Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 20-May-2025

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. Assessment and management of a 10 year old school going child with retinopathy of prematurity
2. What is multidisciplinary team approach in low vision? List the team members and explain their roles in low vision intervention
3. Explain electronic devices available for low vision population. Mention the advantages of CCTV
4. Describe various steps in evaluation of a low vision patient

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

5. Contact lenses in low vision
6. What is Glaucoma? Explain the testing procedure and management options?
7. Explain environmental modifications
8. Non-optical devices in low vision
9. Draw optics of Galilean and Keplerian telescope
10. Corneal changes in geriatric population
11. Physiological changes of uvea and vitreous in geriatrics

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

12. Software which has only magnifying properties
13. Eccentric viewing
14. Color vision testing in low vision
15. Explain exit pupil
16. What is impairment?
17. Calculate the magnification and tube length of a telescope with objective lens power of +14.00 DS and eyepiece power of +20.00 DS
18. PSRT
19. Bar magnifiers
20. Write two causes of peripheral field defect
21. Enlist two age related changes in lids

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 22-May-2025

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 and contraindication for Soft contact lens. Write about Soft CL Fitting assessment in detail
2. Write in detail about etiology, signs, symptoms and management for commonly seen infection and inflammation related soft contact lens complication.
3. Write indication of pediatric contact lens. Explain various Contact Lens options available in market.
4. What is multipurpose solution? Write a short note on solution hypersensitivity.

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

5. Write in detail about importance of keratometer and slit lamp in preliminary evaluation of contact lens.
6. 42-year software engineer came for contact lens clinic. Spectacle refraction OU: -2.00Ds. Will you dispense contact lens to him? Write about different options of contact lens for this case.
7. What is difference between hydrogel and silicon hydrogel contact lens material, Explain indication of silicon hydrogel contact lens.
8. Explain in detail about Ideal Characteristics of Contact Lens Material. Write about importance of oxygen permeability.
9. Write a short note on RGP Contact Lens materials.
10. Explain relation of Base curve, total diameter and Back vertex power for RGP contact Lens.
11. Write a short note on Signs, Symptoms and management of CLARE.

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

12. Back vertex power of contact lens and Spectacle.
13. 3 and 9 O'clock staining.
14. Water Content and Ionicity.
15. Chemical disinfection in RGP lens care system.
16. Contact Lens edge design.
17. Verification of Total diameter of Contact Lens.
18. Inorganic contact lens deposits.
19. Prism Ballast and Periballast.
20. A subject has Spectacle Refraction 00: -10.00Ds and as: - 5.50Ds. What will be the contact lens power?
21. Daily Wear and Flexible Wear.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 20-May-2025

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

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. Elaborate the guidelines to determining, magnification and selecting low vision aids for distance and near
2. Types, etiology, signs, symptoms and management of Glaucoma

   OR

   Write in detail about corneal and lenticular changes in eye due to age

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

3. Write about geriatric contact lens dispensing
4. Write about BRVT chart
5. Write about high-plus addition lens in low vision patients

   OR

   Explain the importance Speech synthesizer and talking books

6. What is ROP? Mention its stages
7. Write about the causes of low vision
8. Explain the JND with one example?
9. Why measuring contrast sensitivity important in low vision patient? How do you manage patient with low contrast sensitivity?
10. Write the refraction technique in low vision patient

    OR

    Write a note in visual fields management procedures in low vision patients

11. Write the types, signs, symptoms and management of Age-Related Macular degeneration
12. What is eccentric fixation? Write the procedure in detail

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

13. Amsler grid
14. Write about changes in lids due to age
15. Name to condition causes central field defects
16. Angular Magnification
17. Mobility cane and Google maps
18. Notex and signature guide
19. Relative distance magnification
20. Calculate the required magnification for distance vision: Distance BCVA is 20/200, target VA is 20/40
21. What is economical blindness?
22. Fibre-Tipped pens

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 22-May-2025

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

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. Describe a RGP contact lens complication?
2. Explain the manufacturing methods for soft contact lens with advantages and disadvantages

   OR

   Define Presbyopia? Explain contact lens options available for presbyopia

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

3. Describe the RGP contact lens fitting in detail
4. Write a short note on silicone hydrogel contact lens
5. Explain wearing and replacement modalities for contact lenses with example

