Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 03-Jan-2022

Time: Three Hours **Max. Marks: 80 Marks**

LOW VISION AIDS AND GERIATRIC OPTOMETRY – (RS-3)

Q.P. CODE: 3121

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Three) **3 x 10 = 30 Marks**

1. Write advantage and disadvantages of various magnifiers.
2. A patient (82/F) diagnosed with Age Related macular Degeneration. What are the signs and symptoms expected for the patient? BCVA: RE-6/60, LE-3/60 NV: N18, N36. Patient want to see relatives face clearly and reading religious book? Explain the solutions you recommend for the patient.
3. What is Retinitis pigmentosa? What is RP triad? Mention LVA management of RP.
4. What is Gerontology? Write the steps of Geriatric ocular evaluation.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

5. Describe Refractive changes in diabetes
6. Describe Radical Retinoscopy with example.
7. Draw the Optics of Galilean Telescope.
8. A Macular Dystrophy pt (24/ M) is having near vision N12 in both eye at 40 cm. Calculate the power of spectacle magnifiers for reading newspaper. Subjective refraction RE:+1.00Dsph, LE : +1.50D
9. Write the advantages and disadvantages of electronic magnifiers.
10. What are the ocular changes happed due to aging?
11. Write the causes of overall blur vision, central vision loss, and peripheral vision loss.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. A patient can read 2 letters at 4 meter in EDTRS chart 1.0 line. Write the visual acuity in log MAR.
13. Write changes of color of crystalline lens due to age related changes.
14. What are the advantages of miotic pupil in old age?
15. Write two names of macular function test.
16. Write two non-optical devices name and use for reading and writing.
17. Mention the stages of grief according to Kubler-Ross model on patients with vision loss.
18. What is Achromatopsia?
19. How aniridia occurs?
20. Unaided visual acuity 6/60. What power lenses you will show to patient as per bracketing technique?
21. Uses of pinhole in low vision patient.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 05-Jan-2022

Time: Three Hours **Max. Marks: 80 Marks**

CONTACT LENS (RS3)
Q.P. CODE: 3122

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer Any Three) **3 x 10 = 30 Marks**

1. Briefly explain common soft contact lens complication, causes and its management.
2. Explain in detail the various contact lens options and fitting philosophies for correcting Keratoconus.
3. Briefly explain the Indications and Contraindications while selecting the contact lenses.
4. Briefly discuss on the tear related deposits and their management.

SHORT ESSAYS (Answer Any Six) **6 x 5 = 30 Marks**

5. FDA classification of soft contact lens and give some example for each group
6. Write short note on silicone hydrogel lens- ocular benefits and challenges.
7. Write short note on prism ballast, truncation, and dynamic stabilization.
8. Describe briefly the various type of tinted soft lens.
9. What problems are most commonly encountered after initiating contact lens wear?
10. Write down the different methods to clean and disinfectant a contact lens.
11. Write a note on keratometry and how it will be useful in fitting a contact lens.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Corneal Warpage
13. Name few CL deposit
14. Videokeratography
15. PMMA
16. Oxygen transmissibility
17. SPK
18. Advantages and disadvantages of simultaneous image
19. Dynamic stabilization
20. Describe daily wear and extended wear contact lens.
21. Lid Tone

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 07-Jan-2022

Time: Three Hours **Max. Marks: 80 Marks**

SYSTEMIC DISEASES AND OCULAR DISEASES
Section A: Systemic Diseases – (40 Marks)
(Revised Scheme – 3)
Q.P. CODE: 3123

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 3123 and 3124 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. What is Hypertension? Classify hypertension. Discuss briefly clinical features, management of malignant hypertension.
2. Define tropical diseases. Enumerate tropical diseases. Discuss the etiology, clinical features, complication and management of Malaria.
3. What is Immunology? Write in brief about Immunology.

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Types, etiology and treatment of arthritis
5. Briefly describe Leprosy and eye.
6. Ocular manifestation and management of subacute bacterial endocarditis.

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Grading and staging of cancer
8. Atopy
9. Complication of diabetes mellitus.
10. Role of miconutrients on eye health
11. Effect of hyperthyroidism on eye.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 07-Jan-2022

Time: Three Hours **Max. Marks: 80 Marks**

SYSTEMIC DISEASES AND OCULAR DISEASES
SECTION B: OCULAR DISEASES – (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3124

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3123 and 3124 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. Discuss tear film dynamics and the disease, mediation and their evaluation of dry eye.
2. What is cataract? Discuss types and diagnosis of cataract. Add a note on management of developmental cataract.
3. Explain about retinal detachment. Describe the types, causes and management.

