[LH 0815] **AUGUST 2015** **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

(New Syllabus 2014-2015)

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code : 841531

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Anatomy of the visual pathway.
2. Dynamics of Aqueous humor secretion, circulation and drainage.
3. Describe the anatomy of lacrimal apparatus with a diagram.

II. Write notes on: **(10 x 5 = 50)**

1. Tonometry.
2. Layers of Retina.
3. Autoclave.
4. Antifungals in Ophthalmology.
5. Blood supply of eye.
6. Theories of colour vision.
7. Acid fast bacilli.
8. Corneal transparency.
9. Indications and Contraindications of topical steroids.
10. Angle of the anterior chamber.

III. Short Answers on: **(10 x 2 = 20)**

1. Name 2 gram positive cocci.
2. Acid fast staining.
3. Name 2 cycloplegics.
4. Beta blockers.
5. Superior oblique muscle.
6. Sphincter papillae.
7. Nasolacrimal duct.
8. Hering s law of equal innervations.
9. Mention the grades of BSV.
10. AC/A ratio.

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[LI 0216] **FEBRUARY 2016** **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

(New Syllabus 2014-2015)

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code : 841531

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Layers of retina.
2. Production and drainage of aqueous humor.
3. Methods of sterilization.

II. Write notes on: **(10 x 5 = 50)**

1. Structures in the angle of anterior chamber.
2. Anatomy of choroid.
3. Extraocular muscles.
4. Nerve supply to the eye.
5. Functions of tears.
6. Advantages of binocular vision.
7. Ocular reactions to systemic medications.
8. Drug delivery methods.
9. Gram staining procedure.
10. Disinfection.

III. Short Answers on: **(10 x 2 = 20)**

1. Parts of crystalline lens.
2. What is limbus?
3. Bones in the orbit.
4. Muscles used for opening and closing eyes.
5. Tests for color vision.
6. Accommodation.
7. Common drugs used in treatment of glaucoma.
8. Name 2 antibiotics in ophthalmic use.
9. Asepsis.
10. Chemical sterilization.

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[LJ 0816] **AUGUST 2016** **Sub. Code : 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three hours **Maximum: 100 Marks**

Answer **ALL** questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Neatly draw the structure of eyeball and label the parts. Discuss in detail about anatomy of Outer coat of eyeball.
2. Discuss in detail about visual pathway with suitable diagrams and flowcharts. Add a note on applied anatomy.
3. Discuss in detail about the various methods involved in Sterilization, Disinfection and Antisepsis.

II. Write notes on: **(10 x 5 = 50)**

1. Chambers of eye.
2. Enumerate intraocular involuntary muscles of eye, their action, blood supply and nerve supply.
3. Layers of retina.
4. Light Reflex.
5. Define Xerophtalmia. What are all the causes for Xerophtalmia and how will you correct it?
6. What is Cataract? Discuss in detail about the causes of Cataract and methods of correction.
7. Enumerate drugs used in Glaucoma, their mechanism of action and principle of using them.
8. Classify Corticosteroids, their mechanism of action, uses and adverse effects.
9. Classify Aminoglycosides, their mechanism of action, uses and adverse effects.
10. Enumerate the toxins released by Staphylococci and various diseases caused by Staphylococci.

III. Short answers on: **(10 x 2 = 20)**

1. Enumerate four refracting media of eyeball through which light enters.
2. Hypermetropia.
3. Stye.
4. Macula Lutea.
5. Function of Rods Cones.
6. Tests for Visual Acuity.
7. Ocusert.
8. Cycloplegics.
9. Interferon.
10. Enumerate four fungi causing systemic diseases.

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[LK 0217] FEBRUARY 2017 **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Neatly draw the structure of eyeball and label the parts. Discuss in detail about anatomy of middle coat of eyeball.
2. Discuss in detail about Photo Transduction Cascade, in which light energy is converted into receptor potential with suitable diagrams and flowcharts.
3. Discuss in detail about the various routes of drug administration, their advantages and disadvantages.

