

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

[AHS 0321]

MARCH 2021

Sub. Code: 1632

(OCTOBER 2020 EXAM SESSION)

M.OPTOM

SECOND YEAR (From 2018-2019 onwards)

PAPER II – ADVANCED CONTACT LENSES - II

Q.P. Code : 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Explain in detail the fitting of soft contact toric lens, list out the complications in brief and their management?
2. What are scleral lenses? What are the indications for scleral lens? What are the advantages and therapeutic applications of scleral lenses?

II. Write Short Notes on:

(10x6 = 60)

1. Rose K lenses
2. LARS rule
3. Role of rigid gas permeable lenses in correction of astigmatism
4. Importance of DK value in fitting of lenses
5. Methods to study corneal topography
6. Piggy bag lenses
7. Acanthamoeba keratitis
8. Absolute and relative contra indications for fitting of contact lenses
9. Maintenance of soft contact lenses
10. Special contact lens designs

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

[AHS 0921]

**SEPTEMBER 2021
(MAY 2021 EXAM SESSION)**

Sub. Code: 1632

**M.OPTOM
SECOND YEAR (From 2018-2019 onwards)
PAPER II – ADVANCED CONTACT LENSES - II
*Q.P. Code : 281632***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on: (2 x 20 = 40)

1. Indications for soft contact lenses and rigid gas permeable lenses, steps involved in fitting of the lenses and methods to assess the correct fit.
2. What are the different problems faced while fitting the contact lenses. Differential diagnosis and management of patient problems regarding contact lenses.

II. Write Short Notes on: (10x6 = 60)

1. Trial set method
2. Lens care system for soft contact lenses
3. Problems associated with extended wear lenses and their treatment
4. Method to stabilise toric lenses
5. Contact lenses for sports person
6. Role of scleral lenses in dry eye
7. Mixed lenses
8. Contact lens solutions
9. Giant papillary conjunctivitis
10. Relevant history to select new contact lens patient

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

[AHS 0122]

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

Sub. Code: 1632

**M.OPTOM
SECOND YEAR (From 2018-2019 onwards)
PAPER II – ADVANCED CONTACT LENSES - II
*Q.P. Code : 281632***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. The different contact lens solutions available in the market, write in brief about their composition and advantages.
2. What is astigmatism? Role of rigid gas permeable and soft toric lenses in correction of astigmatism.

II. Write Short Notes on:

(10x6 = 60)

1. Cosmetic contact lenses
2. Manufacturing techniques of soft contact lenses
3. Methods of correction of keratoconus with contact lenses
4. Fluorescein pattern in rigid gas permeable lenses
5. Bandage contact lenses
6. Advantages and disadvantages of soft contact lenses
7. Presbyopia management with contact lenses
8. Orthokeratology
9. Lens deposits
10. Soft contact lenses after radial keratotomy

THE TAMIL NADU M.G.R. MEDICAL UNIVERSITY

[AHS 1022]

OCTOBER 2022

Sub. Code: 1632

M.OPTOM
SECOND YEAR (From 2018–2019 & 2020-2021 onwards)
PAPER II – ADVANCED CONTACT LENSES - II
Q.P.Code : 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. If you had to set up a contact lens clinic in your town, how would you go about doing it? What would be your advanced / ideal / reasonable / minimum setup of equipment for the CL Clinic? What is empirical method of fitting contact lenses? Is there any other method of fitting?
2. How will you manage the following patients with contact lenses? Identify the condition and discuss the fitting plan for each case individually.

Eye	Keratometry reading	Current refraction	
RE	K1 46.00D K2 49.00D	-1.00/-3.00 x 120 VA 6/18, N8	Scissors reflex noted
LE	K2 47.00D K2: 50.00D	-2.00/-4.00x 20 VA 6/24 ph 6/18,N8	
Eye	Keratometry reading	Current refraction	
RE	K1 44.00D K2 44.00D	-1.00/-3.00 x 120 VA 6/6, N6	
LE	K2 44.00D K2: 44.25 D	-2.00/-4.00 x 20 VA 6/6, N6	
Eye	Keratometry reading	Current refraction	
RE	K1 44.00D K2 47.00D	-1.00/-3.00 x 120 VA 6/6, N6	
LE	K2 44.00D K2: 46.00D	-2.00/-2.00 x 20 VA 6/6, N6	
Eye	Keratometry reading	Current refraction	
RE	K1 44.00D K2 44.00D	-1.00 Ds VA 6/6, N6	
LE	K2 44.00D K2: 44.00D	-2.00Ds VA 6/6, N6	

P.T.O.

