

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

[AHS 0122]

JANUARY 2022

Sub. Code: 2753

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)

B.OPTOM

THIRD YEAR (Regulation 2018-2019)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code : 802753

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail the different classifications of contact lenses.
2. Write in detail about the optics of contact lenses.
3. Write about the different types of low vision aids. How do you select a particular aid and magnification required for patients with low vision?

II. Write notes on:

(8 x 5 = 40)

1. Contraindications for contact lens use.
2. Properties of contact lens materials.
3. RGP lens manufacturing techniques.
4. Features of an ideal soft contact lens fit.
5. Write about any 2 complications due to extended wear of contact lenses.
6. Write about the preliminary examination of patients before contact lens trial.
7. Neatly draw a contact lens and mark its parts. Define the key parameters of a contact lens.
8. Evaluation of a patient with low vision.

III. Short answers on:

(10 x 3 = 30)

1. Oxygen transmission.
2. Therapeutic contact lenses.
3. Steps in contact lens care and maintenance.
4. Contact lens options for keratoconus.
5. LARS rule.
6. Fresnel prisms and its uses.
7. Rehabilitation of low vision patients.
8. List out common low vision disorders leading to peripheral vision loss.
9. Glare control in low vision patients.
10. Legal blindness.

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 2753

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.OPTOM

THIRD YEAR (Regulation from 2018-2019)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code : 802753

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. What are the indications of RGP lenses? Explain the fitting of RGP lenses in detail.
2. Write in detail about various contact lens materials, their advantages and disadvantages.
3. Write in detail the optics, uses, advantages, disadvantages of optical low vision devices.

II. Write notes on:

(8 x 5 = 40)

1. Explain corneal metabolism and hydration dynamics.
2. Types of toric lens fitting.
3. Write the signs and symptoms of a loose-fitting soft contact lens. How will you correct the fit?
4. Therapeutic contact lenses.
5. CLPC – Expand and explain the features, causes and management.
6. Contraindications for contact lens wear.
7. Advantages of disposable contact lenses.
8. Non-optical low vision aids.

III. Short answers on:

(10 x 3 = 30)

1. Sattler's veil.
2. Types of bifocal contact lenses.
3. Diagnostic uses of contact lenses.
4. A patient wears -5.00DS spectacles at a distance of 12mm from the eye. What is the power to be prescribed in contact lenses?
5. Draw a contact lens and mark the parts.
6. What will be your lens of choice for a patient having dry eyes? Justify your answer(s).
7. Disability vs. disorder.
8. List the types of magnification. Give example of one device for each type.
9. Pinhole spectacles.
10. Types of illumination techniques and magnification used in slit lamp in contact lens practice.

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

[AHS 0423]

APRIL 2023

Sub. Code: 2753

B.OPTOM

THIRD YEAR (Regulation 2018-2019 onwards)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code : 802753

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about soft contact lens care and maintenance.
2. Write in detail about toric contact lens patient selection, fitting considerations and its evaluations.
3. Define Low Vision Aids. Write in detail about non-optical devices in Low vision.

II. Write notes on:

(8 x 5 = 40)

1. Define Keratometry. Write uses of Keratometry in contact lens fitting.
2. Write about insertions and removal techniques of Soft contact lens.
3. Find out the contact lens power for following prescriptions (vertex distance = 14 mm).
a) - 10.00 DSPH b) + 5.00 DSPH.
4. Write about accommodation and convergence with contact lens.
5. Chemical disinfection of contact lenses.
6. Write a short note on Bi-Optic telescopes.
7. Classify the categories of Visual Impairment.
8. Contact lens fitting in Astigmatism.

III. Short answers on:

(10 x 3 = 30)

1. What is Multi-Purpose Solution?
2. Water content of a contact lens.
3. Instruments used in measurement of contact lens power.
4. Write types of semi-soft contact lens materials.
5. Write the parts of contact lens with a diagram.
6. Define functional Vision.
7. Write about the uses of Notex.
8. How do you examine the tear film quality?
9. Types of rigid lenses.
10. What is CLARE?

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 2753

B.OPTOM

THIRD YEAR (Regulation 2018-2019 onwards)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code: 802753

Time: Three hours

Answer ALL Questions

Maximum:100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about the selection criteria and evaluation of Trial Lens Fitting of Soft Contact Lens.
2. Write in detail about parameters required and the fitting assessment of an RGP Lens.
3. Explain about different types of Low Vision Devices available for Distance Vision Correction.

II. Write notes on:

(8 x 5 = 40)

1. FAD classification of Contact Lenses.
2. What are the main advantages of Contact Lens over Spectacles?
3. Symptoms of loose fit and tight fit in soft contact lens and its correction.
4. Differences between Static and Dynamic fitting of RGP contact lenses.
5. Terms used in relation to properties of contact lens materials.
6. Define Legal blindness.
7. Types of magnification used in low vision.
8. Define Glare. Explain about the types of Glare and its management.

III. Short answers on:

(10 x 3 = 30)

1. What is TACO test?
2. Define Visual impairment.
3. Define Oxygen transmissibility.
4. The spectacle prescription is : -3.00Dsp/ -3.75DCx180. If the rotation of the lens is 10 degrees to the left, what will the final lens order be?
5. Name any three Computer assisted devices used in LV (low vision) patients.
6. Mention any three ocular disease conditions that can cause peripheral field defect.
7. Mention the indications of Bandage contact lens wear.
8. Disadvantages of PMMA.
9. Mention the deposits on Soft contact lenses.
10. What is Hybrid Contact Lens?

