

## ESSAY

1. Explain the tear film assessment tests performed during a contact lens practice. Briefly comment on hydrogel and silicone hydrogel contact lenses. What is the role of low water content lenses in the management of dry eye (6+10+4=20)
2. Describe the care and maintenance of soft contact lenses in detail. Add a note on various contact lens options available for keratoconus patients. (12+8=20)
3. Elaborate the steps and methods in the preliminary examination of contact lens subjects.
4. Explain the materials used in manufacturing of contact lenses and contraindications of contact lenses.
5. Slit lamp examination for contact lens patients
6. Write in detail about indications and contraindications of contact lens use. Add a note on ideal contact lens material properties.
7. Explain the different manufacturing methods of contact lens. Write briefly about any one of the manufacturing method along with its limitation.
8. What is astigmatism. What are the types of contact lenses available to correct astigmatism. List the indication and contraindications for each of them.
9. Write in detail about pre-fitting and post fitting evaluation of soft contact lens.
10. Describe the steps in fitting contact lenses for a young adult with low myopia
11. What are the prefitting consideration while fitting RGP lenses. If your lens shows
12. Moderate pooling in the center what type of fit is this. What are the signs observed and
13. Symptoms of patient. Briefly mention the complications related to this type of fit.
14. Fitting procedure of soft contact lens and evaluation
15. Explain the preliminary examination procedures and their significance for contact lens fitting.

16. Explain the different fitting philosophies in contact lens practice. Add a note on contact lens fitting in astigmatism
17. Explain the pre fitting evaluation for an initial soft contact lens wearer. Add a note on indications and contraindications of contact lens wear.
18. What are the various ways of manufacturing soft contact lenses. Explain advantages and disadvantages of each technique.
19. Discuss three different corneal soft contact lens complications.

### **SHORT ESSAY**

1. Explain how does the accommodation and convergence changes from wearing
2. Dimensions of cornea
3. Total diameter verification for RGP lenses
4. Contraindications for contact lens fitting
5. The mechanism of hydrogen peroxide disinfection system
6. Physical and physiological properties of contact lens materials
7. A patient has a spectacle refraction of -11.00 DSph at a vertex distance of 14mm. He is
8. Fitted with a trial CL with a back vertex power (BVP)of -5.00, and the over refraction is -6.00 D. What BVP should be ordered for the final CL.
9. Explain the indications of THERAPEUTIC contact lens.
10. Slit lamp illumination techniques used for contact lens examination
11. What changes will you observe under slit lamp with hypoxic (oedematous) CORNEA
12. Materials used for soft contact lens.
13. Fitting in aphakia
14. RGP materials.

15. Discuss details about care and maintenance of RGP contact lenses.
16. Contact lens fitting in aphakic patients.
17. Differences between RGP and soft lenses.
18. Discuss the symptoms of loose fit and tight fit in soft contact lens and the remedy.
19. Initial patient work up before contact lens fitting
20. How will you decide upon first trial contact lens for your patient. Explain with proper example.
21. Prosthetic contact lens and color contact lens
22. Differentiate SEAL and SMILE.
23. Effects hypoxia.
24. Which instructions are needed to be conveyed while dispensing first time soft daily wear lenses.
25. Contact lens fitting in children
26. Tight lens syndrome
27. Explain the classification of keratoconus.
28. Therapeutic contact lens
29. Contact lens related papillary conjunctivitis
30. Indications and contraindications for contact lens fitting
31. Disadvantages of thermal disinfection of soft contact lenses
32. Convergence and accommodation with contact lenses
33. Properties of an ideal contact lens material.
34. Stabilization techniques in soft toric contact lens.

35. Significance of the components in contact lens solution
36. Indications for toric contact lenses
37. Contact Lens Solutions
38. Contact lens fitting in astigmatism.
39. Keratometer
40. History taking in contact lens patients
41. Superior limbic Kerato-conjunctivitis
42. Chemical disinfections
43. Therapeutic contact lenses
44. Explain FDA classification for soft contact lens. Give examples of lenses available in India in each group.
45. Discuss Non Tear Related Deposits on RGP & Soft Lens Surface.
46. Stabilization Techniques of Soft Toric Contact Lens..

