



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

**CS/B.OPTM/SEM-4/BO-405/2011  
2011**

**OPHTHALMIC LENS & DISPENSING OPTICS**

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. Choose the correct alternatives for any *ten* of the following :  
10 × 1 = 10

- i) Toughest ophthalmic lens is
  - a) CR-39
  - b) Crown glass
  - c) Polycarbonate
  - d) None of these.
  
- ii) In case of exotropia the best way to measure IPD is
  - a) Pupil centre to Pupil centre
  - b) Pupil margin to Pupil margin
  - c) Limbus to Limbus
  - d) Monocular P.D.

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- iii) Which system measures the P.D. using a corneal reflex ?
- a) Essilor pupillometer      b) Topcon PD meter  
c) PD rule                      d) All of these.
- iv) Tinting of lenses decrease the
- a) transmittance              b) reflection  
c) scratch resistance        d) all of these.
- v) Prism produce displacement of object seen through it towards the
- a) apex                          b) base  
c) sideways                  d) none of these.
- vi) Which of the following gives specification of tints required for industrial protection ?
- a) BS 3062  
b) BS 169  
c) BS 379  
d) Both (b) and (c)  
e) None of these.
- vii) Why hydrophobic coatings repel water ?
- a) They have wetting angle  
b) They have low wetting angle  
c) They have high wetting angle  
d) The coating decreases the wetting angle of the surface.



- viii) Supra frame is a
- a) metal frame
  - b) rimless frame
  - c) plastic frame
  - d) semi-rimless frame.
- ix) The tint may be removed and reapplied for which types of lenses ?
- a) Vacuum coated lenses
  - b) Internal tinted lenses
  - c) Plastic lenses
  - d) Both (a) and (c)
  - e) None of these.
- x) When is it specially important to use monocular PD measurements ?
- a) When eyes are asymmetrically placed
  - b) When the principal lenses are of high power
  - c) When the two lenses have considerably different powers from one another
  - d) When progressive addition lenses are used
  - e) When (a) and (d) are true
  - f) When (b) and (c) are true.
- xi) The amount of Pantoscopic tilt given in case of PAL is generally
- a) 10 – 12 degrees
  - b) 12 – 14 degrees
  - c) 20 – 22 degrees
  - d) 8 – 10 degrees.



**GROUP – B**

**( Short Answer Type Questions )**

Write short notes on any *three* of the following.

3 × 5 = 15

2. Aspheric lens.
3. Toric transposition.
4. Importance of nose pad.
5. Explain standard alignment.
6. Prism prescription in lenses.

**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following. 3 × 15 = 45

7. a) The degree of hardness and softness of PAL depends on four basic design elements. Discuss.  
b) Discuss hard and soft design, with reference to the above statement.  $7\frac{1}{2} + 7\frac{1}{2}$
8. Do you feel occupational dispensing has any significant role in preventing or minimising occupational hazards ? Explain with suitable examples.
9. Draw a spectacle frame & label the different parts of it with description. What are the different measuring systems are used for measurement ? 5 + 10
10. What is protective lens ? What type of frame & lenses are usually chosen for eye protection ? Describe the Industrial and Sports eye protection in relation to ophthalmic dispensing.
11. a) Discuss the frame and lens criteria for paediatric dispensing.  
b) How will you take PD of a paediatric patient ?  
c) How will you measure the bifocal segment requirement in a paediatric patient ? 5 + 5 + 5