



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.



- 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.

$3 \times 5 = 15$

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. $3 \times 15 = 45$

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 ? $5 + 5 + 5$