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Write short note on corneal ulcer.
5. Describe clinical signs and symptoms of uveitis and add a note on its management.
6. Write a note on Glaucoma evaluation.

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Posterior vitreous detachment.
8. Clinical features of retinitis pigmentosa.
9. Preseptal cellulitis
10. Normal tension Glaucoma.
11. Allergic conjunctivitis.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 10-Jan-2022

Time: Three Hours **Max. Marks: 80 Marks**

DISPENSING OPTOMETRY AND OCCUPATIONAL OPTOMETRY
SECTION A: DISPENSING OPTOMETRY – (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3125

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3125 and 3126 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. Write in detail the steps involved in surfacing.
2. Explain the various types of Facial measurements required for frame selection.
3. Explain step by step procedure for insertion of lenses into Nylon cord Frame.

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Write a note on Dispensing in Progressive Addition lenses.
5. Write a note on selecting frame for the High Minus wearer.
6. Explain types of Bifocals.

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Pantoscopic tilt
8. Image jump
9. Crest angle
10. High index lens
11. Positive face form

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 10-Jan-2022

Time: Three Hours **Max. Marks: 80 Marks**

DISPENSING OPTOMETRY OCCUPATIONAL OPTOMETRY
SECTION B – OCCUPATIONAL OPTOMETRY (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3126

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note : Both QP Codes 3125 and 3126 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. List the occupations with risk of chemical hazards. How to control those hazards. Add on Acid burns in Eye.
2. List the types of Eye camps. Explain the role of optometrist in Diabetic screening.
3. What are code of ethics and the law governing optometric practice in India?

SHORT ESSAYS (Answer any Two) **2 x 5 = 10 Marks**

4. Explain rules and objectives in factories Act.
5. Brief and importance of pre employment examination.
6. What are the various levels of preventions and role of optometrist in Primary Eye care?

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Community based rehabilitation and its need.
8. Explain IOFB.
9. List the PPE's for Medical lab technitions.
10. Objectives of WHO.
11. Write effect of UV rays on Eye.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 12-Jan-2022

Time: Three Hours **Max. Marks: 80 Marks**

Pediatric Optometry, Binocular Vision and Advances in Optometry (RS-3)

Q.P. CODE: 3127

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Three) **3 x 10 = 30 Marks**

1. Accomodative esotropia types, etiology, clinical features and treatment.
2. Explain the pharmacological management of strabismus.
3. In divergence insufficiency
    a) What symptoms whould you expect the patient to report?
    b) What binocular vision findings whould indicate the presence of this condition?
    c) What forms of treatment would you consider?
4. Discuss in detail grades of binocular single vision.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

5. Write a short note on VEP and VER.
6. What is ARC? Brief on two test used for ruling out ARC.
7. Can either the stimulus AC/A ratio or the response AC/A ratio be changed as a result of visual training? Briefly discuss.
8. Explain the Effect of diagnostic occlusion on ocular alignment in normal subject.
9. Fundamental laws of ocular motility.
10. What are the contraindications of atropine?
11. Why does a presbyopes seldom complain of asthenopia accompanying near work in spite of presence of a high exophoria at near?

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Mobius syndrome
13. Crowding phenonenon
14. Which age group you can HOTV cards?
15. Forced duction test
16. Write down the difference between aniseikonia & anisocoria.
17. Push-up amplitude of accommodation
18. Corresponding retinal elements
19. Infantile exotropia
20. What is AC/A ratio and how will you do the procedure?
21. Nutritional Amblyopia

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 05-Jul-2022

Time: Three Hours **Max. Marks: 80 Marks**

LOW VISION AIDS AND GERIATRIC OPTOMETRY – (RS-3)
Q.P. CODE: 3121

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Three) **3 x 10 = 30 Marks**

1. A telescope is composed of +40D objective lens and +60D ocular lens. The system is focused for infinity by an emmetropic patient, determine the following:
   a) The type of magnification
   b) The magnification of telescope
   c) The tube length
2. Briefly explain optometric examination of the older adult
3. Write in details on cornel and lenticular changes that occur in the elderly patient
4. What you mean by RP? Explain low vision management for a child with retinitis pigmentosa

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

5. Describe different refraction technique used in low vision patients
6. Explain in detail about retinal pigmentosa in low vision patient
7. Write a short note on assessment of functional vision
8. Describe the different ways of enlarging an image in low vision practice
9. Dispensing contact lens in geriatric age group
10. Write a short note on spectacle magnifier
11. What are the structural and physiological changes occurs in eye and its adnexa due to aging?

