Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination - 08-May-2025

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

Visual Optics (RS-3)

Q.P. Code : 3112

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. Draw a labeled diagram of Gullstrand's schematic eye and reduced eye.
2. Write briefly about Dynamic Retinoscopy.
3. Define Myopia and write a note on management of myopia.
4. Define Convergence and explain convergence insufficiency in detail with its management.

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

5. Explain fogging technique.
6. Write a note on axis and power refinement procedure with JCC.
7. Management of Anisometropia.
8. Types of Astigmatism and treatment options.
9. Write a note on cardinal points of optical system.
10. Write a note on extended keratometry with procedure.
11. Enlist various charts used for measuring contrast sensitivity and explain any one in detail.

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

12. Latent Hypermetropia.
13. MEM retinoscopy.
14. Anomalies of accommodation.
15. Find out far point of corrected myopic eye having -4.00Dsph power.
16. Uses of Maddox rod.
17. AC/A ratio.
18. Near triad.
19. Define depth of focus.
20. Define one prism diopter.
21. Define pseudomyopia.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 13-May-2025

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

CEVS AND OPTOMETRIC INSTRUMENTS
(REVISED SCHEME-3)
Q.P. CODE: 3113

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 keratometer? Mention its uses. Explain it on the basis of principle & types.
2. Define Lensometer. What is Optometer principle? What is Badal & non badal principle, mention its advantages & disadvantages.
3. What is Slit lamp biomicroscopy? Explain it on the basis of uses, illumination techniques and sources of error.
4. What is Tonometry? What are the different techniques? Explain the procedure of applanation tonometry.

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

5. Explain scheiner's principle. Where it is used?
6. Badal & Non badal principle
7. Principle of fundus fluorescein camera
8. What is Glaucoma hemifield test
9. How is total deviation numerical plot calculated in Humphery field analyzer?
10. Components of trial set
11. What are the differences between direct and binocular indirect ophthalmoscope?

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

12. Anderson's criteria
13. How is the colour coding done in topography modeling system?
14. How does blind spot acts as the fixation monitor in Humphery Field analyzer?
15. Optical principle of direct ophthalmoscope
16. Name two types of colour arrangement tests.
17. Benefits of contact lens over spectacles

    Or

    Scheiner's principle
18. What are best form lenses?
19. What is projection chart?
20. Indication of VEP
21. What are the accessories of slit lamp?

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination - 08-May-2025

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

VISUAL OPTICS (RS-4)
Q.P. CODE: 3347

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 accommodation? Explain NPA, range of accommodation and amplitude of accommodation with example. Write a short note measurement of NPA
2. Define convergence. Write a short note on types of convergence. Write a short answer on measurement of NPA

   OR

   Define and classify astigmatism. Mention clinical features and treatment option available for astigmatism

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

3. Write on etiology, clinical feature and treatment of convergence insufficiency
4. Name different types of dynamic retinoscopy. Explain MEM
5. List different method of measurement of AC/A ratio. Explain any one with example

   OR

   Characteristics of retinoscopic reflex
6. Write in details about sign convention
7. Define different kind of aberration and mention its application
8. Write a note on theories of color vision
9. Write the classification of astigmatism based on principal meridian
10. Write a note on cornea is an optical element of eye

    OR

    Mention etiology, clinical feature and treatment of hypermetropia
11. Write about different methods of presbyopic correction
12. Name the test / chart available for pediatric visual acuity assessment as per different age group

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

13. **Mention the significance of radical retinoscopy**
14. Mention the significance of convert 6/36 into LogMAR
15. Explain spherical equivalent with example
16. Mention the indication of red and green filter
17. Mention the etiology, clinical feature accommodative excess
18. Enlist the etiology of refractive anomalies
19. Enlist the chart available for measurement of contrast sensitivity
20. Mention the difference between axial and refractive ametropia
21. Explain the signs of aphakia
22. Mention the advantages and disadvantages of phoropter

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 13-May-2025

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

CEVS AND OPTOMETRIC INSTRUMENTS (RS-4)
Q.P. CODE: 3348

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 visual acuity? What are the differences between Snellen and Bailey Lovie charts? Explain how you are going to construct a log MAR chart.