   OR

   Write a short note on soft toric stabilization methods
6. What is CLARE? Describe in detail about the CLARE
7. Write a short note on indication for pediatric contact lens
8. Write a short note on care and maintenance of soft contact lens
9. Describe preliminary evaluation for contact lens fitting. Explain the importance of keratometer/topography in preliminary evaluation
10. What is wettability? Explain about measurement of wettability

    OR

    Explain relationship between Base curve and diameter with diagram
11. Explain contact lens deposits and its management
12. Explain the characteristic of flat fitted RGP Contact lens

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

13. Tear related deposits
14. Enlist the instrument used for verification of total diameter and base curve of contact lens
15. Multipurpose solution
16. Therapeutic contact lens indication and contra indication
17. Piggy back lenses
18. SEAL
19. Watermelon seed principles
20. Silicon Elastomer Contact lens
21. Advantages of contact lens over spectacle
22. Accommodation and convergence contact lens in myopia and hypermetropia

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 27-May-2025

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

SYSTEMIC DISEASES AND OCULAR DISEASES (RS – 3)
Section A: SYSTEMIC DISEASES – (40 Marks)
Q.P. CODE: 3123

Your answers should be specific to the questions asked
Draw neat, labelled diagrams wherever necessary
(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. Define diabetes mellitus. Discuss the types, pathophysiology, clinical features and management of diabetes mellitus
2. Explain the etiology, prevention and treatment options for genetic disorders
3. Describe the classification, risk factors and management, complication of malignant hypertension

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

4. List Helminthic disease. Write briefly on Schistosomiasis
5. Nutritional disorders of eye
6. Pathophysiology and treatment of pulmonary tuberculosis

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

7. Warning signs of cancer
8. Define Xerophthalmia
9. Causes of thromboembolism
10. Components of immune system
11. Non pharmacological treatment of obesity

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 27-May-2025

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 POAG? Write in detail about etiology, diagnosis and management.
2. Types of conjunctivitis. Clinical features and management of Trachoma.
3. Clinical features and stages of Diabetic retinopathy.

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

4. Write about corneal degenerations and dystrophies.
5. Write a note on ROP.
6. What is Exposure Keratopathy? Clinical features and treatment of Keratopathy.

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

7. **What is Hypopyon**
8. What is Trichiasis?
9. Keratoconus and clinical signs.
10. Difference between Pterygium and Pinguecula.
11. Etiology of ARMD.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 27-May-2025

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. What is hypothesis? Explain the characteristics to form a good hypothesis
2. What is research? Explain the steps and methods involved in research process

   OR

   Define Epidemiology. Describe descriptive epidemiology along with its uses

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

3. Difference between validity and reliability
4. Difference between Cohort study and Cross sectional study
5. Find the mean, median, mode and range for the following list of values –
   13, 18, 13, 14, 13, 16, 14, 21, 13

   OR

   Explain the types ad classification of data
6. Explain the types of measurement scales. Illustrate and example for each scale
7. What are the properties of normal distribution?
8. Write a short notes on - a) Proportion b) Incidence c) Prevalence
9. Difference between quantitative data and qualitative data
10. Define probability sampling. What are the types of sampling in statistics

    OR

    Explain the concept of health and disease. and give one examples with ocular condition
11. What is dependent and independent variables with example
12. Explain epidemiological surveillance

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

13. What is an alternative hypothesis?
14. What is meant by bias? Different types of bias
15. What is correlation?
16. Define probability sampling
17. Recent study reveals that over usage of gadgets leads to 75.3% of headache, 42% of blurring of eye, 38% or redness of eye, 20% of nausea and 60% of sleepless. Draw a pie chart and bar diagram for this conditions
18. What is morbidity and mortality?
19. Define epidemiology
20. Define skewness and kurtosis with graph
21. Define statistics
22. Difference between primary data and secondary data

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 29-May-2025

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. Explain different types of bifocal lenses. Write the advantages and disadvantage of each
2. Enlist various types of lens material describe. Write the advantages and disadvantages of each
3. Briefly explain about photochromatic lens. What are the factors affecting for photochromatic lens?