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Bracketing method
13. Importance of CBR in low vision care
14. Enlist non-optical devices
15. EVP
16. Explain posterior vitreous detachment
17. Legal blindness
18. Enlist the perceptual skills
19. Albinism
20. Enlist low contrast visual acuity charts
21. Role of optometrists in dispensing low vision

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 07-Jul-2022

Time: Three Hours **Max. Marks: 80 Marks**

CONTACT LENS - (RS-3)
Q.P. CODE: 3122

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer Any Three) **3 x 10 = 30 Marks**

1. Explain indication for Soft toric CL. Write about Soft torte CL Fitting assessment in detail.
2. Write in detail about etiology, signs, symptoms and management of RGP contact lens complication.
3. Explain indication, advantages and disadvantages of hydrogel contact lens.
4. Write a short note on RGP CL manufacturing techniques.

SHORT ESSAYS (Answer Any Six) **6 x 5 = 30 Marks**

5. Write a short note on Mechanical complication of silicon hydrogel contact lens.
6. Write about pediatric contact lens fitting.
7. Explain in detail indication of therapeutic contact lens.
8. What is keratoconus? Explain different fitting philosophies for correcting keratoconus.
9. Describe optics of contact lens in brief.
10. Write instruction given to the patient while dispensing contact lens. Write Do's and Don'ts.
11. What is presbyopia? Explain in detail about monovision and modified monovision.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Back Optic Zone.
13. Two step hydrogen peroxide.
14. Identification and management of protein deposits.
15. Lathing.
16. V-Gauge.
17. Rigidity and Elasticity of Modulus.
18. Convergence with contact lens.
19. Explain magnification with contact lens and Spectacle.
20. Tear Film and Contact Lens.
21. Dynamic Stabilization.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 11-Jul-2022

Time: Three Hours **Max. Marks: 80 Marks**

SYSTEMIC DISEASES AND OCULAR DISEASES
Section A: Systemic Diseases – (40 Marks)
(Revised Scheme – 3)
Q.P. CODE: 3123

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3123 and 3123 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. Mention the nutrition related disorders and explain Nutritional disorders of Eye.
2. Write in detail about Malignant and Benign tumors.
3. Describe on connective Tissue disorders. Write briefly on arthritis.

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Write the clinical features, complications and management of Thyroid Eye Disease.
5. Short essay on Immune System.
6. Short essay on Diagnosis of Genetics.

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Treatment options for tuberculosis.
8. Schistosomiasis.
9. Carcinogens.
10. Antibodies.
11. Taenia.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 11-Jul-2022

Time: Three Hours **Max. Marks: 80 Marks**

SYSTEMIC DISEASES AND OCULAR DISEASES
SECTION B: OCULAR DISEASES – (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3124

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3123 and 3124 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. Discuss closed angle Glaucoma and the modality available for its management.
2. How do you evaluate integrity of visual pathway? Discuss briefly about localisation of their lesions.
3. Discuss diabetic retinopathy and its types. Write your management plan in case of Neovascularisation.

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Write a short note on ectopia lentis & syndrome associated with it.
5. Write brief about Kerataconus.
6. Define ptosis and write about signs, symptoms, investigations and its management.

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Retinal detachment.
8. Grades of RAPD.
9. Asteroid Hyalosis.
10. Difference between Hyphema.
11. Proptosis evaluation.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 13-Jul-2022

Time: Three Hours **Max. Marks: 80 Marks**

DISPENSING OPTOMETRY AND OCCUPATIONAL OPTOMETRY
SECTION A: DISPENSING OPTOMETRY – (RS – 3)
Q.P. CODE: 3125

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3125 and 3126 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. Explain the various complaints present with progressive addition lenses along with their methods of troubleshooting them
2. Explain parts of frame. Types of nose bridge, end piece and temples
3. Explain the various types of lens materials with each advantages and disadvantages

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Principles and theories of antireflection coatings
5. Explain lens manufacturing process
6. What is edging? Explain its procedure and different shapes of bevels available for edging

SHORT ANSWERS **5 x 2 = 10 Marks**

7. What is lens glazing?
8. Different types of bifocals
9. Scratch resistant coatings
10. Uses of IPD measurement
11. What is the purpose of Hi-index lenses, give an example?

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 13-Jul-2022

Time: Three Hours **Max. Marks: 80 Marks**

DISPENSING OPTOMETRY OCCUPATIONAL OPTOMETRY
SECTION B – OCCUPATIONAL OPTOMETRY (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3126

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

(Note : Both QP Codes 3125 and 3126 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. What is Community optometry? Explain role of optometrist in community.
2. Write in detail about mechanical ocular injury?
3. Write the objective and activities of a blind school.