2. Principle and clinical procedure of ultrasonography. Differentiate A scan from B Scan.
   OR
   Write instrumentation theory of fundus fluoresce in angiography. Explain the stages of FFA.

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

3. How will you take history in a patient presented with defective vision?
4. Write a note on EOG.
5. Write a note on tangent screen visual field testing.
   OR
   Outline the methods of examination of pupil.
6. Write short note on various components of Pentacam report.
7. Write short note on confrontation technique. Explain the diagram drawing of confrontation.
8. Different types of Gonioscopes and its advantages.
9. Explain the theory of using Pseudcoisochromatic test plates to check color vision.
10. Compare direct and indirect Ophthalmoscopy.
    OR
    Aberrometer principle and clinical uses.
11. Non contact lenses for fundus examination.
12. Briefly explain optical principle of Lensometer.

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

13. Describe the uses of B scan
14. Name the Piezoelectric crystal in ultrasound.
15. State Imbert - Fick law.
16. Scheiner's principle
17. Write the origins of ERG waves.
18. What is Riddoch Phenomenon of visual field?
19. Name the pediatric visual acuity charts.
20. Write power range of keratometer, what is extended Keratometry?
21. What is the use of Amsler grid?
22. Mention the differences between a 30-2 and 24-2 HVF test programme.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination - 15-May-2025

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

MICROBIOLOGY AND PATHOLOGY, PHARMACOLOGY
SECTION A: MICROBIOLOGY AND PATHOLOGY (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3114

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.
(Note: Both QP Codes 3114 and 3115 are to be answered within total duration of 3 hours)

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

1. Give an account of Gram-negative bacteria.
2. Define and classify sterilization. Give a detailed account of dry heat method of sterilization.
3. Define leukemia. Classification of leukemia. Explain chronic myeloid leukemia.

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

4. Acanthamoeba keratitis.
5. Cells of inflammation.
6. Enumerate the difference between lepromatous and tuberculoid leprosy.

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

7. **Name two fungi causing eye infection**
8. Define selective media. Give examples.
9. Necrosis.
10. Phagocytosis.
11. Define embolism.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 15-May-2025

Time: 3 Hours **Max. Marks: 80 Marks**

MICROBIOLOGY AND PATHOLOGY, PHARMACOLOGY
SECTION B: PHARMACOLOGY (RS – 3) (40 MARKS)
Q.P. CODE: 3115

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

(Note: Both QP Codes 3114 and 3115 are to be answered within total duration of 3 hours)

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

1. What is pharmacokinetics and pharmacodynamics? Discuss the absorption and biotransformation of drug in detail
2. Classify diuretics. Explain the mechanism of action, therapeutic use and adverse effect of manitol
3. Write in detail the classification, mechanism of action of drugs used in Glaucoma

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

4. Discuss anti viral drugs
5. Atropine
6. Write the therapeutic use of glucocorticoids

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

7. Plasma half life
8. Anticoagulants
9. Drug dependence
10. Define pharmacodynamics
11. Mention four ocular drug delivery system

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 15-May-2025

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

MICROBIOLOGY AND PATHOLOGY, 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
(Both QP codes 3349 and 3350 are to be answered within total duration of 3 hours)

LONG ESSAYS (First Question Choice) **1 x 10 = 10 Marks**

1. Write in detail about acanthamoeba keratitis
   Or
   Write anatomy and pathology in degeneration of cornea

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

2. Write about any two common bacterial culture media
3. Define sterilization. Explain radiation
4. Laboratory diagnosis of tuberculosis
5. Anaerobic bacterial culture methods
   Or
   Write in detail about bacterial conjunctivitis
6. **Write a note on viral infections of eye**

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

7. Anaerobic bacteria
8. Write any three bleeding disorders
9. Penicillium
10. Adenovirus
11. Definition of cavernous sinus thrombosis

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination - 15-May-2025

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

MICROBIOLOGY, PATHOLOGY AND PHARMACOLOGY (RS – 4)
Section B: PHARMACOLOGY (50 Marks)
Q.P. CODE: 3350

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 are the factors governing the pharmacokinetics of drug? Discuss in detail about absorption of drug
   OR
   Classify anti-glaucoma drugs. Describe the mechanism of action of each group of drug

