[LH 0815] **AUGUST 2015** **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT

(New Syllabus 2014-2015)

FIRST YEAR

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

Q.P. Code : 841631

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

Answer ALL questions

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

1. Anatomy of Extraocular muscles – origin, insertion, nerve supply and actions.
2. Define Sterilisation. Describe the different methods of sterilisation.
3. Describe the different layers of Cornea and maintenance of corneal transparency.

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

1. Levator palpebrae superioris.
2. Aqueous humor secretion.
3. Neonatal conjunctivitis.
4. Topical NSAIDs.
5. Tenon s capsule.
6. Physiology of Accomodation.
7. Gram s stain.
8. Antifungals used in Ophthalmology.
9. Superior Orbital Fissure.
10. Electroretinography.

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

1. Hering’s law of equal innervations.
2. Name two gram negative bacteria.
3. Mention the three grades of BSV.
4. Dilator papillae.
5. Orbicularis oculi.
6. AC/A ratio.
7. Cyclopentolate.
8. KOH mount.
9. Pilocarpine.
10. Meibomian gland.

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[LI 0216] FEBRUARY 2016 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT

(New Syllabus 2014-2015)

FIRST YEAR

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

Q.P. Code : 841631

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

Answer all questions

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

1. Layers of Cornea and factors responsible for corneal transparency.
2. Extra ocular muscles-origin, insertion, nerve supply and actions.
3. Define Mydriatics and Cycloplegics. Write notes on mydriatic and cycloplegic agents with regard to mechanism of action, dosage, indications, contraindications and adverse effects.

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

1. Classify anti-glaucoma medication.
2. Anatomy of eyelid with diagram.
3. Draw the structure of eyeball and name its parts.
4. Draw and name parts of visual pathway.
5. Pilocarpine.
6. Name the layers of the retina.
7. Formation of aqueous humour.
8. Explain gram staining and its applications.
9. Give the importance of antibiotic sensitivity test.
10. Different culture media in Microbiology.

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

1. Viral infections of the eye.
2. Name two liquid culture media.
3. What are gram negative bacilli?
4. Name the muscles of iris and their actions.
5. Autoclave.
6. Blood supply of eye.
7. Acid fast bacilli.
8. Mention the grades of BSV.
9. Schirmers test.
10. Name the layers of tear film.

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[LJ 0816] **AUGUST 2016** **Sub. Code : 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT

FIRST YEAR

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

Q.P. Code: 841631

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

Answer **ALL** questions.

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

1. Define sterilization. What are the methods available for sterilization? Add suitable examples.
2. Describe the morphology of bacteria. Draw a labeled diagram.
3. Describe the anatomy of lacrimal apparatus with a diagram.

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

1. Tonometry.
2. Diagram of corneal structure and function.
3. Name the layers of retina.
4. Different staining techniques used in Microbiology.
5. Name the different culture media used in Microbiology.
6. Indications and contraindications of topical steroids.
7. Formation of aqueous humour.
8. Anti fungals in Ophthalmology.
9. Schirmers test.
10. Accommodation.

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

1. Parts of ciliary body.
2. Name the extra ocular muscles of the eye.
3. Functions of the tear film.
4. Gram negative bacilli.
5. Acid fast staining.
6. Name two Cycloplegic drugs.
7. Grades of binocular single vision (BSV).
8. Write the uses of formalin.
9. Routes of drug administration in Ophthalmology.
10. Name two anti-glaucoma drugs.

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[LK 0217] FEBRUARY 2017 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT
FIRST YEAR
PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY & MICROBIOLOGY

Q.P. Code: 841631

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

Answer All questions.

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

1. Define sterilization. Explain dry heat and moist heat sterilization.
2. Extra ocular muscles-origin, insertion, nerve supply and actions.
3. Dynamics of aqueous humor secretion, circulation and drainage.

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

1. Schirmers test.
2. Layers of retina.
3. Acid fast bacilli.
4. Anti fungals in Ophthalmology.
5. Disinfectants used in Ophthalmology.
6. Different staining techniques used in Microbiology.
7. Accommodation.
8. Draw and name parts of visual pathway.
9. Fungal infections of the eye.
10. Classify anti-glaucoma medications.

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

1. Disinfection.
2. What is resistance and sensitivity of bacteria?
3. Name some anti bacterial drugs used in Ophthalmology.
4. Grades of Binocular Single Vision (BSV).
5. Theories of colour vision.
6. Functions of tear film.
7. Name the factors which influence Intra Ocular Pressure (IOP).
8. Name the bones of the medial wall of orbit.
9. Herpes Zoster.
10. Nerve supply and action of lateral rectus muscle.

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[LL 0817] AUGUST 2017 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT

FIRST YEAR

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

Q.P. Code: 841631

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

Answer All questions.