II. Write Short Notes on:

(10 x 6 = 60)

1. What are the issues in fitting a patient post corneal graft?
2. How would you differentiate between a steep, flat and ideal fit of a contact lens?
3. Discuss orthokeratology for myopia
4. A case record of a patient shows Manual Keratometry values of 62.00 / 59.00 @25. How do you think they would have obtained this K reading?
5. What is static and dynamic assessment of CL fitting?
6. What are the instruments used in CL fitting?
7. A 43 year CL user with prescription RE -1.00Ds LE: -1.50 D has come with C/O difficulty with using her mobile phone with contact lenses. What solutions can you offer this patient?
8. A toric contact lens trial patient C/O blurred vision in the BE. The trial lens Rx BE: is -1.00Ds/-1.25 Dc@90. On examination you find that the lens has rotated 20 deg to the clockwise in the right eye, and 20 deg anticlockwise in the left eye. How would you modify the contact lens prescription to order the final lens?
9. What is Dk / Dk/t? How is it important in contact lens fitting?
10. How will you manage a patient with bullous keratopathy with contact lenses?

THE TAMIL NADU M.G.R. MEDICAL UNIVERSITY

[AHS 0523]

MAY 2023

Sub. Code: 1632

**M.OPTOM
SECOND YEAR (From 2020–2021 onwards)
PAPER II – ADVANCED CONTACT LENSES – II**

Q.P. Code: 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. What are the different options of myopia control with contact lenses?
2. What are the routine steps to be followed while fitting an RGP CL, Soft CL? Write out a proforma for fitting the contact lenses. Give an example.

II. Write Short Notes on:

(10 x 6 = 60)

1. Dos and Don'ts in Soft CL use.
2. Importance of Dk value in CL fitting.
3. Components of a soft contact lens care solution with example.
4. What are corneal GP lenses, mini sclera lenses and scleral lenses?
5. Indications for contact lenses in Children.
6. Contact lenses in presbyopia- what are the options?
7. Explain the relationship between changes in Base Curve, Diameter and Power of an RGP lens modification.
8. What are extended wear lenses?
9. How would you measure very flat or very steep corneas with the keratometer?
10. When is it advisable to fit contact lenses on a patient who has undergone a corneal procedure?

THE TAMIL NADU M.G.R. MEDICAL UNIVERSITY

[AHS 1023]

OCTOBER 2023

Sub. Code: 1632

**M.OPTOM
SECOND YEAR (From 2020–2021 onwards)
PAPER II – ADVANCED CONTACT LENSES – II**

Q.P. Code: 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. A 9-year-old child with prescription of -5.00D in both eyes has come to you for a consultation, her last prescription checked 6 months back was -4.00D. What is the type of refractive error? How would you manage this case?
2. Explain the different manufacturing methods of contact lenses.

II. Write Short Notes on:

(10 x 6 = 60)

1. What are the types of contact lenses that are available to fit a patient of keratoconus?
2. Discuss PROSE. What is the type of lens: material, Dk and size used?
3. A patient with a corneal scar following a cracker injury 5 years back comes to you for CL fitting. How will you counsel and manage this patient?
4. Explain steps in care and maintenance for a CL user.
5. Contact lenses in presbyopia – What are the options?
6. What are continuous wear and extended wear lenses? What is the recommended Dk for each type?
7. How would you measure very flat or very steep corneas with the Keratometer?
8. What are the types of Prosthetic lenses available?
9. What are the parameters for ordering a soft cl and an RGP CL? Write a sample prescription for one soft and one RGP CL.
10. What are the instruments / equipment required for fitting contact lenses?

THE TAMIL NADU M.G.R. MEDICAL UNIVERSITY

[AHS 0524]

MAY 2024

Sub. Code: 1632

M.OPTOM
SECOND YEAR (From 2020–2021 onwards)
PAPER II – ADVANCED CONTACT LENSES – II

Q.P. Code: 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. What are the causes of irregular corneas? Discuss contact lens fitting in irregular corneal conditions.
2. Identify the condition and describe contact lens fitting in each of the cases. Is there any advantage of contact lenses over spectacles in each of the cases?

Eye	Keratometry reading	Current refraction	
RE	K1 46.00D K2 49.00D	-1.00/-3.00 x 120 VA 6/9, N8	No Scissors reflex noted
LE	K2 47.00D K2: 49.50D	-2.00/-3.00 x 60 VA 6/12 ph 6/6, N8	
Eye	Keratometry reading	Current refraction	
RE	K1 44.00D K2 44.00D	-12.00Ds VA 6/18, N6	No Scissors reflex noted
LE	K2 44.00D K2:44.00D	-15.00Ds VA 6/18, N6	
Eye	Keratometry reading	Current refraction	
RE	K1 44.00D K2 45.00D	-1.00/-1.50 x 120 VA 6/6, N8	Clear reflex noted
LE	K2 45.00D K2:45.00D	-6.00 VA 6/24 ph 6/6, N6	
Eye	Keratometry reading	Current refraction	
RE	K1 46.00D K2 49.00D	-1.00/-3.00 x 120 VA 6/18, N8	Scissors reflex noted
LE	K2 47.00D K2:52.00D	-2.00/-4.00 x 60 VA 6/24 ph 6/18,N8	

II. Write Short Notes on:

(10 x 6 = 60)

1. Routine steps in RGP CL fitting. Write the prescription for an RGP CL order.
2. Components of a soft contact lens care solution with example.
3. What are corneal GP lenses, mini sclera lenses and scleral lenses?
4. Indications for contact lenses in Children.
5. Contact lenses in presbyopia – what are the options?
6. What are extended wear lenses?