SHORT ESSAYS (Answer any Two) **2 x 5 = 10 Marks**

4. Write about visual requirements, standards for different jobs.
5. Write about Workmen's Compensation Act.
6. Explain in detail about Personal Protective Equipment.

SHORT ANSWERS **5 x 2 = 10 Marks**

7. What is Glare and its types.
8. World Health Organization.
9. VDT and Eye.
10. First aid for Chemical Injury.
11. What is Ergonomics?

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 15-Jul-2022

Time: Three Hours **Max. Marks: 80 Marks**

Pediatric Optometry, Binocular Vision and Advances in Optometry (RS-3)

Q.P. CODE: 3127

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Three) **3 x 10 = 30 Marks**

1. A 15-year old 10th grader presented with a history of asthenopia associate with short periods of reading. VA (distance, uncorrected): OD :20/20, OS: 20/20 Near point of convergence: Penlight: 5cm/7.5cm, cover test (distance): Ortho cover test (Near): 4 exophoria, subjective: OD: Plano, OS: Plano,-1.00 Gradient: Ortho, Base in vergence (Near): 6/12/6, Base Out Vergence (Near) 5/9/7, NRA :+1.50, PRA:- 1.50. Identify the condition and explain it.
2. What is diplopia? Describe the investigations and intervention done in a case of diplopia.
3. List all the paediatric visual acuity charts by age group and write a note on the testing procedure and documentation for the Teller Acuity Cards.
4. Name the extra ocular muscle. Provide the nerve supply as well as action Describe the symptoms, signs and treatment options for lateral rectus muscle palsy in the right eye.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

5. What is ARC? Brief on two test used for ruling out ARC.
6. Can either the stimulus AC/A ratio or the response AC/A ratio be changed as a result of visual training? Briefly discuss.
7. List some of the nystagmus with localizing signs.
8. Write a note on Bielschowsky head tilt test?
9. Write a note on Dissociated vertical deviation.
10. Types of Duane's retraction syndrome and its management.
11. Indications of recurrent stye in pediatric age.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Your five year old patient presents with 10 prism dioptres of esophoria at distance and 20 prism dioptres of intermittent esotropia at near. The refractive error is +1.00 OD and OS and the child has 20/20 visual acuity in both eyes with the glasses. With the glasses the cover test is ortho at distance and 10 esophoria at near. The best diagnosis for this patient is:
13. Which of the tests does not assess negative fusional vergence?
14. Corresponding retinal elements.
15. Infantile exotropia.
16. What is AC/A ratio and how will you do the procedure.
17. Nutritional Amblyopia.
18. Laten Hypermetropia.
19. Aneisokonia.
20. CAM visual stimulator.
21. Explain cover uncover test.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 12-Dec-2022

Time: Three Hours **Max. Marks: 80 Marks**

LOW VISION AIDS AND GERIATRIC OPTOMETRY
(Revised Scheme – 3)
Q.P. CODE: 3121

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer Any Three) **3 x 10 = 30 Marks**

1. A 55 years male patient diagnosed open angle glaucoma, best corrected Visual acuity 6/12 in both eye. Visual field restricted <10 degree, referred to low vision clinic. Patient complains about difficulty in walking specially at night. What are the examinations you recommend for the patient? How you are going to solve the challenge face by patient? (3+7)
2. A patient (82/F) diagnosed with Proliferative diabetic retinopathy. What are the signs and symptoms expected for the patient? BCVA: RE – 6/60, LE – 3/60 NV: N18, N36. Patient want to see relatives face clearly and reading religious book. Explain the solutions you recommend for the patient. (5+5)
3. Write the cause of albinism, types, systemic and ocular sign and symptoms, low vision management.
4. Write advantage and disadvantages of various magnifiers.

SHORT ESSAYS (Answer Any Six) **6 x 5 = 30 Marks**

5. Describe Refractive changes in diabetes.
6. Describe Radical Retinoscopy with example.
7. Write the advantages and disadvantages of electronic magnifiers.
8. What are the refractive changes happen due to aging?
9. Write the causes of overall blur vision, central vision loss and peripheral vision loss.
10. Write a brief of ARMD sign, symptom and management.
11. Write a short note on field expanders.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. A patient can read 2 letters at 4 meter in EDTRS chart 1.0 line. Write the visual acuity in logMAR.
13. Write changes of color of crystalline lens due to age related changes.
14. What are the advantages of miotic pupil in old age?
15. Write two names of macular function test.
16. Write two non optical device name and use.
17. Name the special contact lens uses for Keratochonous.
18. What is Achromatopsia?
19. What is RP triad?
20. Unaided visual acuity 6/60. What power lenses you will show to patient as per bracketing technique?
21. Uses of pinhole in low vision patient?

