



Name :
Roll No. :
Invigilator's Signature :

CS/B.OPTM/SEM-3/BO-301/2012-13

2012

VISUAL OPTICS (OPTICS-III)

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 the following : $10 \times 1 = 10$
- i) A patient requires cylinder lens at 30° in one eye & 150° in other eye. What can be the type of astigmatism ?
 - a) WTR
 - b) ATR
 - c) OBLIQUE
 - d) BI-OBLIQUE
 - ii) Coma is a result of
 - a) peripheral aberration
 - b) chromatic aberration
 - c) diffraction
 - d) none of these.
 - iii) Which method of illumination is used for observing the corneal endothelium ?
 - a) Scleral scatter
 - b) Speular reflection
 - c) Retroillumination
 - d) None of these.

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[Turn over



- iv) PRESBYOPIA is a condition which produces
- a) near vision problem
 - b) distance vision problem
 - c) both near and distance vision problem
 - d) none of these.
- v) Myopic shift occurs with
- a) nuclear sclerosis
 - b) ant movement of the lens or implant
 - c) use of pilocarpine
 - d) all of these.
- vi) The horizontal meridian is more curved than vertical in
- a) with the rule astigmatism
 - b) against the rule astigmatism
 - c) oblique astigmatism
 - d) bi-oblique astigmatism.
- vii) Refractive index of cornea is
- a) 1.376
 - b) 1.406
 - c) 1.363
 - d) 1.386
- viii) If the crystalline lens moves forward the resulting refractive error will be
- a) Myopia
 - b) Hyperopia
 - c) Astigmatism
 - d) Aphakia.



- ix) The stimulus to accommodation is
- a) blur image b) proximity of image
- c) convergence d) all of these.
- x) Smaller pupil can give rise to
- a) spherical aberration b) chromatic aberration
- c) diffraction d) coma.

GROUP – B

(Short Answer Type Questions)

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

2. Strums conoid.
3. Aphakia with its treatment.
4. Depth of field and depth of focus.
5. Purkinjee image

GROUP – C

(Long Answer Type Questions)

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

6. Describe any one theory regarding mechanism of accommodation. Define amplitude of accommodation. How will you measure the amplitude of accommodation.

5 + 3 + 7

7. Define astigmatism. Write down different refractive types of regular Astigmatism and Treatments of astigmatism.

2 + 5 + 8

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8. With the help of diagram state the position of cardinal points on schematic eye of Gullstrand. What is the reduced eye of Donder ? Define diffraction & resolving power. 7 + 4 + 4
9. What are the different axes and angles present in eye ? Describe each of them with diagram. What is diffraction ? 3 + 7 + 5
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