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

[AHS 0424]

APRIL 2024

Sub. Code: 2753

B.OPTOM

THIRD YEAR (Regulation 2018-2019 onwards)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code: 802753

Time: Three hours

Answer ALL Questions

Maximum:100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write about Soft Contact Lenses Fitting, Care and Maintenances.
2. A 14 years old female diagnosed with high myopia with macular degeneration was referred to low vision clinic, her Visual acuity with glasses (Distance) OD:3/30 OS: 3/19, For (near) OU: N10 at 10cm with glasses, her old glass prescription OD -15.00/ -2.00X50⁰, OS-12.00/-1.50X45⁰, New Subjective correction OD -11.50/-2.00/50, OS-12.00/ -2.00-50. Write about your management for this low vision case.
3. Write about Contact Lenses for Astigmatism - Fitting and Management.

II. Write notes on:

(8 x 5 = 40)

1. Toric contact lenses stabilization method.
2. Keratoconus.
3. Telescopes - types and its usages in low vision.
4. Indications of contact lenses.
5. Dry eye and management.
6. Contrast Sensitivity charts.
7. Fitting evaluation in RGP Contact lenses.
8. Non optical low vision aids.

III. Short answers on:

(10 x 3 = 30)

1. Wetting angle.
2. TBUT tests.
3. Radical retinoscopy.
4. Types of low vision near vision charts.
5. Spectacle magnifier.
6. Specular Microscopy.
7. Contact lenses verification of base curve and diameter.
8. Rose K Lenses.
9. Three RGP materials.
10. Tear lenses.

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

[AHS 0125]

JANUARY 2025

Sub. Code: 2753

B. OPTOM

THIRD YEAR (Regulation 2018-2019 onwards)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code: 802753

Time: Three hours

Answer ALL Questions

Maximum:100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about the materials used in manufacturing RGP lens. Elaborate on merits and demerits.
2. Write in detail about the fitting procedure of soft contact lens and its evaluation.
3. Enumerate common disorders leading to low vision. Write in detail about problems and management of the following:
 - a) Corneal Opacity
 - b) Glaucoma
 - c) Age related macular degeneration.

II. Write notes on:

(8 x 5 = 40)

1. Electronic devices.
2. Glare and contrast in low vision care.
3. Instructions given for a first-time contact lens wearer.
4. Types of Prosthetic contact lenses.
5. Contact lens solution and properties.
6. Disposable contact lens.
7. Explain the importance of Rehabilitation in low vision care.
8. Selection of a patient for soft contact lens fitting.

III. Short answers on:

(10 x 3 = 30)

1. Define Low vision according to WHO.
2. Methods of cleaning a dirty lens.
3. Mention three differences between Galilean and Keplerian telescope.
4. Mention the causes of decentration of soft contact lens.
5. Spectacle refraction of a patient is $-2.00/-1.75 \times 150^\circ$. He was fitted with a soft Toric lens $-2.00/-1.75 \times 150^\circ$, which rotates 20° clockwise on the eye. What is the final prescription of the contact lens using LARS rule?
6. Uses of contact lens in Nystagmus.
7. Disadvantages of stand magnifier.
8. Stages in manufacture of contact lens.
9. Diagnostic uses of contact lenses.
10. What is orthokeratology?

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

[AHS 0425]

APRIL 2025

Sub. Code: 2753

B. OPTOM

THIRD YEAR (Regulation 2018-2019 onwards)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code: 802753

Time: Three hours

Answer ALL Questions

Maximum:100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about indications and contraindications for Contact Lenses.
2. Explain in detail about fitting of Soft Lenses - from patient selection to dispensing of Final Lenses.
3. Mr. A, 15 years old, suffers from Retinitis Pigmentosa. Write about his symptoms, needs, low vision evaluation procedure and the management options.

II. Write notes on:

(8 x 5 = 40)

1. FDA classification of contact lenses.
2. Toric lens stabilization techniques and features.
3. Soft contact lens manufacturing techniques.
4. Microbial keratitis.
5. Prosthetic lens - types and uses.
6. With diagrams, explain the relationship between base curve, diameter and sagittal depth.
7. Advantages of contact lenses over spectacles.
8. Optical low vision aids.

III. Short answers on:

(10 x 3 = 30)

1. Oxygen permeability.
2. Bandage contact lenses.
3. Types of lens deposits.
4. Hybrid lenses.
5. Draw the On-K fit pattern of RGP lens on a spherical cornea and mark the zones.
6. Ortho-keratology.
7. Special charts used in low vision patient assessment.
8. List out common low vision disorders leading to central vision loss.
9. Low vision Rehabilitation.
10. Categories of Visual impairment.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 2753

B. OPTOM

THIRD YEAR (Regulation 2018-2019 onwards)

PAPER III – LOW VISION AIDS AND CONTACT LENS

Q.P. Code: 802753

Time: Three hours

Answer ALL Questions

Maximum:100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write about the functional vision assessment for Low vision.
2. Write in detail about R.G.P. contact lenses fitting.
3. Write in detail about Paediatric contact lenses, indications, materials and fitting.

II. Write notes on:

(8 x 5 = 40)

1. Rose K Lenses.
2. Evaluation of tear film.
3. Astigmatism and Contact Lens (CL) correction options.
4. Prosthetic contact lenses types and usage.
5. Contact lenses manufacturing techniques.
6. Evaluation of Contact lenses Base curve, Diameter and Coverage.
7. Spectacle magnifier and Field expanders.
8. Types of magnification.

III. Short answers on:

(10 x 3 = 30)

1. Enzymatic cleaner in contact lens solution.
2. Telescopes types and uses in low vision.
3. Rehabilitation for central field loss.
4. Dome Magnifier.
5. Electronic devices advantages.
6. Types of Glare.
7. Sagittal depth.
8. Light house near vision charts.
9. Find out the effective power for +13.00D spectacle at a distance of 15 mm in front of the patient's eye.
10. Symptoms of steep fitted contact lenses.