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 14-Dec-2022

Time: Three Hours **Max. Marks: 80 Marks**

CONTACT LENS (RS3)

Q.P. CODE: 3122

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer Any Three) **3 x 10 = 30 Marks**

1. Explain in detail about the preliminary examinations done in contact lens practice.
2. Define extended wear. Write about the different generations available in the market with example. What are the possible complications associated with extended wear contact lens?
3. Describe the latest contact lens options available for moderate to advanced keratoconus.
4. What are the materials used in RGP contact lens manufacturing process? Write in detail about the fitting assessment of spherical RGP contact lens.

SHORT ESSAYS (Answer Any Six) **6 x 5 = 30 Marks**

5. What is reference marking in soft toric lenses? Explain the assessment and management of lens rotation in soft toric lens.
6. Contact lenses prescribed in colour vision defects.
7. What are the parameters to be verified in a contact lens and the instruments used for the same?
8. 3 & 9 O'clock staining: clinical features, differential diagnosis, management and prognosis.
9. What are the advantages of soft disposable contact lens as compared to conventional soft contact lens?
10. Tear related deposits
11. What are the various tests done for tear film in contact lens practice? List the common causes of dry eye and best option in contact lens for the same.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Oxygen flux
13. Sagittal height
14. What are the factors that affect the lens wettability?
15. Contact lens parameters of Pure Vision 2
16. Spectacle refraction of a myope at a vertex distance of 14 mm is OD: -6.00DSph/-2.00DCylx180. Calculate the ocular refraction.
17. What are the sources of oxygen for cornea?
18. Monovision correction concept in presbyopes.
19. Name two ocular conditions in which bandage contact lens is prescribed and name one bandage contact lens available in Indian market.
20. What are the lubricating agents used in multipurpose solutions?
21. Three-point touch fit in RGP lens practice

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 16-Dec-2022

Time: Three Hours **Max. Marks: 80 Marks**

SYSTEMIC DISEASES AND OCULAR DISEASES
Section A: Systemic Diseases – (40 Marks)
(Revised Scheme – 3)
Q.P. CODE: 3123

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3123 and 3123 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. Define Rheumatic Fever. Write in detail about pathophysiology, classification, diagnosis and management of Rheumatic fever.
2. What is Immunology? Describe on immunology and the Eye.
3. Describe in detail about Diabetic Mellitus.

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Nutritional disorders of Eye.
5. Neoplasia and the Eye.
6. Write on Thyroid Eye Disease (TED).

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Define Blood pressure.
8. Bitot's spot.
9. Transmission of Toxoplasmosis to eye.
10. Etiology of Trachoma.
11. Echinococcus.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 16-Dec-2022

Time: Three Hours **Max. Marks: 80 Marks**

SYSTEMIC DISEASES AND OCULAR DISEASES
SECTION B: OCULAR DISEASES – (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3124

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3123 and 3124 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. What is PCAG? Write in detail about etiology, diagnosis and management.
2. What is Dry Eye Syndrome? Write about special investigation of watering from the eyes.
3. What is ROP? Causes, clinical features and management of ROP.

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Short note on the Glaucomatous field defects.
5. Short note on types of cataract.
6. Write about clinical signs, classification of corneal Ectasia.

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Steven's Johnson syndrome.
8. What is Episcleritis?
9. What is Retinoblastoma?
10. What is Ectropion and Entropion?
11. Clinical features of vitreous hemorrhage.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 19-Dec-2022

Time: Three Hours **Max. Marks: 80 Marks**

DISPENSING OPTOMETRY AND OCCUPATIONAL OPTOMETRY
SECTION A: DISPENSING OPTOMETRY – (RS – 3)
Q.P. CODE: 3125

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3125 and 3126 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer Any Two) **2 x 10 = 20 Marks**

1. Explain the different types of faults present in the lenses
2. Explain types of progressive lenses
3. Explain the various types of frame materials

SHORT ESSAYS (Answer Any Two) **2 x 5 = 10 Marks**

4. Boxing system with diagram
5. Lens glazing
6. Jump effect in bifocal lenses with appropriate diagrammatic representation

SHORT ANSWERS **5 x 2 = 10 Marks**

7. What is lens polishing?
8. Disadvantages of progressive lenses
9. Explain about segment height and segment width
10. Any four differences between pediatric and adult in facial measures using Rees Fairbanks facial gauge
11. Anti-reflection coating

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III Year B.Sc. Optometry Degree Examination - 19-Dec-2022

Time: Three Hours **Max. Marks: 80 Marks**

DISPENSING OPTOMETRY OCCUPATIONAL OPTOMETRY
SECTION B – OCCUPATIONAL OPTOMETRY (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3126

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note : Both QP Codes 3125 and 3126 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. What is screening? Explain Role of optometrist in school screening camp?
2. Write in detail about Non mechanical injury?
3. What is NPCB? Write in details about NPCB.

