



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Optomtry-2021/B.Optomtry-2022

Course Name – Ophthalmic Lens & Dispensing Optics-I

Course Code - BOPTOC303

(Semester III)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Name the Refractive index of Trivex
 - a) 1.523
 - b) 1.76
 - c) 1.423
 - d) 1.56
- (ii) Select the permanent marking of PAL
 - a) Distance references circle
 - b) Fitting cross
 - c) micro-etching
 - d) None
- (iii) Select the temporary marking of PAL
 - a) Fitting cross
 - b) micro-etching
 - c) Logo
 - d) add power
- (iv) Write the distance between the nasal horizontal indicator and prism references point
 - a) 17 mm
 - b) 34 mm
 - c) 17 nm
 - d) 34 nm
- (v) Crown glass are used for:
 - a) Single vision
 - b) Bifocal
 - c) Trifocal
 - d) All
- (vi) Write the Two form of high index lenses is:
 - a) Glass high index(GHI)
 - b) Plastic high index(PHI)
 - c) Both
 - d) None
- (vii) Name the 1st inventor of split bifocal lens
 - a) Benjamin Franklin
 - b) Morick.
 - c) John Borsch
 - d) None of the this
- (viii) Tell the advantage of Benjamin Franklin's bifocal:
 - a) Large field of view.
 - b) Dust accumulation at dividing line.
 - c) More time and labour required
 - d) None.
- (ix) Select the properties of plastic lenses:
 - a) Heavy
 - b) Not preferred for children

- c) High impact resistance d) None
- (x) Identify the test which we use to check the impact resistance
- a) Taber test b) Steel wool test
- c) Drop ball test d) None of the this
- (xi) Choose the correct answer: Abbe value of polycarbonate lens is
- a) 30 b) 40
- c) 50 d) 60
- (xii) Choose the following advantages of trivex
- a) Excellent Optics b) 1.53 index, lenses may have very slightly thicker edges than other materials
- c) inability to be tinted darker d) None
- (xiii) Choose the following disadvantages of high index plastic lens
- a) Cosmetically good b) Magnification is reduced
- c) Thinner and lighter than other lenses d) Greater distortion
- (xiv) Select the correct answer: Spherical equivalent $+3.00/-0.50 @ 90$
- a) 2.75 b) 3.25
- c) -2.75 d) -3.25
- (xv) Write down the another name of D-bifocal
- a) Flat top bifocal b) upper curve bifocal
- c) split bifocal d) None

Group-B

(Short Answer Type Questions)

3 x 5=15

2. In which cases we prescribe the soft design PAL lenses to the patients? (5)
3. Give the names of the three tests we can use to gauge a lens scratch resistance. (3)
4. Mentioned the clinical advantage and disadvantages of PMMA lens materials. (3)
5. Explain the disadvantages of polycarbonate lens. (3)
6. create a chart to show the difference between the round shape, solid curve, flat top bifocal. (3)

OR

Explain the gray tint lens (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Solve this--Toric transposition LE: $-3.00/+3.50 @ 75$ degree, Base curve $+6.00$ (5)
8. Give a brief summary of the Prentice's rule along with an illustration. (5)
9. Explain the advantage and disadvantage of Fresnel Prisms. (5)
10. Note the comparison between glass lenses and PMMA lenses. (5)
11. Explain the difference between the myodisc and minus lenticular lens design. (5)
12. Explain, how will we remove the ghost image from the spectacles lens surface? (5)

OR

Explain, what will happen when a $+3.00$ D is decentered 5 mm away from the center of the eye, (5)