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

2. Write short note on pharmacotherapy of ocular infection
3. Describe different uses and the side effects of local anaesthesia drugs
4. Describe anti-inflammatory drugs used in eye disorder
5. Anticoagulants
   OR
   Explain antibacterial drug in ophthalmic use with example
6. Explain pharmacodynamics of drug

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

7. Immunomodulators in ophthalmic practice
8. Ocular drug delivery system
9. Oral anti-diabetic drugs
10. Define agonist and antagonist drugs
11. Mention three side effects of corticosteroids therapy on eye

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination - 23-May-2025

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

OPTOMETRICS OPTICS – (RS-3)
Q.P. CODE: 3111

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. Describe the different types of multifocal lenses with suitable examples.
2. Differentiate between the datum and boxing systems of measurements with the help of suitable diagrams.
3. Combine this two oblique prisms together into one prism
   a) 2△ Base 130
   b) 5△ Base 20
4. Explain the properties of crossed cylinders with help of example.

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

5. Write a short note on different types of plastic material frames?
6. Calculate the edge substance 'e' of a plano concave lens made in crown glass (1.523) of surface power – 18.0 D, diameter of lens 44 mm centre thickness 0.6 mm
7. Describe with the help of suitable diagrams dimensions of bifocal and trifocal segment
8. Describe the advantages and disadvantages of PAL.
9. Explain the steps of torric transposition with example
10. Briefly explain the image jump in bifocal lens
11. Write a short note on impact resistance lenses.

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

12. Calculate the prismatic effects produced when a -4.0 D lens is decentred 4 mm up wards
13. D-Bifocals.
14. Explain the term segment height and segment depth.
15. Mechanical requirement of bifocal lenses
16. Verifocal lenses
17. Glass cement
18. Datum length
19. Aspheric lens
20. PMMA
21. Rotation test

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination - 23-May-2025

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

OPTOMETRIC OPTICS & DISPENSING (RS-4)
Q.P. CODE: 3346
(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. Describe progressive addition lenses in the following heading with a neat diagram temporary marking and its importance, permanent marketing and its importance, hard and soft design in detail.

2. Mention the lens quality with respect to faults in the material and on the surface of a lens. Explain the different techniques of inspecting a lens for its defects.
   Or
   Describe in detail the plastic and metal materials used for spectacle frames.

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

3. What is Fresnel prism and mention its advantages and disadvantages.

4. Different types of bifocal lenses.

5. Discuss Lenticular lenses.
   Or
   What do we mean by image jump in biofocal lenses? Illustrate jump with an example and how can jump be eliminated.

6. Give reason for plus lenses on application of transverse movement test exhibit against motion and negative lenses exhibit with movement.

7. Short note on frame measurement and frame selective for elderly.

8. What are the mechanical properties of spectacle lenses?

9. What are Photo chromatic lenses and factors influencing photochromatic lenses?

10. A Right Eye lens of power – 7.00 DS is decentred 3mm out and 4 mm up. What are the resulting horizontal and vertical prismatic effect?
    Or
    A lens has the following parameters, power : plano –3.00 DC X 90, lens form plano concave cylinder, lens is 50 mm round, refraction index 1.53, center thickness 1.00mm, what is the edge thickness in the horizontal and vertical meridian.

11. Mention briefly the lens defects.

12. Mention the steps involved in taking binocular and monocular distance PD using a ruler.

Rajiv Gandhi University of Health Sciences, Karnataka

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

13. Polycarbonate lenses.

14. Library and convertible temple.

15. List the ideal characteristics of a tinted lens.

16. Best form lenses.

17. Define glare and list the types.

18. Short note on Refractive index of a lens.

19. What is Pantoscopic tilt? What is the usual pantoscopic tilt?

20. How chromatic aberration is eliminated in a recumbent prism.

21. Short note on contrast filters and gradient lenses.

22. Simple transposition :
    a) +3.00 DS –3.00 DC x 180
    b) +1.75 DS +0.75 DC x 50
    c) -0.75 DS –1.75 DC x 120

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 13-Nov-2025

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

VISUAL OPTICS (RS-4)
Q.P. CODE: 3347

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 in detail about etiology, clinical features, types and management of Astigmatism
2. Write in detail about the drugs used in refraction and the procedure of Cycloplegic retinoscopy