## **SHORT NOTES**

1. Indications for contact lens use
2. Name any five complications of soft contact lens
3. Diffuse and retro-illumination technique using slit lamp
4. Extended keratometry
5. FDA classification for different soft contact lens types
6. Accommodation with contact lenses
7. Oxygen permeability

8. Disadvantages of PMMA
9. Types of bifocal contact lenses
10. Contact lens versus spectacles
11. Properties of contact lens solutions
12. Define sagittal depth and height
13. Sources of oxygen for cornea
14. Non-invasive assessment of tear layer
15. RGP static fit assessment
16. Classification of contact lens materials
17. List any three handling instructions for contact lens users.
18. Hydrogen peroxide disinfection systems in contact lens care
19. Cellulose acetate
20. Uses of Keratometer
21. Contraindication of contact lenses
22. special contact lenses indications
23. Prosthetic contact lens
24. List the various lens design
25. Contact lens fitting in keratoconus
26. Advantages of chemical disinfection
27. Uses of keratometer
28. List any six RGP material

29. Indications for soft contact lenses
30. How accommodation is affected when a myopic patient is shifted from spectacle to contact lens.
31. If the soft contact lens is placed inside out, what are the symptoms noted by the patient.
32. Mention the types of stabilizing techniques used in contact lens.
33. “Unilateral aphakic patient will be able to restore his/her stereopsis with the use of contact lens” justify this statement.
34. Explain the importance of rinsing.
35. Explain oxygen permeability.
36. What are therapeutic contact lens and its uses?
37. Characteristics of steep and flat fit
38. Disinfecting agents and their importance
39. Advantages of disposable contact lenses
40. LARS rule
41. Indications for therapeutic lenses
42. Methods of cleaning a dirty lens
43. Indications for toric lens
44. Instruments used in contact lens practice
45. HEMA
46. Parts of a contact lens
47. List RGP lens materials
48. What is LARS and where will you apply

49. A patient has horizontal visible iris diameter (HVID) of 11.5 mm. What CL TDs would be
50. most suitable when fitting this patient with SCLs.
51. Disadvantages of PMMA contact lens material
52. A patient's right eye has ocular astigmatism at axis 15. A trial contact lens placed on the
53. eye rotates 100 clockwise. What cylinder axis should be ordered for the final CL.
54. Explain monovision.
55. Write any one soft contact lens related complication, with its sign and symptoms.
56. Advantages and disadvantages of cast moulding
57. Mention bifocal contact lens designs.
58. Therapeutic contact lens
59. Indications for RGP lenses
60. Importance of wetting angle
61. Define oxygen permeability and transmissibility
62. Name the stabilization techniques in soft toric contact lens
63. Which filter is best to use for evaluation of RGP fitting with fluorescein dye.
64. An eye was fitted with RGP lens of 8.60 mm BC but looking at peripheral fitting you decide to increase its diameter by 0.50 mm. write the new BC to maintain its central fit similar like the previous fitting
65. Which axis is to be ordered when prescription is -1.00 cyl X 90 and trial lens is showing 15-degree clockwise rotation
66. What is monovision contact lens correction.
67. When to use protein removal tablets for soft contact lenses.

68. An eye has HVID of 10.5 mm. what diameter of RGP lens would be suitable to start with
69. Verification of BC and diameter in RGP contact lenses are done by .....and  
.....
70. In unilateral axial myopia which mode of optical correction is appropriate, spectacle or contact lens. And Why.
71. An RGP wearer presents with 3 & 9 O' clock staining. How to manage

### **FILL IN THE BLANKS**

1. FDA group III classification for soft contact lens involves----- lenses
2. .... measures the corneal curvature
3. Blurring of vision immediately after blink indicates ..... fit
4. During slit lamp examination, \_\_\_\_\_ is seen in keratoconus.
5. The distance between the back surface of the spectacle lens and the cornea is \_\_\_\_\_.
6. FDA Group I classification for soft contact lenses involves-----
7. ----- is the lenticular astigmatism in an eye with subjective refraction -3.00/-4.00× 90° and Keratometry readings 44.00/47.00@180°
8. Mucin balls are most commonly seen in----- contact lenses
9. WRITE 2 INDICATIONS OF THERAPEUTIC CONTACT LENS.
10. The horizontal visible iris diameter is .....
11. The average diameter of soft contact lenses is .....
12. Piggyback lenses are fitted in .....
13. The oxygen permeability of PMMA lenses is .....
14. Silicone hydrogel lenses are prescribed as ..... lenses