II. Write notes on: **(10 x 5 = 50)**

1. Chambers of eye
2. Enumerate extraocular voluntary muscles of eye, their action, blood supply and nerve supply.
3. Lacrimal apparatus.
4. Visual pathway
5. Errors of Refraction.
6. Classify Quinolones, their mechanism of action, uses and adverse effects.
7. Enumerate Mydriatics, their mechanism of action, uses and adverse effects.
8. Define Sterilisation and various methods involved in Sterilisation.
9. Define Gram's stain. Discuss in detail about the Principle and Procedure of Gram's stain.
10. Discuss in detail about life cycle of Entamoeba Histolytica and various disease caused by Entamoeba.

III. Short answers on: **(10 x 2 = 20)**

1. Enumerate four refracting media of eyeball through which light enters.
2. Define Cataract. What are all the methods used for correction of Cataract.
3. Nasociliary nerve.
4. Ophthalmoscopy.
5. Macula Lutea.
6. What is Color Blindness? Mention two causes for Color Blindness.
7. Schrimer's test.
8. Enumerate four microbes causing Diarrhoea.
9. Enumerate four microbes causing Keratitis.
10. Polio vaccine.

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[LL 0817] AUGUST 2017 **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss in detail about visual pathway with suitable diagrams and flowcharts. Add a note on applied anatomy.
2. Dynamics of aqueous humor secretion, circulation and drainage.
3. Describe the gram staining methods for identification of bacteria.

II. Write notes on: **(10 x 5 = 50)**

1. Acid fast bacilli.
2. Layers of retina.
3. Indications and contraindications of topical steroids.
4. Enumerate drugs used n glaucoma, their mechanism of action and principle of using them.
5. Anatomy of choroid.
6. Grades of binocular vision.
7. Detail on physical methods of Sterilization.
8. Corneal anatomy.
9. Autoclave.
10. Write any five biochemical tests to identify bacteria.

III. Short answers on: **(10 x 2 = 20)**

1. Stye.
2. Cycloplegics.
3. Acid fast staining.
4. Sphincter papillae.
5. Chemical sterilization.
6. Accommodation.
7. What is limbus?
8. Tests for visual acuity.
9. Name the extra ocular muscles.
10. Functions of tears.

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[LM 0218] FEBRUARY 2018 **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Anatomy of retina.
2. Describe the anatomy of lacrimal apparatus with a diagram.
3. Discuss in detail about the various methods involved in sterilization, disinfection and antisepsis.

II. Write notes on: **(10 x 5 = 50)**

1. Theories of color vision.
2. Anti fungals in ophthalmology.
3. Autoclave.
4. What is cataract? Discuss in detail about causes of cataract and methods of correction.
5. Enumerate the toxins released by staphylococci and various diseases caused by staphylococci.
6. Nerve supply to the eye.
7. Drug delivery methods.
8. Tonometry.
9. Notes on drug excretion.
10. Write about types of medium.

III. Short answers on: **(10 x 2 = 20)**

1. Hypermetropia.
2. Function of rods and cones.
3. Name two gram positive cocci.
4. Levator palpabrae superioris muscle.
5. Mention the grades of BSV.
6. Common drugs used in treatment of glaucoma.
7. Bones in the orbit.
8. Macula lutea.
9. AC/A ratio.
10. Relative Afferent Pupillary Defect.

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[LN 0818] AUGUST 2018 **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Development of eyeball.
2. Describe in detail circulation of aqueous humor.
3. Medical therapy of glaucoma.

II. Write notes on: **(10 x 5 = 50)**

1. Extraocular muscles and functions.
2. Anatomy of optic nerve.
3. Tonometry.
4. Binocular single vision.
5. Antiglaucoma medications.
6. Antifungal antibiotics.
7. Trachoma organism.
8. Organisms implicated in ophthalmia neonatorum.
9. Electroretinogram and its uses.
10. Stereopsis.

III. Short answers on: **(10 x 2 = 20)**

1. Gonococci.
2. Lens placode.
3. Iris anatomy.
4. List of antiglaucoma drugs.
5. Visual acuity tests in child.
6. Chlamydia Trachomatis.
7. Anatomy of angle structures.
8. Rhodopsin.
9. Name theories of colour vision.
10. List of cycloplegics.

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[LO 0219] FEBRUARY 2019 **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY
FIRST YEAR
PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Draw diagram and describe angle structures.
2. Describe lens structure in detail.
3. Theories of color vision and tests of color vision.