   OR

   What is Vergence? Write about the anomalies of convergence

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

3. Optical aberration of eye
4. Factors effecting visual acuity
5. Component of Hypermetropia

   OR

   JCC
6. Cardinal points and far points of eye
7. Uses of Prisms in ophthalmology
8. Duochrome test
9. Pseudophakia
10. OKN test

    OR

    CSM test
11. Binocular balancing
12. Emmetropization

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

13. RAF ruler
14. Transpose plano/-1.25 DC* 125
15. Facultative Hypermetropia
16. Astigmatic fan
17. Sturm’s conoid
18. Depth of focus
19. Tentative addition based on age in presbyopia
20. Axes and angles of eyeball
21. Aniseikonia
22. Phoropter

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Operation Theatre Technology Degree Examination – 06-Nov-2025

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

MEDICINE RELEVANT TO OPERATION THEATRE TECHNOLOGY (RS2)
Q.P. CODE: 1242

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

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

1. Describe the etiology, clinical features, investigations and treatment of Ischemic Heart Disease
2. 50 years old female patient with hypertension is posted for varicose veins surgery. What are the expected intraoperative and post-operative complications and how will you manage
3. Explain in detail cerebro vascular accident (CVA)

SHORT ESSAYS (Answer any Eight) **8 x 5 = 40 Marks**

4. Illustrate hypovolemic shock and its management
5. Write etiopathogenesis and treatment of chronic liver failure
6. Explain emphysema
7. Explain the physiological changes during pregnancy
8. Discuss the operation theatre management of obese patients, including preoperative and postoperative care
9. Add a note in OT preparation and intra operative management of patient with anemia
10. Explain the diagnosis and treatment of pregnancy induced hypertension (PIH)
11. Explain management of patient with bronchial asthma in the operation theatre
12. Add a note on fasting guidelines and OT preparation in pediatric patients
13. Prepare a table of NYHA classification of breathlessness

SHORT ANSWERS (Answer any Ten) **10 x 2 = 20 Marks**

14. Enlist any four medications used in treatment of epilepsy
15. Write about complications observed in positioning obese patients
16. Describe body mass index (BMI)
17. Enlist any two crystalloids with their composition
18. Treatment of diabetic ketoacidosis
19. Describe Oral hypoglycemic agents
20. Classify hypertension
21. Enlist any four diuretics
22. Renal function test
23. Risk factors of pre-labor rupture of membrane (Amniotic sac rupture)
24. Describe lung volumes
25. APGAR Score

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 18-Nov-2025

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

CEVS AND OPTOMETRIC INSTRUMENTS
(REVISED SCHEME-3)
Q.P. CODE: 3113

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 theory of indirect ophthalmoscope. Write about the clinical procedure and recording of the same.
2. What is Keratometry? Explain the instrumentation theory and the clinical uses of same.
3. What is Ultrasonography? What are the physics involved and the clinical indications of ultrasonography?
4. What is visual acuity? Differentiate between Snellen visual acuity chart from log MAR visual acuity chart. Write about the construction of log MAR chart at 4m.

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

5. Explain the principle of applanation tonometer. Write its advantage over Schiotz tonometer.
6. What are the quad maps present in Orbscan report.
7. What is Badal and non-badal principle? Explain.
8. Explain the Glaucoma Hemifield test in detail.
9. Enlist the various slit lamp illumination techniques and explain the specular reflection and sclerotic scatter.
10. Write about the different phases of FFA.
11. Explain instrumentation and optics of retinoscope.

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

12. What is the principle of Pachymeter?
13. What is lens Guage and what measurement it taken with lens Guage.
14. Define visual acuity and MAR.
15. What are the uses of Exophthalmometer?
16. What is Hruby lens and where is it used?
17. What is Scheiner’s principle?
18. Write the origin of ERG waves.
19. Name few color vision charts designed based on Pseudoisochromatic principle.
20. Differentiate false positive and false negative errors in visual field report and write its implication.
21. Anderson’s criteria.