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

4. Discuss the importance of the fitting triangles or a foundation for spectacle lens
5. Explain the image jump in bifocal lens with diagram
6. Describe the various types of lenses, which are suitable for high minus prescription

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

7. Name different types of temples
8. Mechanical requirement of bifocal
9. Advantages of aspheric lens
10. Pantoscopic tilt
11. Facial wrap

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 29-May-2025

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

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. Discuss your strategies for tackling major causes of visual impairment in the community with special reference to children, under the National Programme for Control of Blindness
2. Discuss the salient indications and hazards of radiation to the eye
3. Critically evaluate nutritional factors causing ocular morbidity

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

4. Workmen's compensation Act
5. What is computer vision syndrome? List the criteria for a standard VDT workstation
6. Write about advantage of vision screening to industry

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

7. First aid for chemical injury to eye
8. Indication for protective glasses
9. Type of eye camps
10. The importance of public relation in hospital
11. IOFB

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 30-May-2025

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. Define malnutrition. What are the different types of malnutrition? Explain any two nutritional disorders of eye
   OR
   Explain the pathology, classification and clinical features and management of diabetes mellitus

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

2. Briefly explain on schistosomiasis
3. What are the causes of genetic disorders? Explain down's syndrome
4. Write short notes on subacute bacterial endocarditis
5. Explain the characteristic features of benign and malignant tumors
   OR
   Describe thyroid disease
6. Hypertension – definition, classification, etiology and drugs

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

7. Define genetics diseases
8. What is inflammation? Name cardinal signs
9. Briefly discuss the diagnosis of malaria
10. How do you manage arterial hypertension?
11. Give the treatment method of tuberculosis

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 02-Jun-2025

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

Paediatric Optometry, Binocular Vision and Advanced 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 associated 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, Accommodative amplitude (push up): OD: 13D, OS: 13D, Monocular Accommodative facility OD: 12 cpm, OS: 12 cpm, Binocular Accommodative Facility: 0 cpm, difficulty with both +/-2.00, MEM Retinoscopy : + 0.25 OU.

   a) From the above case what is the tentative diagnosis with justification?
   b) What forms of treatment would you consider?

2. Classification of esotropia types, etiology, clinical features and treatment
3. List all of the paediatric visual acuity charts by age group and write a note of the testing procedure and documentation for the Teller Acuity Cards
4. Name the extra ocular muscles. Provide the nerve supply as well as blood supply. 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. Write a short note on worth four dot test
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. Indication of recurrent stye in pediatric age

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

12. Your 5 year old patient presents with 10 prism diopters of esophoria at distance and 20 prism diopters 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. Enlist the test to assess accommodation
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 - 03-Jun-2025

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

SECTION A : PRACTICE MANAGEMNT AND LAW IN OPTOMETRY (RS-4) (50 Marks)
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. What do you mean by code of conduct? What is the significance of it? Explain the code of conduct for the optometry profession
   OR
   Define public relations. Write in detail about the various methods of public relations

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

2. Explain in detail professional licensure and its importance
3. Write about the following:
   a) journal and ledger
   b) trial balance
4. Write short notes on various phases of public relations
5. What is negligence? With appropriate examples explain the type of negligence related to optometry
   OR
   How do you manage the clinic and staff in your own practice?
6. Explain in detail about basics of bookkeeping

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

7. List out the Laws related to optical product manufacture in India
8. What are the principles of accountancy?
9. What is the Consumer Protection Act?
10. What is medical ethics?
11. What is the importance of record keeping in your private practice?

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 03-Jun-2025

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

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. What are the cause blunt injuries of eye? What are the damages it may cause in eye? How it can be protected? What you will do on such emergency?
   OR
   Explain role of an optometrist in general and visual health and safety of people at work

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

2. Write a short note on personal protective equipment. Write PPE for welders
3. What is Computer vision syndrome? Explain important ergonomics for Computer user?
4. Write about Effect of UV and IR radiation
5. Explain role of an optometrist in community outreach camp
   OR
   What are the occupational hazards for welders and textile industry workers? What are the advice you provide to reduce those hazards?
6. Write a about chemical injury and its management

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

7. Occupational Safety
8. Eye Protectors
9. Vision problems in various occupation
10. Vision standard for railway and airlines
11. IOFB

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 05-Jun-2025

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

PAEDIATRIC OPTOMETRY, BINOCULAR VISION AND ADVANCED OPTOMETRY (RS-4)
Q.P. CODE: 3358

(QP Contains two pages)