P.T.O.

7. How would you measure very flat or very steep corneas with the Keratometer?
8. What are the types of Prosthetic lenses available?
9. What are the conditions where Bandage Contact Lenses are required? How do you fit a BCL and what is the follow-up plan?
10. Classify contact lenses based on material.

THE TAMIL NADU M.G.R. MEDICAL UNIVERSITY

[AHS 1024]

OCTOBER 2024

Sub. Code: 1632

**M.OPTOM
SECOND YEAR (From 2020–2021 onwards)
PAPER II – ADVANCED CONTACT LENSES – II**

Q.P. Code: 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Explain the different manufacturing methods for contact lenses.
2. A 48-year-old who has always worn contact lenses with prescription RE: -4.50Ds and LE: -5.00Ds has difficulty with near vision with her current lenses. What is her spectacle prescription? How will you manage this patient? Give the steps in fitting and trouble shooting.

II. Write Short Notes on:

(10 x 6 = 60)

1. Routine steps in soft toric CL fitting. Write the prescription for a soft toric CL order.
2. Discuss the components of an ideal contact lens care solution with example.
3. What are corneal GP lenses, mini sclera lenses and scleral lenses?
4. A new patient comes in for an eye examination, his spectacle prescription reads - 8.00D in both eyes. Based on his eye test he wants the contact lens prescription. How will you proceed? What are the legalities you would consider?
5. What are the conditions where Bandage Contact Lenses are required? What are the possible complications?
6. What is orthokeratology? How does an orthokeratology lens work?
7. What are the Do's and Dont's in Soft CL Use?
8. What is Dk and Dk/t? What is their significance? What are the recommended values of the same for daily wear, extended wear lenses orthokeratology and scleral lenses?
9. What are the methods of CL fitting? Give an example for each.
10. Discuss instrumentation related to CL fitting.

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

[AHS 0525]

MAY 2025

Sub. Code: 1632

M.OPTOM

SECOND YEAR (From 2020–2021 onwards)

PAPER II – ADVANCED CONTACT LENSES – II

Q.P. Code: 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Spectacle Prescription OD: -1.25/-1.25X180

OS: -3.00/ -2.25X170.

K VALUES OU: 45.00 (7.50mm) @ 180/ 47.50 (7.11mm) X 90.

Discuss how you will choose the Base Curve / power / Diameter of the Trial lens you will choose for: (1) Soft CL OR soft toric CL and (2) RGP for both eyes.

2. Elaborate on the handling instructions, insertion and removal instructions for a (1) soft CL and (2) RGP CL patient.

II. Write Short Notes on:

(10 x 6 = 60)

1. Explain in detail LARS rule.
2. Write short note on Acanthamoeba Keratitis caused secondary to CL wear.
3. Contact lens options for a sports person.
4. K1: 43.00@180, K2: 45.00@90. Refraction: -2.00/-3.00x180. What CL would you advice this patient and why?
5. Various points to be noted while fitting a post Refractive Surgery patient and the contact lens options advisable for these patients.
6. Describe two different soft multifocal contact lens designs and mention their fitting strategies.
7. Explain about the various types of Prosthetic contact lens. Give two conditions where each type of prosthetic CL is used.
8. Elaborate on three RGP or semi soft CL complications.
9. Write briefly about the various bifocal contact lens designs.
10. Write in detail about any two contact lens manufacturing techniques.

THE TAMIL NADU M.G.R. MEDICAL UNIVERSITY

[AHS 1025]

OCTOBER 2025

Sub. Code: 1632

M.OPTOM
SECOND YEAR (From 2020–2021 onwards)
PAPER II – ADVANCED CONTACT LENSES – II

Q.P. Code: 281632

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Identify the condition, describe it. How will you manage this patient with contact lenses?

Eye	Keratometry reading	Current refraction	
RE	K1 44.00D K2 49.00D	-1.00/-3.00 x 120 VA 6/18, N8	Scissors
LE	K2 47.00D K2: 50.00D	-2.00/-4.00 20 VA 6/24 ph 6/18,N8	reflex noted

2. A 45 year old myope who has always worn contact lenses has difficulty with near vision with her current lenses. How will you manage this patient? Give a case example.

II. Write Short Notes on:

(10 x 6 = 60)

1. Bandage contact lenses.
2. What are the types of prosthetic lenses? And where are they used?
3. What are the difficulties faced in fitting a paediatric patient with contact lenses?
4. What are the parameters that can be modified in a finished RGP lens?
5. What are extended wear lenses?
6. LARS Rule in Toric fitting with examples.
7. Dos and Don'ts in Soft CL use.
8. Importance of Dk value in CL fitting.
9. Components of a soft contact lens care solution with example.
10. Soft CL manufacturing by spin casting method.