SHORT ESSAYS (Answer any Two) **2 x 5 = 10 Marks**

4. Write a short note on Eye protector?
5. What is Computer vision syndrome? Explain important ergonomics for Computer user?
6. Explain in detail about Occupational Hazards?

SHORT ANSWERS **5 x 2 = 10 Marks**

7. Pesticides.
8. Community Based Rehabilitation (CBR).
9. Vision 2020
10. Intraocular Foreign Body (IOFB).
11. Health workers.

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III Year B.Sc. Optometry Degree Examination - 21-Dec-2022

Time: Three Hours **Max. Marks: 80 Marks**

Pediatric Optometry, Binocular Vision and Advances in Optometry (RS-3)
Q.P. CODE: 3127

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Three) **3 x 10 = 30 Marks**

1. What is paralytic squint? Name two test for paralytic squint. List few points to differentiate a paralytic strabismus.
2. Classification of esotropia types, etiology, clinical features and treatment.
3. Give a brief outline of your management plan of an 8 year old boy with OD:+5.50 DS (6/15) NV N10, OS:+1.00 DS (6/6) NV N6. What might be the probable diagnosis of this patient? Justify.
4. Briefly explain the development of binocular vision.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

5. Types of Duane's retraction syndrome and its management.
6. Explain congenital disorder of lacrimal system.
7. What is the significance of Panum's fusional areas in regards to (a) the horopter (b) physiological diplopia
8. What is the AC/A ratio of 21-year-old patient with the following measurements taken during the orthoptics examination.

   IPD=6.0 cm, convergent demand in MA =2.0 MA
   Convergent demand in PD=12 PD
   Far phoria =10 ΔD exophoria at 6mts
   Near phoria =5 ΔD esophoria at 50cms
9. Write a note on Worths four dot test.
10. What are the contraindications of atropine?
11. Why does a presbyopes seldom complain of asthenopia accompanying near work in spite of presence of a high exophoria at near.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Fresnel prism.
13. What type of contact lens material is used for Peadiatric group? Mention its Dk value.
14. Explain the difference between Harmonius ARC and Unharmonius ARC.
15. Write down the difference between Aniseikonia and Anisocoria.
16. Stimulation deprivational amblyopia.
17. Blepherophimosis syndrome.
18. What is the average axial length of Peadiatric eyeball?
19. What is Laten Hypermetropia?
20. Mobius syndrome.
21. Crowding phenomenon.

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III Year B.Sc. Optometry Degree Examination – 12-Dec-2022

Time: Three Hours **Max. Marks: 100 Marks**

LOW VISION AIDS AND GERIATRIC OPTOMETRY (RS-4)

Q.P. CODE: 3351

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Enumerate common disorders leading to low vision. Write in detail about problems and management of following conditions
   a) Retinitis pigmentosa
   b) Corneal opacity
2. Explain in detail about Galilean and Keplerian telescope

   OR

   Define low vision and enumerate its classification. Explain the role of optometrists in low vision management

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Glare control devices in low vision
4. Computer software in low vision
5. Management of Acromatopsia

   OR

   Kubler Ross stages of grievances
6. History taking in low vision patients
7. Contrast sensitivity measurement
8. Structural and physiological changes occur in eye and its adnexa due to aging
9. Steps in geriatric ocular evaluations
10. Changes occurring due to uveitis

    OR

    Explain the management options for nystagmus low vision patient
11. Explain Stand Magnifier advantages and disadvantages
12. Types of magnifiers used in low vision devices

SHORT ANSWER **10 x 3 = 30 Marks**

13. Typoscopes
14. Why BI prisms are used in low vision patients?
15. Can FM 100 be used for low vision patient? Justify your answer
16. Advantages of Dome magnifier
17. Mention about electro-optical devices for low vision patients
18. Bioptic telescopes
19. Brow ptosis
20. ETDRS chart
21. Corning photochromatic filters
22. What is Gerentology?