II. Write notes on: **(10 x 5 = 50)**

1. Anatomy of lens.
2. Ciliary body anatomy.
3. Tonography.
4. Tests for color vision.
5. Steroids.
6. Medical management of anterior uveitis.
7. Electrooculogram and uses.
8. Fungi in keratitis.
9. Organisms implicated in postoperative endophthalmitis.
10. Anatomy of cornea.

III. Short answers on: **(10 x 2 = 20)**

1. Name four antifungal drugs.
2. Fungi affecting cornea.
3. Name scleral layers.
4. Diagram of pupillary light reflex.
5. Anatomy of occipital cortex.
6. Color vision receptors.
7. Beta blockers in treatment of glaucoma.
8. Layers of cornea.
9. Blood vessels supplying conjunctiva.
10. Components of accommodation.

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[LP 0819] AUGUST 2019 **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Anatomy and blood supply of retina.
2. Development of eyeball.
3. Detailed structure of visual pathway.

II. Write notes on: **(10 x 5 = 50)**

1. Intrinsic muscles of eye.
2. Viral conjunctivitis.
3. Steroid in ocular medicine.
4. Colour blindness.
5. Color vision test.
6. Anatomy of lens.
7. Uses of cycloplegics.
8. Optic chiasma anatomy.
9. Physiology of Accommodation.
10. Visually evoked potential.

III. Short answers on: **(10 x 2 = 20)**

1. Staphylococci.
2. Optic vesicle.
3. Various layers of cornea.
4. Name two alpha agonist used in glaucoma treatment.
5. Draw rhodopsin cycle.
6. Three stages of binocular single vision.
7. Name various visual perceptions.
8. Draw diagram of pupillary light reflex.
9. Name blood supply of conjunctiva.
10. Name the intraocular muscles.

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[LQ 0220] FEBRUARY 2020 **Sub. Code: 1531**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code: 841531

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: **(3 x 10 = 30)**

1. Draw a diagram of the Eye an label all the parts. Discuss in detail about the lens.
2. Describe the anatomy of the lacrimal apparatus with a diagram.
3. Methods of sterilization.

II. Write notes on: **(10 x 5 = 50)**

1. Extraocular muscles.
2. Blood supply of the eye.
3. Define Xerophthalmia. What are the causes of xerophthalmia and how will you correct it?
4. Classify quinolones, their mechanism of action, uses and adverse effects.
5. Drug delivery devices.
6. Tonometry.
7. Electroretinogram and its uses.
8. Choroid.
9. Bacterial conjunctivitis.
10. Anophthalmia.

III. Short answers on: **(10 x 2 = 20)**

1. Optic vesicle.
2. Diagram of papillary light reflex.
3. Name two cycloplegics.
4. Nasolacrimal duct.
5. What is the limbus?
6. Stye.
7. Macula lutea.
8. Ophthalmoscopy.
9. Steroids in ocular medicine.
10. Schirmer’s Test.

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

[AHS 0321] MARCH 2021 Sub. Code: 1531

(AUGUST 2020 EXAM SESSION)

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR (Regulation 2014-2015 & 2018-2019)

PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY

Q.P. Code : 841531

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. Describe the dynamics of aqueous humour secretion, circulation and drainage.
2. Describe the structure of the visual pathway.
3. Describe the theories of colour vision and test for colour vision.

II. Write notes on: **(10 x 5 = 50)**

1. Autoclave.
2. Function of tears.
3. Disinfection.
4. Light reflex.
5. Enumerate drugs used in Glaucoma, their mechanism of action and principles of using them.
6. Define Gram's stain. Discuss in detail about principle and procedure of Gram's Stain.
7. Corneal Anatomy.
8. What is cataract? Discuss in detail about the causes of cataract and methods of correction.
9. Steroid in ocular medicines.
10. Visually evoked response.

III. Short answers on: **(10 x 2 = 20)**

1. Beta blockers.
2. Superior Oblique muscle.
3. Grades of BSV.
4. Gonococcus.
5. Bones in the orbit.
6. Chemical sterilization.
7. Test for visual acuity.
8. Enumerate 3 fungi causing systemic diseases.
9. Accommodation.
10. Myopia.

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