

## **ASSIGNMENT 7**

**Material Covered:**  
***Units 3.6, 3.7 and 3.8 of Module 3***  
***of the IACLE Contact Lens Course***

## ASSIGNMENT 7

Read the questions carefully and record your answers on the answer sheet provided.

1. ***An RGP lens shows a good alignment fit centrally, even though it does not remain centred all the time. The peripheral edge clearance is unacceptably large along the steeper corneal meridian with occasional bubble formation after a blink. The lens corrects the patient's refractive error accurately resulting in excellent visual acuity. What would be the MOST appropriate course of action?***
  - a. No action needed
  - b. Refit with a spherical soft contact lens
  - c. Make the peripheral curves toric
  - d. Refit with a back surface toric rigid lens
  
2. ***What is the corneal astigmatism of an eye with the following keratometry readings:  
7.63 mm (44.25 D) along 140  
8.28 mm (40.75 D) along 30***
  - a. -3.50 D Cyl x 30
  - b. -3.50 D Cyl x 75
  - c. -3.50 D Cyl x 140
  - d. -3.50 D Cyl x 185
  
3. ***A patient's left eye has a spectacle prescription of -5.75 D and keratometry readings of 7.85 @ 170 (43.00 D) and 7.42 @ 80 (45.50 D). This eye would be best corrected with a:***
  - a. Double slab-off soft toric lens
  - b. Spherical RGP lens
  - c. Back surface toric RGP lens
  - d. Spherical soft lens
  
4. ***All of the following are desirable fitting characteristics of soft toric lenses, EXCEPT:***
  - a. Full corneal coverage
  - b. Good centration
  - c. Little or no movement
  - d. Rapid return to axis if mislocated
  
5. ***An eye with spectacle refraction +1.75 / -1.25 x 45 and keratometry readings of 7.71 mm @ 45 (43.75 D) and 7.50 mm @ 135 (45.00 D) would be BEST corrected with a:***
  - a. Spherical soft lens
  - b. Spherical RGP lens
  - c. Toric soft lens
  - d. Back surface toric RGP lens

6. **A patient's right eye has keratometry readings of 8.23 mm @ 5 (41.00 D) and 7.85 mm @ 95 (43.00 D) and a spectacle refraction of  $-1.75 / -0.50 \times 05$ . What residual astigmatism would you expect if this patient were fitted with a spherical RGP lens?**
- 1.50 D Cyl x 05
  - 2.50 D Cyl x 05
  - 1.50 D Cyl x 95
  - 2.50 D Cyl x 95
7. **A patient's right eye has ocular astigmatism at axis 15. A trial contact lens placed on the eye rotates  $10^\circ$  clockwise. What cylinder axis should be ordered for the final lens?**
- 10
  - 15
  - 25
  - 175
8. **A patient's right eye has a spectacle prescription of  $-3.50 / -2.50 \times 160$  and keratometry readings of 8.33 mm @ 160 (40.50 D) and 7.84 mm @ 70 (43.00 D). What type of RGP lens design would be MOST suitable for this eye?**
- Spherical
  - Back surface toric
  - Front surface toric
  - Bitoric
9. **Consider the following case:**
- Keratometry: 7.94 mm @ 175 (42.50 D)  
7.34 mm @ 85 (46.00 D)
- Subjective refraction:  $-3.75 / -2.75 \times 175$
- What is the corneal astigmatism of this eye?**
- 2.75 D Cyl x 85
  - 2.75 D Cyl x 175
  - 3.50 D Cyl x 85
  - 3.50 D Cyl x 175
10. **What residual astigmatism would be present if a non-flexing spherical lens were placed on the eye in question 9?**
- 0.75 D Cyl x 85
  - 0.75 D Cyl x 175
  - 2.75 D Cyl x 175
  - 3.50 D Cyl x 175

11. **The reference marks on soft toric lenses are used to assess which of the following:**
  - a. Cylinder axis
  - b. Lens orientation *in situ*
  - c. Stabilization method
  - d. Cylinder power
  
12. **Which of the following spectacle prescriptions would MOST likely result in acceptable vision for the patient if fitted with a spherical soft contact lens?**
  - a.  $-3.00 / -1.50 \times 88$
  - b.  $-4.75 / -2.00 \times 10$
  - c.  $-6.25 / -1.75 \times 180$
  - d.  $-8.00 / -2.00 \times 175$
  
13. **Consider a soft toric lens with a minus cylinder at axis 145. The thickest meridian of this lens will be at:**
  - a.  $10^\circ$
  - b.  $55^\circ$
  - c.  $100^\circ$
  - d.  $145^\circ$
  
14. **Which of the following spectacle prescriptions is MOST likely to be corrected successfully with a soft toric lens?**
  - a.  $-0.25 / -1.50 \times 175$
  - b.  $+1.00 / -1.75 \times 40$
  - c.  $+4.00 / -6.00 \times 80$
  - d.  $-6.00 / -2.00 \times 90$
  
15. **A patient's left eye has a spectacle refraction of  $-3.50 / -1.50 \times 170$ . A toric soft lens placed on this eye rotates 15 degrees anticlockwise. What cylinder axis should be ordered for the final lens?**
  - a. 5
  - b. 15
  - c. 155
  - d. 175
  
16. **Consider an eye with keratometry readings of 8.08 mm @ 160 (41.75 D) and 7.50 mm @ 70 (45.00 D). Which of the following BOZR combinations would be MOST suitable for a low-toric-simulation back surface design RGP lens?**
  - a. First principal meridian = 41.75 D (8.08 mm)  
Second principal meridian = 42.75 D (7.89 mm)
  - b. First principal meridian = 41.75 D (8.08 mm)  
Second principal meridian = 44.00 D (7.67 mm)
  - c. First principal meridian = 45.00 D (7.50 mm)  
Second principal meridian = 40.75 D (8.28 mm)
  - d. First principal meridian = 45.00 D (7.50 mm)  
Second principal meridian = 46.00 D (7.34 mm)

17. **A patient has a spectacle prescription of  $-4.75 / -2.75 \times 175$  and keratometry readings of 7.76 mm @ 175 (43.50 D) and 7.67 mm @ 85 (44.00 D). This patient would best corrected with:**
- A back surface toric RGP lens
  - A spherical RGP lens
  - A front surface toric RGP lens
  - A spherical soft lens
18. **A patient's right eye has a spectacle refraction of  $-6.50 / -3.00 \times 170$  at a vertex distance of 14 mm. You decide to fit this patient with a toric soft contact lens. Taking into account the typical rotation of a soft toric lens on the eye, which of the following would MOST likely be the final contact lens power ordered?**
- $-6.00 / -2.50 \times 160$
  - $-6.00 / -3.00 \times 180$
  - $-6.50 / -2.50 \times 180$
  - $-6.50 / -3.00 \times 160$
19. **A well-centred toric soft contact lens gives full corneal coverage, shows little movement, and is slow to reorient when mislocated. Without changing lens diameter, which of the following actions would be MOST appropriate?**
- Decrease the lens thickness
  - Change the axis of the cylinder power
  - Increase the BOZR
  - Increase the lens thickness
20. **A patient's left eye has a spectacle prescription of  $-4.75 / -4.00 \times 90$  and keratometry readings of 7.80 mm @ 90 (43.25 D) and 7.42 mm @ 180 (45.50 D). What type of RGP lens design would be MOST suitable for this eye?**
- Back surface toric
  - Bitoric
  - Reverse geometry
  - Front surface toric