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

1. Ocular movements and its significances.
2. Anatomy of anterior chamber of eye.
3. Visual path way.

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

1. Aqueus humour.
2. Anatomy of eye lid.
3. Corneal anatomy.
4. Physiology of accommodation and convergence.
5. Colour vision.
6. Visual acuity.
7. Muscles of iris and its action.
8. Anatomy of lens.
9. Rods and cones.
10. Mydriatics and miotics.

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

1. Topical anesthesia.
2. Bones of orbit.
3. Phsiology of blinking movements.
4. Anatomy of macula.
5. Corneal endothelium.
6. Optic chiasma.
7. Uveal scleral out flow.
8. Lacrimal sac.
9. Trochlear nerve.
10. Dark adaptation.

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[LM 0218] FEBRUARY 2018 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT

FIRST YEAR

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

Q.P. Code: 841631

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

Answer All questions.

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

1. Describe an orbit and its contents.
2. Describe Lacrimal apparatus and its drainage.
3. Anatomy of ocular movements.

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

1. Transparency of cornea.
2. Vitreous.
3. Anatomy of anterior chamber.
4. Anatomy of lens.
5. Musles of eyelid.
6. Tear film.
7. Rhodopsin cycle.
8. Mydriatics and cyclo plegics.
9. Optic nerve.
10. Layers of retina.

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

1. Pupillary reflexes.
2. Orbicularis oculi musles.
3. Dark adaptation.
4. Purkinje images.
5. Corneal endothelium.
6. Ciliary body.
7. Protective mechanisms of eye.
8. Abducent nerve.
9. Topical anesthesial eye drops and its uses.
10. Uveal scleral out flow.

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[LN 0818] AUGUST 2018 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/
DIPLOMA IN OPHTHALMIC ASSISTANT

FIRST YEAR

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

Q.P. Code: 841631

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

Answer All questions.

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

1. Describe the anatomy of Lacrimal apparatus with a diagram.
2. Production and drainage of Aqueous humour pathway.
3. Describe the Pupillary pathway and various Pupillary reflexes.

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

1. Anatomy of Angle of Anterior chamber.
2. Describe the anatomy of Walls of Orbit.
3. Draw the gross anatomy of upper eyelid and name its various parts.
4. Short notes on Metabolism of Cornea and Maintenance of Corneal transparency.
5. Short notes on field defects in various disorders.
6. Theories of Colour Vision.
7. Short notes on Topical Antiviral drugs.
8. Short notes on commonly used drugs in the treatment of Glaucoma.
9. Short notes on Autoclave.
10. Short notes on Disinfection and disinfectants.

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

1. Name 2 gram positive Cocci.
2. 2 common anaesthetic drugs.
3. Chennai eye- Causative drugs.
4. 2 lesions caused by Herpes zoster virus.
5. 2 examples of tear substitutes.
6. Write 2 methods of biomedical waste disposals.
7. Uses of Formalin.
8. Muscles used for opening and closing of eyes.
9. Accomodation.
10. What is Limbus?

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[LO 0219] FEBRUARY 2019 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/
DIPLOMA IN OPHTHALMIC ASSISTANT

FIRST YEAR

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

Q.P. Code: 841631

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

Answer All questions.

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

1. Draw the gross structure of the Eye. Name its various parts and describe the features of each part of the Eye.
2. Describe the Visual pathway and the lesions of visual pathways.
3. Discuss in detail about the various methods involved in Sterilisation, Disinfection and Antisepsis.

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

1. Anatomy of chambers of the Eye.
2. Layers of Retina.
3. Microscopic structure of Cornea.
4. Various tests for Colour vision.
5. Physiology of Accomodation.
6. Functions and composition of Tear film.
7. Role of steroids in Ophthalmology.
8. Role of Mydriatics and Cycloplegics in Ophthalmology.
9. Write a short note on Culture medium in Microbiology.
10. Various diseases caused by Staphylococci and Streptococci in Eye.

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

1. Parts of Lens of the Eye.
2. Muscles of the Iris and their action.
3. Parts of Lacrimal Apparatus.
4. Types of Tonometer.
5. Charts used for assessing visual acuity for distance and near vision.
6. 3 grades of binocular single vision.
7. Name the antifungal eye drops.
8. Name the broad spectrum antibiotic eye drops.
9. Acid fast staining in Microbiology.
10. Name 2 lesions on the Cornea by Herpes Simplex virus.

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[LP 0819] AUGUST 2019 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/
DIPLOMA IN OPHTHALMIC ASSISTANT

FIRST YEAR

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

Q.P. Code: 841631

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

Answer All questions.

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

1. Describe the anatomy of eye with diagram.
2. How corneal transparency is maintained?
3. Name the extra ocular muscles, their nerve supply and action.

