	Utech
Name :	
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Invigilator's Signature :	

CS/B.OPTM/SEM-4/BO-401/2013

2013

VISUAL OPTICS (OPTICS - IV)

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) Pelli Robson chart is used for
 - a) V. A. testing
 - b) Glare testing
 - c) Contrast sensitivity testing
 - d) Colour vision testing.
 - ii) 1 mm shortening of axial length of eyeball can produce
 - a) 1D of hyperopia
- b) 3D of hyperopia
- c) 1D of myopia
- d) 3D of myopia.

4028 [Turn over

CS/B.OPTM/SEM-4/BO-401/2013



- iii) If a myopic patient shifts from spectacle to contact lens
 - a) accommodative & vergence demand increase
 - b) accommodative & vergence demand decrease
 - c) accommodative demand increases but vergence demand decreases
 - d) no change occurs in accommodative & vergence demand.
- iv) Spherical equivalent of +2.00/-2.50 D cyl 90° is
 - a) + 3·25 Dsph
- b) 0.50 Dsph
- c) + 0.75 Dsph
- d) + 0.50 Dsph.
- v) Coma is a type of
 - a) off-axis spherical aberration
 - b) chromatic aberration
 - c) peripheral magnification
 - d) none of these.
- vi) A patient having refractive error of
 - -1 Dsph/-3.00 Dcyl 180 is an example of
 - a) with the rule astigmatism
 - b) against the rule astigmatism
 - c) mixed astigmatism
 - d) none of these.

4028



- vii) In Listings reduced eye posterior focal point on retina is behind anterior surface of cornea.
 - a) 22.9 cm
- b) 22.5 mm
- c) 24·4 cm
- d) 22.9 mm.
- viii) Against the rule astigmatism refers to a condition where the horizontal meridian is curved than the vertical meridian.
 - a) more

b) less

- c) equally
- d) none of these.
- ix) In case of hypermetropia punctum remotum is at
 - a) infinity
- b) in front of the eye
- c) behind eye
- d) none of these.
- x) Far point of a patient is at 20 cm in front of the eye, his refractive error is
 - a) -5.00 D
- b) + 5.00 D
- c) + 10·0 D
- d) none of these.

GROUP - B

(Short Answer Type Questions)

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

- 2. Circle of least diffusion.
- 3. Advantages of 10 L insertion , over spectacle correction, in aphakia.
- 4. Mechanism to minimize spherical aberration in the eye.
- 5. Progressive myopia.

4028

3

[Turn over

CS/B.OPTM/SEM-4/BO-401/2013



(Long Answer Type Questions)

Answer any *three* of the following.

 $3 \times 15 = 45$

- 6. Define F & K relationship. An axial ammetropic eye with 9.00 D spectacle at ant. Focal plane. When the person is corrected with contact lens, find out the new RSM. 5 + 10
- 7. Briefly describe different modalities available for aphakia correction with their advantages & disadvantages.
- 8. Classify astigmatism. Illustrate the characteristics of retinoscopic reflexes found in astigmatic eye. 7 + 8
- 9. Define & classify glare. Outline the tests for contrast sensitivity function of eye. 5 + 10

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4028 4