hyperopia
 - d) Keratoconus
5. The two adjacent points can be seen clearly if separated by
 - a) 1 min of arc
 - b) 5 min of arc
 - c) 10 min of arc
 - d) 0.5 min of arc
6. Vernier acuity is based on
 - a) Resolution
 - b) Recognition
 - c) Localisation
 - d) Color sense
7. With the movement reflex in retinoscopy means
 - a) Myopia > 1 D
 - b) Simple myopic astigmatism
 - c) Myopia < 1 D
 - d) Compound myopic astigmatism
8. The line joining the nodal point, macular and fixation point is
 - a) Optical axis
 - b) Visual axis
 - c) Fixation axis
 - d) Homo centric axis
9. The difference in refractive status of the two eyes is called
 - a) Anisometropia
 - b) Aniseikonia
 - c) Anisocoria
 - d) Antimetropia
10. The targets used in visual acuity chart are called
 - a) Alphabets
 - b) Numbers
 - c) Optotypes
 - d) Symbols

II. State whether the following statements are TRUE or FALSE (10 x 1 = 10)

1. Ciliary spasm caused presbyopia.
2. Convex lens is used for aphakic correction.
3. Base in prism is used to correct convergence insufficiency.
4. Autorefractor are based on Imbert-Fick principle.
5. Radical retinoscopy is done for low refractive errors.
6. The spherical equivalent is subtracting half the cylinder from the sphere.
7. Jackson cross cylinder is to find the astigmatism.
8. High myopia is more than -3.00 Diopters.
9. +0.75 D is normal lag of accommodation.
10. Myopic crescent seen in pathological myopia.

III .Fill in the blanks:

(10 x 1 = 10)

1. _____ lens is used to correct myopia.
2. Pelli-Robson chart is used to measure _____.
3. Against motion in retinoscopy is neutralized with _____ lens.
4. _____ test is based on chromatic aberration.
5. _____ is used to find the curvature of cornea.
6. There are _____ cardinal points.
7. Nuclear sclerosis cataract produces _____ myopia.
8. The disparity in retinal image size is called _____.
9. The line joining nodal point, macula and fixation point is _____.
10. The targets used in visual acuity charts are called _____.

IV. Write any FIVE answers of the following:

(5 x 6 = 30)

1. Jackson cross cylinder.
2. Reduced Eye.
3. Correction of presbyopia.
4. Amblyopia.
5. Transpose the following
 - (a) +4.00 D sph. / -1.50 D cyl. x 180°
 - (b) -3.50 D sph. / +2.00 D cyl. x 135°
 - (c) +9.00 D sph. / -3.00 D cyl. x 90°
6. Range and Amplitude of accommodation.
7. Spot Retinoscopy.

V. Write any TWO essays of the following:

(2 x 10 = 20)

1. Discuss on hypermetropia, types and correction.
2. Discuss visual acuity charts in children.
3. Principles of retinoscopy in different refractive errors.

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