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III Year B.Sc. Optometry Degree Examination – 14-Dec-2022

Time: Three Hours **Max. Marks: 100 Marks**

CONTACT LENS (RS-4)
Q.P. CODE: 3352

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Explain various component of contact lens solution
2. Explain the optics of contact lens. Explain ideal properties of contact lens

   OR

   Enlist various contact lens for keratoconus. Write about fitting philosophies of contact lens for keratoconus

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Signs and management of contact Lens induced acute red eye
4. What is wettability? How to measure it?
5. Explain contact lens wearing modalities and replacement schedule

   OR

   Write a short note about hydrogen peroxide system
6. FDA classification of soft contact lens materials with examples
7. Explain 3'o clock and 9'o clock staining
8. Describe the indications of contact lens
9. Explain Cosmetic contact lenses
10. Explain piggyback and hybrid lenses

    OR

    Explain SEAL complication
11. Symptoms and signs of loose fit and tight fit in soft contact lens and its modification
12. Explain therapeutic contact lenses

SHORT ANSWER **10 x 3 = 30 Marks**

13. Accommodation with contact lenses
14. Explain water melon seed principle. Write about prism ballast
15. What is HVID and VVID? How to measure them and what is the purpose of measuring them?
16. What are the differences between standard RGP lenses and Rose K2 lenses?
17. Enlist contact lens options for presbyopes
18. Parameters for an ideal preservation
19. What are the tests for assessing the tear film quality and quantity?
20. Spectacle refraction of a patient is – 4.25 / - 2.25 x 10°. He was fitted with a soft toric lens – 4.00 / - 1.75 x 40°, which rotates 20° clockwise on the eye. What is the final prescription of the contact lens using LARS rule?

21. Extended wear lens and indications
22. Prosthetic contact lens

***III Year B.Sc. Optometry Degree Examination – 16-Dec-2022**

Time: Three Hours **Max. Marks: 100 Marks**

RESEARCH METHODOLOGY AND STATISTICS (RS-4)
Q.P. CODE: 3353

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Write on the various study design
2. Write on hypothesis testing in 10 steps

OR

Write on properties of normal distribution along with graphical form

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Define – rate, ratio, proportion
4. Explain types of probability sampling
5. Find out mean, median and mode for the distribution of the weights of 150 person form the below data

Weight (Kg)	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	18	37	45	27	15	8

OR

Difference between skewness and kurtosis with diagram

6. Find the average and SD of the following data on incubation periods of whopping cough in 10 patients
   12, 13, 16, 18, 17, 14, 15, 19, 14, 16
7. Define sampling principle and explain cluster random sampling
8. Advantages and disadvantages of systematic sampling
9. What is bias? What is recall bias?
10. What do you understand by bar diagram and a sub-divided bar diagram?

OR

What are the role of statistics in optometry

11. Definition and aims of epidemiology
12. List the four stages of natural course of disease

SHORT ANSWER **10 x 3 = 30 Marks**

13. Give the name of the methods of testing or hypothesis
14. Define – population survey
15. What are the requisites of reliable data?

16. What is Skewness? Explain
17. What are the uses of sampling
18. Merits and demerits of simple random sampling
19. Enlist methods of probability sampling
20. What is p-value?
21. Importance of vital statistics
22. What is record linkage?

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III Year B.Sc. Optometry Degree Examination – 19-Dec-2022

Time: Three Hours **Max. Marks: 100 Marks**

SECTION A: SYSTEMIC DISEASES (RS-4)
Q.P. CODE: 3354

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note : Both QP Codes 3354 and 3355 are to be answered within total duration of 3 hours)

LONG ESSAYS (Question No. 1 choice) **1 x 10 = 10 Marks**

1. Describe aetiology, clinical features and management of thyroid eye disease
   OR
   Briefly explain about diabetes mellitus

SHORT ESSAYS (Question No. 5 choice) **5 x 5 = 25 Marks**

2. Eye related genetic disorders and their diagnosis
3. Briefly explain about pathophysiology of hypertension
4. Rheumatic fever
5. Difference between benign and malignant tumours
   OR
   Syphilis and eye
6. Write short note on pulmonary tuberculosis

SHORT ANSWERS **5 x 3 = 15 Marks**

7. Ocular toxocariasis
8. Vitamin A deficiency
9. Write clinical features and complication of malaria
10. HIV infection
11. Immunity and eye

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III Year B.Sc. Optometry Degree Examination - 19-Dec-2022

Time: Three Hours **Max. Marks: 100 Marks**

Section B: OCULAR DISEASES (50 Marks) (RS-4)
Q.P. CODE: 3355

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3354 and 3355 are to be answered within total duration of 3 hours)

LONG ESSAYS (Question No.1 choice) **1 x 10 = 10 Marks**

1. Write about the clinical features and management of central retinal vein occlusion.
   OR
   Various types of allergic conjunctivitis and management of vernal keratoconjunctivitis.