15. The refractive index for which the keratometer is calibrated is .....
16. .... are fitted 2 mm smaller than the corneal diameter
17. Name the scientist who invented HEAMA
18. Fluorescein pattern shows thick central pooling; name the type of RGP fit.
19. What are LARS and CAAS
20. Write suitable contact lens power of this prescription. +7.0 DS vertex distance 12mm.
21. Write spherical equivalent of -2.00DS/-2.00 DC x 180
22. Glands of Krause and Wolfring contributes to the ..... phase of the basal tears.
23. Overnight corneal oedema in normal eyes without contact lens is .....
24. .... described the concept of a contact.
25. Vogt's striae is the horizontal white lines seen in ..... patient.
26. Silicon hydrogel contact lenses have ..... modulus of elasticity as compared to 55% hydrogel contact lenses.
27. Normal range of keratometer is.....
28. The normal sagittal depth of the cornea is -----
29. ----- can be viewed by specular reflection using a slit lamp biomicroscope at high magnification.
30. ----- is the microorganism responsible for contact lens induced microbial keratitis
31. Vertex distance compensation is made in case of contact lens of power more than .....
32. Central clearance fluorescein pattern in RGP lens indicates -----
33. In myopia, contact lenses of a \_\_\_\_ BVP than spectacles are required.
34. The regular and orderly arrangement of the \_\_\_\_ is important to the maintenance of corneal transparency.

35. The \_\_\_\_\_ is the vehicle for most of the tear film components and is the transfer medium for O<sub>2</sub> and CO<sub>2</sub>
36. In \_\_\_\_\_ material, Si-O-Si bond is there and MA is incorporated to enhance the \_\_\_\_\_.
37. CLPC is seen easily with the slit lamp in \_\_\_\_\_ and \_\_\_\_\_ filter used in the observation system to enhance the contrast.
38. "----- Keratitis is commonly seen in contact lens wearers
39. In soft contact lens Filcon refers to .....
40. What is the name of instrument to measure vertex distance
41. A patient has a spectacle refraction of -9.00 D at a vertex distance of 14 mm. If we wanted to fit this patient with a CL, back vertex power (BVP) would be .....
42. A myope transferring from spectacles to CLs will use ..... accommodation and convergence
43. "..... invented the HEMA material CL.
44. TA contact lens material with water content greater than 50% & nonionic is .....
45. Tightness of soft contact lens can be evaluated by .....test.
46. Contact lens magnification is greater than spectacle magnification in cases of \_\_\_\_\_
47. State the strength and direction of prism used in prism ballast lenses -----
48. ----- is caused due to use of tap water on contact lenses
49. Reverse geometry lenses are ideal to treat patients -----
50. EDTA is a ----- agent
51. Corneal folds are induced by ----- percentage of corneal swelling
52. Contact lens induced papillary conjunctivitis (CLPC) is more common in ----- contact lens wear.

53. ----- is the least normal time of tear break up
54. Contact lens related microbial keratitis (MK) is most commonly associated with .....
55. Name one FDA group-II lens
56. .In contact lens fitting measurement of pupil diameter is important in determining .....
57. A patient has keratometry reading of 7.67mm @ 180 and 7.80mm @90 which BOZR would be most appropriate if you were to fit spherical RGP.
58. For a +5.00DS hyperope fixating an object at 40cm, the difference in the accommodation demand between spectacle wear (at a vertex distance of 14mm) and contact lens wear is .....
59. In against the rule astigmatism the corneas plus refractive power is greatest at and around .....meridian.
60. The oxygen required for the essential metabolism of the cornea is delivered principally by.....
61. Define extended wear lenses
62. Drysdale principle is used to measure.....
63. Horizontal dumbbell type fluorescein pattern is seen in .....
64. The centre of gravity shifts backward if TD.....
65. In flat SCL fitting post blink keratometry mires are.....
66. ' \_\_\_\_\_ & \_\_\_\_\_ monomers are present in silicone hydrogel contact lenses  
14.Name one preservative for soft lens MPS.....
67. During normal closed eye sleep the cornea swells by an average of
  - 0 percent • 2 percent • 4 percent • 20 percent