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## 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 :

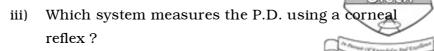
 $10 \times 1 = 10$ 

- 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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- 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.

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- 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) Vaccum 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) are (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.

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#### **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

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