

VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)

B.OPTOMETRY DEGREE EXAMINATION – September 2021
Second Year

VISUAL OPTICS

Time: Three hours

Maximum: 80 marks

I Choose the best answer

(10 x 1 = 10)

1. Base in prism is used to correct
 - a) Exophoria
 - b) Esotropia
 - c) Esophoria
 - d) Ciliary spasm
2. The image formed by convex lens when object is at infinity is
 - a) Real
 - b) Erect
 - c) Virtual
 - d) Same size
3. Refractive index of aqueous is equal to refractive index of
 - a) Cornea
 - b) Lens
 - c) Vitreous
 - d) Air
4. Color vision is measured by
 - a) Ishihara plate
 - b) Arden plate
 - c) Lea symbols
 - d) Pelli-Robson chart
5. The distance correction for working distance of 66 cm is
 - a) -1.00D
 - b) -1.50D
 - c) +1.00D
 - d) +1.50D
6. With the movement retinoscopy is seen in
 - a) Myopia <1D
 - b) Hypermetropia
 - c) Both of the above
 - d) None of the above
7. The targets used in visual acuity chart are called
 - a) Alphabets
 - b) Symbols
 - c) Optotypes
 - d) Numbers
8. Dull glow in retinoscopy is seen in
 - a) Aphakia
 - b) High myopia
 - c) Both of the above
 - d) None of the above
9. The spherical equivalent of -5.00D sph./-1.50D cyl. X 180°
 - a) -5.75 D sph .
 - b) -1.50 D sph.
 - c) -6.50 D sph.
 - d) -3.50 D sph.
10. 0.25 D difference in refractive error causes
 - a) 1% aniseikonia
 - b) 4% aniseikonia
 - c) 0.25% aniseikonia
 - d) 0.5% aniseikonia

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

1. Ocular refraction and contact lens refraction are approximately same.
2. Ciliary spasm causes presbyopia.
3. Corneal scar produces irregular astigmatism.
4. Lenticonus produces index myopia.
5. For emmetropic eye, the far point is at infinity.
6. Convergent rays of light are considered as positive sign.
7. Hyperopic shift occurs in CSR.
8. Concave lens corrects presbyopia.
9. Ishihara test is based on chromatic aberration.
10. The difference in refractive status of eye is called anisocoria.

III Fill in the blanks: (10 x 1 = 10)

1. _____ lens is used to correct aphakia.
2. Arden plate measures _____
3. _____ is used to refine power and axis of cylinder.
4. Scissoring reflex on retinoscopy is seen in _____
5. The near point of eye is called _____
6. Vernier acuity is based on _____
7. The myopic crescent is seen in _____
8. Cataract causes _____ glare.
9. Against the movement reflex in retinoscopy is neutralized with _____
10. Jack in the box phenomenon is seen in _____ correction.

IV Write any **FIVE** answers of the following: (5 x 6 = 30)

1. Jackson's Cross cylinder.
2. Anisometropia
3. Accommodation.
4. Reduced Eye.
5. Advantages of streak retinoscopy.
6. Sturm's conoid.
7. Correction of myopia.

V Write any **TWO** essays of the following: (2 x 10 = 20)

1. Discuss on aphakia and pseudophakia. Add a note on aphakic correction.
2. Various visual acuity charts for distance vision.
3. Methods of retinoscopy. Add a note on retinoscopy in difficult situations.