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 in detail about the clinical examination procedures and the sequence of testing for a child of 3 years old coming for a routine eye examination with a family history of myopia for both parents
2. A five-year-old boy presented to the clinic for a routine eye examination. The patient presented with an ocular history of gradual onset of esodeviation from the age of 3 years and wearing glasses since then. The patient has been wearing hypermetropic glasses with an Rx of OU: +7.00DS. The boy has esotropia of 40 prism dioptres for near and distance without glasses and fully corrected esotropia with his glasses. The patient has visual acuity of 6/6, N6 with correction in OU
    a) What further clinical evaluation would you like to perform for the patient?
    b) What are your differential diagnosis and final diagnosis based on the clinical features given above? Justify your answer with a management plan for the patient
    c) Write the classification of esodeviation

    OR

    What is Accomodation? List the tests to assess accommodation. Explain the signs of any 3 anomalies of accommodation

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

3. What are the types of convergence? Explain convergence insufficiency
4. Write about the types of functional amblyopia and the visual functions affected in these types of amblyopia
5. What are the sensory adaptations observed in exodeviations?

    OR

    What is A-pattern esodeviation? Write the clinical features of A-V pattern strabismus
6. What are the clinical manifestations of Duane's retraction syndrome? Explain
7. What is monofixation syndrome. Explain any 2 tests to rule out the same
8. List down the non-surgical management for divergence insufficiency. Explain any 1
9. Explain the following
    a) Prism Bar Cover test
    b) After image test
10. What do you understand by the process of emmetropisation? Explain the prerequisites for the same

    OR

    What are the types of suppression? Explain any 2 tests to rule out suppression
11. Explain the pediatric contact lens work up under the following: contact lens materials, pre-fitting examination and dispensing
12. What are the types of Nystagmus? Explain any 2

Rajiv Gandhi University of Health Sciences, Karnataka

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

13. What are the types of epicanthus folds seen in pediatric practice?
14. What is strabismus fixus?
15. Y pattern deviation
16. Vergence facility. What does difficulty with Base in prism signify?
17. What is null point in nystagmus?
18. Sherrington's law
19. What are the factors that can influence the type and magnitude of deviation?
20. Name the clinical conditions where a larger corneal diameter is observed
21. What are the types of accommodation? Explain any one
22. Define Fusion. What are the two types of fusion, explain

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 10-Nov-2025

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. Write the optics, ray diagram, difference of Keplerian and Gelelain telescopes?
2. Enumerate common disorders leading to low vision. Write in detail about problems and management of the following :- a) Corneal Opacity b) Glaucoma
   OR
   Elaborate the spectacle and contact lens dispensing in geriatric age group?

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

3. What is CCTV? Write the advantages and disadvantages?
4. Management of senile cataract.
5. Write the guidelines and training to use telescope.
   OR
   Explain the importance speech synthesizer and talking books.
6. The general point to remember while prescribing to child with low vision.
7. Write in detail about the different macular function test used in ARMD.
8. Write detail about glare, lighting controlling and sensory substitution devices.
9. Write refractive changes of cornea and lens in aged population.
10. List the congenital type causes of low vision.
    OR
    Calculate the magnification and tube length of the telescope? Objective lens and eye piece lens are +30 and -90 Diopters respectively.
11. Write the categories of visual impairment according ICD 10^{th} revision.
12. Write the procedure of confrontation.

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

13. What are the neurological changes associated with aging.
14. Atherosclerosis.
15. Economical blindness.
16. Causes of peripheral field defects.
17. Nuclear sclerosis.
18. Management of ptosis.
19. Dome magnifier.
20. Half eye spectacle magnifier.
21. Exit pupil.
22. ROP.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 12-Nov-2025

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. Write about preliminary examination and investigation done before fitting contact lens
2. Write in detail about therapeutic contact lens and its indication

   OR

   Briefly explain clean, disinfection and maintenance of soft contact lens

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

3. What you mean by extended wear contact lens? Explain in detail
4. Write a note on verification process of contact lens
5. Write different grades of CLPC with its management