Rajiv Gandhi University of Health Sciences, Karnataka

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

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

MICROBIOLOGY & PATHOLOGY, PHARMACOLOGY
Q.P. CODE: 3114
SECTION A – MICROBIOLOGY AND PATHOLOGY (RS – 3) (40 Marks)

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 3114 and 3115 are to be answered within total duration of 3 hours)

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

1. Define sterilization and classify. Explain in detail about autoclave
2. Describe the lab-diagnosis of HIV –AIDS
3. Explain the classification, source, lab diagnosis and treatment of bacterial endopthalmitis

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

4. Give an account of herpes simples virus
5. Define anemia and list the different types
6. Short notes on Mycotic keratitis

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

7. Define embolism
8. What is inflammatory pseudo tumour of orbit?
9. Explain eyeworm
10. Name any three parasites causing eye infections
11. Describe staphylococcus aureus

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 20-Nov-2025

Time: 3 Hours **Max. Marks: 80 Marks**

MICROBIOLOGY AND PATHOLOGY, PHARMACOLOGY
SECTION B: PHARMACOLOGY (40 MARKS)
(REVISED SCHEME – 3)
Q.P. CODE: 3115

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

(Note : Both QP Codes 3114 and 3115 are to be answered within total duration of 3 hours)

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

1. Mention the different types of allergic reactions and discuss their mechanisms.
2. Define antibiotics. Discuss the classification, mechanism of action, therapeutic uses and adverse effects of Cephalosporins.
3. Classify the diuretics used in ophthalmology. Elaborate on osmotic diuretics.

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

4. Discuss anti-diabetic drugs.
5. General and ocular complications of corticosteroid therapy.
6. Write short notes on the beta blockers.

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

7. Mention three pre-surgical antiseptics.
8. Mention any three Mydriatics.
9. Mention three sources and three functions of Vitamin A.
10. Mention three sources of drugs.
11. Three drugs used to diagnose ocular disorders.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination – 18-Nov-2025

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

CEVS AND OPTOMETRIC INSTRUMENTS (RS-4)
Q.P. CODE: 3348

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 streak retinoscope? Describe the instrumentation and optics of streak retinoscope
2. What are the components of vision? How will you assess visual acuity in pre-school children?

   Or

   Explain the different procedure for assessing the lacrimal system along with their indications, contraindications, procedure and interpretations

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

3. Write the principle of Keratometer. Mention errors possible in a manual keratometry
4. Explain the optics of manual lenometer
5. Explain the components of electroretinogram

   Or

   Explain the Van Herrick grading system
6. Short note on D-15 colour vision test
7. Short note on fundus photography
8. Difference between static and dynamic retinoscopy
9. Explain 3 mirror gonioscopy. What are contraindications of gonioscopy?
10. Explain Amsler chart and its types

    Or

    Mention the color coding used for retinal abnormalities
11. What is phoropter? Mention its advantages and disadvantages
12. Explain A – scan ultrasonography

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

13. Principle of Retinoscopy
14. Hofstetter's formula for calculating the minimum, average and maximum amplitude of accommodation based on the age
15. What is the purpose of pattern deviation plot in Humphrey visual field analyzer?
16. What are the indications of visual evoked potential test?
17. Potential acuity meter and its use
18. What is the principle of optometer?
19. a) K_1 =42.50 x 180
    b) K_2 = 43.5 x 90

    Mention the type of astigmatism and calculate the amount of astigmatism
20. Uses of pinhole and staenopic slit
21. Accessories of a slit lamp
22. Benefits of history taking

Rajiv Gandhi University of Health Sciences, Karnataka

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

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

MICROBIOLOGY, PATHOLOGY AND PHARMACOLOGY (RS – 4)
Section B: PHARMACOLOGY (50 Marks)
Q.P. CODE: 3350

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. Mention the various routes of drug administration with example. What are the advantage and disadvantage of intravenous routes

   OR

   Classify Chemotherapeutic drugs. Discuss mechanism of action, uses and adverse effect of Aminoglycosides

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

2. Miotics and mydriatics drugs
3. Pre anaesthetic medication
4. Discuss anti diabetic drugs
5. Mention various types of ocular drug delivery system

   OR

   Therapeutic use and adverse effect of thiazide diuretics
6. Dyes used in ocular diagnosis

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

7. Bio-availability
8. Drug nomenclature
9. Drug for hypertensive crisis
10. Tear substitute
11. Occusert

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