SHORT ESSAYS (Question No.5 choice) **5 x 5 = 25 Marks**

2. Clinical features and management of retinitis pigmentosa.
3. Management of bacterial endophthalmitis.
4. Describe in detail Glaucoma diagnostic instruments.
5. Classification of retinal detachment and management of Rhegmatogenous RD.
   OR
   Describe the ocular manifestations in blunt injuries.
6. Stages of retinopathy of prematurity.

SHORT ANSWER **5 x 3 = 15 Marks**

7. Grading of Trachoma.
8. Describe three findings of granulomatous uveitis.
9. Scleritis associated with systemic disease.
10. Mutton fat Keratic precipitate.
11. Signs of acute iridocyclitis.

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III Year B.Sc. Optometry Degree Examination – 21-Dec-2022

Time: Three Hours **Max. Marks: 100 Marks**

SECTION A: PRACTICE MANAGEMENT AND LAW IN OPTOMETRY (RS-4)
Q.P. CODE: 3356

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note : Both QP Codes 3356 and 3357 are to be answered within total duration of 3 hours)

LONG ESSAYS (Question No. 1 choice) **1 x 10 = 10 Marks**

1. List 10 things which violate the professional ethics of a medical person
   OR
   Write on opening your own private practice

SHORT ESSAYS (Question No. 5 choice) **5 x 5 = 25 Marks**

2. Write a short note on letter to edition
3. Write the importance of PR
4. Write about of medical records keeping
5. What is income tax and sales tax?
   OR
   What are bank reconciliation and banking procedures?
6. What is medical negligence?

SHORT ANSWERS **5 x 3 = 15 Marks**

7. Three conditions where insurance is not granted
8. List out any four components of optometric medical records
9. Who is a consumer according to the consumer protection act?
10. Balance sheet
11. Inventory control

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III Year B.Sc. Optometry Degree Examination – 21-Dec-2022

Time: Three Hours **Max. Marks: 100 Marks**

SECTION B: OCCUPATIONAL OPTOMETRY (RS-4)
Q.P. CODE: 3357

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note : Both QP Codes 3356 and 3357 are to be answered within total duration of 3 hours)

LONG ESSAYS (Question No. 1 choice) **1 x 10 = 10 Marks**

1. Role of optometrists in occupational safety
   OR
   Explain briefly mechanical injuries of eye with example

SHORT ESSAYS (Question No. 5 choice) **5 x 5 = 25 Marks**

2. Explain visual standards for different occupations
3. Explain benefits of Workmen's Compensation Act
4. Explain air borne occupational Hazards with preventive measure
5. Explain in detail about personal protective equipment. Enlist PPE required for Welder's
   OR
   Define accident. What are the different measures to prevent occupational accidents?
6. Describe Radiational hazards with preventive measure

SHORT ANSWERS **5 x 3 = 15 Marks**

7. Common ophthalmic radiation
8. Acid Injury
9. Expand NBCP and write its roles and responsibilities
10. Different types of light sources available
11. Prevention of computer vision syndrome

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III Year B.Sc. Optometry Degree Examination - 23-Dec-2022

Time: Three Hours **Max. Marks: 100 Marks**

Pediatric Optometry, Binocular Vision & Advances in Optometry (RS-4)
Q.P. CODE: 3358

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Outline the investigations of a case paralytic squint. What is the usual position in a case of right superior oblique paralysis?

2. Briefly explain Nystagmus – definition, classification and clinical evaluation.
   OR
   In divergence insufficiency : a) What symptoms would you expect the patient to report? B) What binocular vision findings whould indicate the presence of this condition? C) What forms of treatment would you consider?

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Etiology of A & V pattern strabismus.
4. Describe about APGAR scorring.
5. Can either the stimulus AC/A ratio or the response AC/A ratio be changed as a result of visual training? Briefly discuss.
   OR
   What are the spectacle prescription guidelines in hypermertopic pediatric group?
6. Write a short note on Anomalous Trichromacy.
7. List the five differences between dissociated vertical deviation and inferior oblique muscle overaction.
8. Explain Randot stereo acuity test.
9. Brown syndrome.
10. Why does a presbyopes seldom complain of asthenopia accompanying near work in spite of presence of a high exophoria at near?
    OR
    Explain the effect of diagnostic occlusion on ocular alignment in normal subject.
11. Write brief on contact lens materials used in pediatric patients.
12. Short note on neural aspects of binocular vision.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Mobius syndrome.
14. Crowding phenomenon.
15. Which age group you can use HOTV cards?
16. Forced Duction test.
17. Write down the difference between Aniseikonia and Anisocoria.
18. Push-up amplitude of accommodation.

19. Corresponding retinal elements.
20. Y pattern of deviation.
21. Corneal Xerosis.
22. Nutritional amblyopia.

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