



Name : .....  
Roll No. : .....  
Invigilator's Signature : .....

**CS/B.OPTM/SEM-4/BO-405/2013  
2013**

**OPHTHALMIC LENS AND DISPENSING OPTIC**

Time Allotted : 3 Hours Full Marks : 70

*The figures in the margin indicate full marks.  
Candidates are required to give their answers in their own words  
as far as practicable.*

**GROUP – A  
( Multiple Choice Type Questions )**

1. A. Choose the correct answers for the following : 9 × 1 = 9

i) Among glass lens materials the base material is

- a) CR 39 b) Crown glass
- c) Plastic d) None of these.

ii) Tinting of lenses decreases the

- a) transmittance b) reflection
- c) scratch resistance d) all of these.



- iii) Which of the following should be avoided when fitting the high minus wearer ?
- a) Squared off corners
  - b) High lite lens
  - c) Thick rim
  - d) An antireflective coating
- iv) Polycarbonate is used in most industrial protective eye-wear because of
- a) light weight
  - b) high impact resistance
  - c) flexibility
  - d) all of these
  - e) none of these.
- v) Pin cushion effect is the result of
- a) decreased magnification towards lens periphery
  - b) increased magnification towards lens periphery
  - c) dispersion
  - d) none of these.
- vi) Supra frame is a
- a) metal frame
  - b) plastic frame
  - c) semi rimless frame
  - d) rimless frame.



vii) If the eyelashes rub the lens, the fitter should

- a) spread the temples
- b) spread the nose-pads
- c) increase the vertex distance
- d) move the vertical position of the pad upwards.

viii) ARC consists of an extremely thin layer of

- a) calcium fluoride
- b) magnesium fluoride
- c) sodium fluoride
- d) none of these.

ix) Photochromatic lens contains crystals of

- a) silver bromide
- b) silver halide
- c) silver chloride
- d) all of these.

B. Fill in the blank :

1

x) The transposed value of  $-4.50$  DS/ $-1.00$   $\times$  40 is .....

### GROUP – B

#### ( Short Answer Type Questions )

Write short notes on any *three* of the following.  $3 \times 5 = 15$

2. Curve variation factor.
3. Polaroid lenses.
4. Standard alignment.
5. D-Bifocals.
6. Base curve.



**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following.  $3 \times 15 = 45$

7. What is PAL ? What is the difference between hard and soft progressive add lens design ? Write the standard method for taking progressive lens fitting Measurements. Describe the advantages and disadvantages of PAL.
8. What is pediatric dispensing ? Write down the frame and lens selections criteria of pediatric. How to measure PD of a pediatric patient ?
9. Describe the different types of multifocal lenses with suitable examples. Describe with the help of suitable diagrams dimensions of bifocal and trifocal segment.
10. Differentiate between 'Boxing" and "Datum" systems and explain both the terms.

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