   OR

   Describe in detail about silicon hydrogel contact lens
6. Write about spin casting and cast molding manufacturing technique of soft contact lens
7. Indication and contraindication of contact lens
8. Name the different stabilization techniques of contact lens. Explain one by one in detail
9. Name the different types of contact lens deposits. Write a note on protein deposition
10. Describe different type of contact lens options for children

    OR

    Role of corneal topography in contact lens fitting
11. Briefly explain the materials used in manufacturing of RGP
12. Explain dynamic and static fitting of RGP lens

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

13. Oxygen transmissibility and oxygen permeability
14. FDA classifications for SCL
15. Expand EOP. Explain
16. BOZR & BOZD
17. Multipurpose solution
18. Role of keratometry in contact lens fitting
19. Multifocal contact lens
20. What is different modality of wear? Examples for each
21. Write about the sign and symptoms of poor fitting of C.L
22. Role of tear film in contact lens wear

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 14-Nov-2025

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

SYSTEMIC DISEASES AND OCULAR DISEASES
Q.P. CODE: 3123
SECTION A – SYSTEMIC DISEASES (RS3) (40 Marks)

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. Mention the nutrition related disorders. Explain in detail about protein calorie malnutrition.
2. What is hypertension? Classify. Discuss about the clinical features and management of malignant hypertension.
3. Define neoplasm. Classify them and discuss the pathogenesis of malignant neoplasm.

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

4. Manifestations of toxoplasmosis
5. Treatment of tuberculosis
6. Principles of cancer therapy

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

7. Retinoblastoma
8. Point mutation
9. Night blindness
10. **Thyroid disease**
11. **Myasthenia gravis**

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 14-Nov-2025

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. Clinical features, classification of keratoconus. Explain role of an optometrist in management of keratoconus.
2. Detail you examinations, investigations and management of subluxated lens 5 year old child.
3. Clinical features, classification and management of anterior uveitis.

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

4. Differentiate PDR and NPDR.
5. Classification of Glaucoma.
6. Write a note on Hereditary macular disorders.

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

7. Hypertensive retinopathy.
8. Stye and chalazion.
9. Vitamin – A deficiency Eye.
10. Signs of Kerataconus.
11. Episcleritis.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 14-Nov-2025

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

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. Describe following terms with diagram-
   a) Negatively skewed b) Positively skewed c) Kurtosis
2. What is Research? Explain the steps and methods involved in research process?
   OR
   Write on hypothesis testing in 10 steps

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

3. Difference between Cohort study and cross-sectional study
4. Properties of a normal distribution with diagram
5. The wages of workers at random from factory are given as wages (€): 578, 572, 570, 578, 560, 567, 588 and 589. Find the mean and SD
   OR
   What is data and explain types of data?
6. Explain the types of measurement scales. Illustrate an example for each scale
7. Find the mean, median, mode for the following list of values – 13, 18, 13, 14, 13, 16,14, 21,13
8. Write a short note on proportion, incidence and prevalence
9. Explain the validity and reliability with example
10. Explain the concept of health and disease. and give one examples with ocular condition
    OR
    Difference between Quantitative data and Qualitative data
11. Define is correlation. List types of correlation
12. Define probability sampling. What are the types of sampling in statistics?

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

13. Merits and demerits of mode
14. What is an alternative hypothesis with example?
15. Define probability sampling
16. Recent study reveals that over usage of gadgets leads to 75.3% of headache, 42% of blurring of eye, 38% of redness of eye, 20% of nausea and 60% of sleepless. Draw a pie chart and bar diagram for this conditions
17. Define morbidity with example
18. Define epidemiology
19. Define kurtosis with graph
20. Importance research in optometry
21. Define notification of disease
22. Define mortality with examples

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 17-Nov-2025

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. List and describe the various faults of lens materials. Methods of lens inspections
2. Briefly explain edging of lens for plastic, metal and rimless frame
3. Explain overall frame adjustment

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

4. Measurement of monocular PD
5. What are the points to be checked in verification of spectacle for patients complaining of intolerance to recently prescribed bifocal lenses?
6. Explain about aspheric lenses in detail

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

7. Marking in progressive addition lens
8. PMMA
9. What is frame front?
10. Image jump
11. Vertex distance

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 17-Nov-2025

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. Role of an optometrist in diabetic retinopathy camp.
2. Mechanical eye injuries in detail.
3. Explain deeply about prevention and control of occupational disease.

