

VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)

B.OPTOMETRY DEGREE EXAMINATION – September 2021
Third Year

CONTACT LENS

Time: Three hours

Maximum: 80 marks

I Choose the best answer

(10 x 1 = 10)

1. The 7.70/-3.25/9.2 lens gave an alignment fit. When the diameter has to be changed to 9.8 mm what parameter has to be changed to maintain the lens cornea relationship?
 - a) Base curve and diameter
 - b) Base curve and power
 - c) Diameter only
 - d) Base curve only
2. Cornea derives its oxygen supply from all except
 - a) Atmosphere
 - b) Aqueous humour
 - c) Capillaries of limbal region
 - d) Crystalline lens
3. Pick the odd one out
 - a) Contact lens induced papillary conjunctivitis
 - b) Superior epithelial punctate lesion
 - c) Arcus senilis
 - d) Microbial keratitis
4. Which of the following is the application of keratometer
 - a) Curvature, corneal thickness, corneal elevation, tear stability
 - b) Curvature, tear stability
 - c) Corneal thickness, tear stability
 - d) Corneal elevation, curvature
5. Which of these is not a material property?
 - a) Oxygen permeability
 - b) Wettability
 - c) Deposit resistance
 - d) Oxygen transmissibility
6. Following are parameters needed for empirical fitting of contact lens except
 - a) HVID
 - b) Keratometer reading
 - c) Spectacle prescription
 - d) Corneal thickness
7. Vision clear immediately after a blink, quickly reverting a lesser quality is indicative of
 - a) Steep fitting in soft contact lens
 - b) Optimal fitting in soft contact lens
 - c) Steep fitting in RGP lens
 - d) Flat fitting in RGP lens

(p.t.o)

8. All are indications of toric SCL except
- | | |
|---|----------------------------------|
| a) Unsatisfactory vision with best sphere | b) RGP not tolerated |
| c) Low sphere to cylinder ratio | d) High sphere to cylinder ratio |
9. Which of the following is not a disinfectant agent?
- | | |
|------------------|---------------|
| a) Chlorhexidene | b) Thimerosol |
| c) Sorbic acid | d) Boric acid |
10. Which of the following is not considered as a primary aim of therapeutic CL?
- | | |
|------------------------------------|---------------------------------|
| a) Relief of ocular pain | b) Promotion of corneal healing |
| c) Mechanical protection & support | d) Vision improvement |

II State whether the following statements are **TRUE** or **FALSE** (10 x 1 = 10)

1. Butyl styrene has lowest specific gravity of all RGP materials.
2. Horizontal bearing is seen in against the rule astigmatism.
3. Silicone component in RGP lenses decreases lens wettability.
4. Spectacle blur is a disadvantage of PMMA lens.
5. To prevent edema the minimum Dk/t of an extended wear lens should be 84.
6. Biofilm is formed when micro organisms come in contact with stored contact lens solution.
7. RGP lens attracts more deposits than soft contact lens.
8. Radiuscope is based on Drydale's principle.
9. Itching due to CLPC often starts after lens removal.
10. Astigmatism of more than 1 D has to be fitted with back surface toric RGP.

III Fill in the blanks: (10 x 1 = 10)

1. Normal tear meniscus height is _____ mm.
2. Increasing sagittal height will _____ the contact lens fit.
3. Oxygen permeability is a property of _____.
4. Total diameter of SCL is selected by adding _____ to HVID.
5. Cornea consists of _____% water.
6. _____ is a fold at inner canthus, appearing as bi-concave crescent.
7. Pupil diameter is used to decide _____ of contact lens.
8. The time taken from last blink to first observable dry spot on the tear film is termed as _____.
9. A decentration of _____ in primary gaze is acceptable in soft contact lens fitting.
10. Multicurve contact lens is indicated for _____ cornea.

IV Write any **FIVE** answers of the following:

(5 x 6 = 30)

1. Explain relationships between the following with appropriate diagrams.
 - a) Base curve and sagittal depth.
 - b) Base curve and diameter.
2. Explain the corneal anatomy in brief. Draw necessary diagrams.
3. Refractive error of a 30 year old female is -5.00/-2.75 DC X 130. What will be the lens of choice and will you go about fitting the contact lens.
4. If the base curve flattens, a +0.25 is added to the back vertex power. If the base curve steepens, a -0.25 is added to the back vertex power. Explain this rule of thumb for RGP CL with example.
5. Explain aetiology, signs, symptoms and management of any two complications of RGP lens in detail.
6. What are the advantages of contact lens over spectacles?
7. What are the various slit lamp techniques? Write in detail about 2 techniques.

V Write any **TWO** essays of the following:

(2 x 10 = 20)

1. What are the essential steps of care and maintenance of contact lens? Write in detail about each step.
2. What is toric SCL stabilization technique? Write in detail about each of the technique.
3. Write about dynamic and static fitting in flat, optimal and steep fitting RGP contact lens.

(Sl.No. M21115)