

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

[AHS 0222]

**FEBRUARY 2022  
(OCTOBER 2021 EXAM SESSION)**

**Sub. Code: 1623**

**M.OPTOM**

**FIRST YEAR (Candidates admitted from 2018-2019 & 2020-2021 onwards)**

**PAPER III – ADVANCED CONTACT LENSES - I**

*Q.P. Code : 281623*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. What are the various methods to manufacture rigid gas permeable lenses and soft contact lenses?
2. What are the various (five) modifications possible with rigid gas permeable lenses and how do you go about doing each of the modifications.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. From the early contributions in the 16<sup>th</sup> century to the recent developments in silicon elastomers, write the major events in the development of contact lens materials.
2. What are the various methods to assess the fit of rigid gas permeable lenses.
3. What are the various investigations and tools used prior to fitting contact lenses.
4. Discuss the types of fit on a toric cornea, with a spheric and toric lens.
5. Name three important material properties of contact lenses and their significance.
6. Name any three components of a lens care system, their functions with examples.
7. Name few instances where contact lenses are indicated and why?
8. What is the importance of a keratometer, topographer and slit lamp in contact lenses fitting.
9. What is the step by step procedure that you will instruct your patient on wearing and removal of rigid gas permeable contact lens.
10. What are the various parameters that you need to calculate to finalize on the best suitable contact lens for the patient.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 1022]**

**OCTOBER 2022**

**Sub. Code: 1623**

**M.OPTOM  
FIRST YEAR**

**(Candidates admitted from 2018-2019 & 2020-2021 onwards)  
PAPER III – ADVANCED CONTACT LENSES – I**

***Q.P. Code : 281623***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Write in detail about the procedure and assessment for RGP contact lens fittings.
2. Write in detail about contact lens verification and discuss about what are the parameters need to verified.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Write about tight fit characteristics of RGP lens.
2. Explain about Contact lens materials.
3. What is DK\t and its significance in Contact lens?
4. Recent advancement in Contact lens.
5. How to calculate vertex power for -2.00/-3.00@180, write down the steps involved in calculations.
6. Write about Anterior Segment OCT.
7. What is vertex distance and calculate the effectivity of lens with example.
8. Scleral Contact lens fitting.
9. Therapeutic Contact lens.
10. Write the Care and maintenance of Soft contact lens.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0523]**

**MAY 2023**

**Sub. Code: 1623**

**M.OPTOM**

**FIRST YEAR (Candidates admitted from 2020-2021 onwards)**

**PAPER III – ADVANCED CONTACT LENSES – I**

***Q.P. Code: 281623***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Explain in detail about the lens of choice for keratoconus patients.
2. Explain soft toric contact lens fitting assessment for the refractive error of -3.00 /- 2.50 @ 170.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Explain about the insertion and removal techniques in RGP.
2. What are the steps involved in Pre- Assessment in Contact lens?
3. Write about a short note on Special purpose Contact lens.
4. Corneal topography and its role in Contact lens.
5. RGP lens modification techniques.
6. Complications of Contact lens.
7. What is Tear lens and write its significance?
8. Write about Contact lens Solutions.
9. Orthokeratology.
10. Fitting assessment in Soft Contact lens.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

[AHS 1023]

OCTOBER 2023

Sub. Code: 1623

**M.OPTOM  
FIRST YEAR (From 2020-2021 onwards)  
PAPER III – ADVANCED CONTACT LENSES – I**

*Q.P. Code: 281623*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Identify and explain common complications associated with RGP contact lens wear. Discuss how these complications can be prevented and managed to ensure the long-term health of the eye.
2. What are the essential components of a contact lens care regimen? Discuss the importance of each component, including lens cleaning, disinfection, and storage.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Discuss the specific parameters and criteria that should be evaluated during lens checking.
2. Write about contact lens induced dry eye and explain how will you manage?
3. Write a note on Giant papillary conjunctivitis.
4. Can you explain the importance of rotational stability in soft toric contact lenses? How do you assess and ensure proper lens alignment?
5. Can you provide examples of cases where contact lenses may be preferred over glasses due to improved vision?
6. How do you determine the most suitable contact lens type and fit for an individual with keratoconus? What factors influence the selection process?
7. Describe the structure of the cornea and its layers.
8. Explain the FDA classification system for contact lens materials.
9. How does the water content of a contact lens material affect its performance and comfort?
10. What are the common fitting challenges or issues encountered during contact lens fitting, such as lens decentration, inadequate movement or poor comfort? How do you address these challenges?