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

4. Effects of ultraviolet rays on eye.
5. What is CBR? Explain the principle of CBR programme.
6. Ergonomics and ocular effect involved in CVS.

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

7. Benefits of ESI.
8. Common occupational diseases.
9. Acids and Alkalies.
10. PPE for Welder's
11. Vision 2020.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 19-Nov-2025

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. Write a note on
   a) Complete third nerve palsy?
   b) How can you differentiate between paralytic and non paralytic strabismus?
   c) Management of paralytic squint?
   d) Add a note on Bielschowsky head tilt test?
2. Briefly explain the Development of Binocular vision.
3. Briefly explain Nystagmus – definition, classification and clinical evaluation.
4. Write a short note on cycloplegic refraction

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

5. Short note on Tests for binocular single vision.
6. Briefly explain Visual direction, localizing sign and corresponding points.
7. The contact lens corrective modality in pediatric aphakia
8. What are the different tests to determine suppression
9. How do you diagnose phoria and tropia.
10. Write a short note on Down's Syndrome
11. Write a short note on Maddox rod test

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

12. Stereopsis.
13. Longitudinal Horopter.
14. Panum's space.
15. Spatial sense.
16. Pre-requisites of Binocular vision.
17. Types of ARC.
18. Signs and symptoms of Albinism.
19. While taking history of a patient what should you note in birth history
20. Synergists.
21. Binocular fusion.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 20-Nov-2025

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

MICROBIOLOGY, PATHOLOGY AND PHARMACOLOGY (RS – 4)
Section A: MICROBIOLOGY AND PATHOLOGY (50 Marks)
Q.P. CODE: 3349

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3349 and 3350 are to be answered within total duration of 3 hours)

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

1. What is Leukemia? Classification and explain chronic myeloid leukemia
   OR
   Write in detail about different types of culture methods

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

2. Discuss briefly TORCH complex
3. Give brief account of clinical manifestations of Syphilis
4. Complications of wound healing
5. Spread of malignant tumours
   OR
   Applications of commonly used disinfectants in hospital
6. Explain enriched and enrichment media

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

7. Write any three ocular viral infections
8. Pneumococcus
9. Name three gram positive bacteria
10. Necrosis
11. Define thrombocytopenia

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 17-Nov-2025

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

Section A: SYSTEMIC DISEASES (50 Marks) (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. Discuss varicella zoster infection and herpes simplex infection of the Eye. Briefly explain the management.
   OR
   Discuss the clinical features, investigations and treatment of pulmonary tuberculosis.

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

2. Role of nutrition in ocular health.
3. Echinococcus infection.
4. Immunity deficiency diseases.
5. Discuss the prevention and treatment of genetic disorders.
   OR
   Briefly explain about cancer and eye.
6. Management of Hypothyroidism.

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

7. Obesity.
8. Drugs used in treatment of Leprosy.
9. Causes of Vitamin A deficiency.
10. Immunoglobulins.
11. Name acquired heart diseases.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 17-Nov-2025

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

SECTION B: OCULAR DISEASES (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 classification, clinical evaluation and management of ptosis
   OR
   Discuss the etiology, risk factors and diagnosis of diabetic retinopathy

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

2. Explain etiology, clinical evaluation and management of keratoconus
3. Discuss anomalies of papillary reaction
4. Describe the etiology, clinical evaluation and management of posterior vitreous detachment
5. Classification of cataract
   OR
   Clinical features of primary open angle glaucoma
6. Write about defects of the visual pathway

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

7. Provide complications of graves ophthalmology
8. Difference between papillae and follicles
9. Explain clinical features and management of ROP
10. List symptoms and causes of retinal detachment
11. Clinical signs of anterior uveitis

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination – 19-Nov-2025

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. Write in brief about medical negligence
   OR
   What is PR? Mention the importance of PR in clinical practice

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

2. What is asset and liability?
3. What is mental illness? How is it difference from 'Disease"?
4. What is licensure? Mention it's importance
5. What are the factors to be considered in organ matching and organ allocation?
   OR
   What is inventory control?
6. List out any four components of medical ethics

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

7. What is a profit and loss account?
8. Petty cash
9. What is data management?
10. Define sales tax
11. List few qualities of a good staff management

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 19-Nov-2025

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

SECTION B : OCCUPATIONAL OPTOMETRY (50 Marks) (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. Define PPE. Explain different safety equipment required for various occupation.
   OR
   Describe different occupational hazards.

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

2. Explain importance of pre employment medical examination.
3. Evolution of public health in India.
4. Explain Requirements of good lighting in different occupation.
5. Describe visual standard required for various occupation.
   OR
   Briefly describe code of Ethics.
6. Explain briefly common ocular disease in various occupation.

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

7. List the levels of prevention.
8. Write a note on ergonomics.
9. Computer vision syndrome.
10. Effect of UV rays on Eye.
11. Eye protector.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 21-Nov-2025

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. Define stereopsis. What is the basic principle of any stereopsis test? Explain any four test used for measuring stereopsis?
2. Describe accommodative Esotropia, types, etiology, clinical features and treatment.

   OR

   A 40 year old man presents with sudden onset of a drooping left eyelid. When he lifts the lid with his finger he notices that he has double vision. He has a severe headache. He is otherwise fit and well with no past ophthalmic history. He is on no regular medication. There is no family history of medical problems.
   a) What nerve palsy is present?
   b) What is the most likely cause?
   c) What is the management?

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

3. Types, signs, symptoms and treatment options for Duane's Retraction syndrome.
4. Write a note of the following a) Horopter b) Normal and abnormal retinal correspondence point.
5. List all prenatal, perinatal and postnatal factors of a pediatric patients medical ocular history.

   OR

   Write a note of the lateral rectus palsy's muscle sequalae.
6. Explain the four essential laws of ocular motility in a few words.
7. List the five clinical distinctions between paralytic and non-paralytic strabismus.
8. Write a note on Dissociated vertical deviation.
9. **Briefly explain amblyopia management in details**
10. Write a note on Bielschowsky head tilt test.

    OR

    Write briefly about congenital glaucoma.
11. Indication of recurrent stye in pediatric age.
12. Explain congenital disorder of lacrimal system.

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

13. See-Saw nystagmus.
14. Purpose of Hirschberg's corneal reflection test.
15. Retinomotor value of fovea.
16. Signs of 3rd cranial nerve palsy.
17. Name two commonest eye Lid's structural abnormalities seen in pediatrics.
18. List two differential diagnosis of Brown's syndrome.
19. Write on past pointing test.
20. Accommodative Insufficiency.
21. Examples for yoke muscles.
22. What are the units of convergence?

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 20-Nov-2025

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

MICROBIOLOGY, PATHOLOGY AND PHARMACOLOGY (RS – 4)
Section A: MICROBIOLOGY AND PATHOLOGY (50 Marks)
Q.P. CODE: 3349

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3349 and 3350 are to be answered within total duration of 3 hours)

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

1. What is Leukemia? Classification and explain chronic myeloid leukemia
   OR
   Write in detail about different types of culture methods

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

2. Discuss briefly TORCH complex
3. Give brief account of clinical manifestations of Syphilis
4. Complications of wound healing
5. Spread of malignant tumours
   OR
   Applications of commonly used disinfectants in hospital
6. Explain enriched and enrichment media

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

7. Write any three ocular viral infections
8. Pneumococcus
9. Name three gram positive bacteria
10. Necrosis
11. Define thrombocytopenia

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 19-Nov-2025

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

SECTION B : OCCUPATIONAL OPTOMETRY (50 Marks) (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. Define PPE. Explain different safety equipment required for various occupation.
   OR
   Describe different occupational hazards.

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

2. Explain importance of pre employment medical examination.
3. Evolution of public health in India.
4. Explain Requirements of good lighting in different occupation.
5. Describe visual standard required for various occupation.
   OR
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6. Explain briefly common ocular disease in various occupation.

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

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8. Write a note on ergonomics.
9. Computer vision syndrome.
10. Effect of UV rays on Eye.
11. Eye protector.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Optometry Degree Examination - 21-Nov-2025

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. Define stereopsis. What is the basic principle of any stereopsis test? Explain any four test used for measuring stereopsis?
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   OR

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5. List all prenatal, perinatal and postnatal factors of a pediatric patients medical ocular history.

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9. **Briefly explain amblyopia management in details**
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    OR

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11. Indication of recurrent stye in pediatric age.
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