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0524]**

**MAY 2024**

**Sub. Code: 1623**

**M.OPTOM  
FIRST YEAR (From 2020-2021 onwards)  
PAPER III – ADVANCED CONTACT LENSES – I**

*Q.P. Code: 281623*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. What are the factors that influence the Dk value of a given contact lens? Explain.
2. Write on soft toric contact lens fitting.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. What are the advantages low water content contact lenses?
2. What are the advantages and disadvantages of ionic contact lens material?
3. The subjective refraction reveals -3.00DS (6/6). The GP contact lens of the following parameter is fitted: 8.6/-2.0D/9.0 (base curve/power/diameter). The fit is optimal. The over refraction revealed -0.50 DS (6/6). What is the tear lens value?
4. What are the patient instructions when you deliver your soft contact lens?
5. What is the most suitable material of contact lens for a dry eye patient? Explain your answer.
6. Patient complains of decrease in visual acuity after blinking with the newly fitted soft contact lens. What will you do next?
7. Write a short note on keratoconus.
8. Write about the importance of slit-lamp bio microscope in contact lens fitting.
9. Make the vertex conversion for the power: -5.00 DS /-2.50 DC@180, write down the steps in vertex conversion.
10. Explain the Ideal contact lens for a subject who is involved in water sports.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

[AHS 1024]

OCTOBER 2024

Sub. Code: 1623

**M.OPTOM  
FIRST YEAR (From 2020-2021 onwards)  
PAPER III – ADVANCED CONTACT LENSES – I**

*Q.P. Code: 281623*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Mention any five complications of soft contact lens. Explain its etiology, signs symptoms and its management.
2. Explain the fitting of RGP contact lens step by step.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. What are the advantages and disadvantage of high-water content contact lenses?
2. What is the significance of Dk value?
3. The GP contact lens of the following parameter is fitted: 8.6/-2.0D/9.0 (base curve/power/diameter).  
The lens moves much. It often decenters. What will you do next? Explain.
4. Explain LARS rule.
5. You come across a patient with severe dry eye. The patient was diagnosed to have Steven Johnson syndrome. What is the ideal contact lens that you suggest for this patient? Explain your answer.
6. Write a short note on sports vision and contact lens.
7. Write about the importance of corneal topographer in contact lens fitting.
8. Explain sagittal depth with diagram.
9. Explain lower lid push-up test.
10. What are the adverse effects of tightly fitted RGP contact lens?

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0525]**

**MAY 2025**

**Sub. Code: 1623**

**M.OPTOM  
FIRST YEAR (From 2020-2021 onwards)  
PAPER III – ADVANCED CONTACT LENSES – I**

***Q.P. Code: 281623***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Explain about Rigid lens problems.
2. Write in detail about optics and design of Contact lens.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Effect of contact lenses on corneal sensitivity.
2. Write the advantages and disadvantages of different manufacturing techniques used in contact lens.
3. Explain about multipurpose solutions for soft and gas permeable lenses.
4. Indications and contra indications for contact lens wearing.
5. Write the effect of flexure on rigid corneal lenses.
6. Instruments for assessing the anterior segment.
7. Assessment of RGP lens fitting.
8. Limitations of soft toric contact lenses.
9. How to check water content of the contact lens and write its importance.
10. Write the properties of ideal contact lens materials.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

[AHS 1025]

**OCTOBER 2025**

**Sub. Code: 1623**

**M.OPTOM**  
**FIRST YEAR (From 2020-2021 onwards)**  
**PAPER III – ADVANCED CONTACT LENSES – I**

*Q.P. Code: 281623*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Write in detail about Contact lens complications.
2. Explain each preliminary examination required in a contact lens fitting and their significance.

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Write the effect of Contact lenses on corneal metabolism.
2. Write about interaction between lenses and micro – organism.
3. Describe: Solution licensing requirements.
4. Explain about care and replacement of lens cases.
5. Evaluation of ocular surface integrity.
6. Describe: Corneal Topography.
7. Explain about RGP lens materials.
8. Write about assessment of soft lens fitting.
9. Write the applications of contact lenses in Laser surgery.
10. Explain about Rigid contact lens insertion and removal technique.

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