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

1. What is visual acuity? How it is measured?
2. What is color vision and how is color vision assessed?
3. What is accommodation?
4. Physiology of aqueous humor formation.
5. What is tonometry? Name the instruments used for tonometry.
6. ERG.
7. Alpha agonist and its function.
8. Angle of anterior chamber.
9. Write down the layers of tear film and function of each layer.
10. Insertion of recti muscles with respect to limbus.

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

1. Write the nerve supply of iris.
2. Where is vitreous humour located in the eye?
3. BSV.
4. What is posterior chamber?
5. Draw the diagram of optic nerve head.
6. Role of vitamin A in the eye.
7. Site of aqueous humour formation.
8. What are zonules? Describe the function of zonules.
9. Cycloplegics.
10. Cardio-selective beta-blocker.

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[LQ 0220] FEBRUARY 2020 **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/
DIPLOMA IN OPHTHALMIC ASSISTANT

FIRST YEAR

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

Q.P. Code: 841631

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

Answer All questions.

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

1. Describe the anatomy of retina with diagram.
2. Describe the pathway of aqueous flow.
3. Describe intra ocular pressure, how it is maintained and the instruments used for measuring IOP?

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

1. What is the rationale of Snellen's chart? How do you measure visual acuity in a child?
2. What is tonometry? Name the instruments used for tonometry.
3. Origin, insertion and nerve supply of Levator Palpebrae Superioris.
4. Layers of retina.
5. How corneal transparency is maintained?
6. Describe the pathway of tear flow.
7. EOG.
8. VEP.
9. Describe the technique of Gram's staining.
10. Disinfectants used in ophthalmology.

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

1. Write down the layers of tear film.
2. Topical Anti-viral ointment.
3. Diabetes Mellitus.
4. Anatomy of lens.
5. Name two vital stains.
6. Palpebral Fissure.
7. How prostaglandin-analogues reduce IOP?
8. Function of 2nd. Cranial nerve.
9. Name two anti-fungal drugs.
10. What is Bacteriostatic and Bacteriacidal antibiotic?

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

[AHS 0321] MARCH 2021 Sub. Code: 1631

(AUGUST 2020 EXAM SESSION)

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/

DIPLOMA IN OPHTHALMIC ASSISTANT

FIRST YEAR (Regulation 2014-2015 & 2017-2018)

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

Q.P. Code : 841631

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

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

1. Extra Ocular Muscles : Origin, Insertion, Nerve supply, Action.
2. Visual Pathway.
3. Anatomy of Cornea.

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

1. Classify anti-glaucoma medications by mechanism of action.
2. Mydriatics and Miotics.
3. Classify Bacteria by (a) Shape, (b) Arrangement, (c) Staining property.
4. Life Cycle of Bacteria.
5. Antifungal drugs.
6. Uveal Tract.
7. Broad classification of antibiotics with example.
8. Method of instilling eye drops.
9. Structure of Crystalline Lens.
10. Tests for colour vision.

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

1. Name two NSAID.
2. Contraindications of topical steroid.
3. Name two antiviral drugs.
4. Name two lubricating Eye drops.
5. Tonometer.
6. Role of Microbiology.
7. Methods of sterilization.
8. Contraindications of phenylephrine.
9. Vital Stains.
10. Uses of Fluorescein stain in ophthalmology.

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

[AHS 0122] JANUARY 2022 Sub. Code: 1631
(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/
DIPLOMA IN OPHTHALMIC ASSISTANT
FIRST YEAR (Regulation 2014-2015 & 2017-2018)
PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY, OCULAR MICROBIOLOGY
Q.P. Code : 841631

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

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

1. Routes of drug administration in Ophthalmology.
2. Anatomy of Lacrimal apparatus with diagram.
3. Dynamics of aqueous out flow.

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

1. ETO sterilization.
2. Name the intraocular muscles and their actions.
3. What is cycloplegic and what is mydriatic?
4. Layers of tear film.
5. Colour vision.
6. Transparency of cornea.
7. Name the layers of retina.
8. Name the different culture media used in microbiology.
9. Accommodation.
10. Prostaglandin Analogues.

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

1. Vital stains.
2. Parts of ciliary body.
3. Intra-ocular tension.
4. Name two NSAID.
5. Contraindication of Timolol.
6. Name two antiviral drugs.
7. Use of Formalin.
8. Name two anti-allergic drugs.
9. Grades of Binocular Single Vision (BSV).
10. Name two lubricating drops.

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

[AHS 0922] SEPTEMBER 2022 Sub. Code: 1631
(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/
DIPLOMA IN OPHTHALMIC ASSISTANT
FIRST YEAR (Regulations from 2014-2015 & 2017-2018)
PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY & MICROBIOLOGY
Q.P. Code : 841631

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

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

1. Describe the anatomy of lacrimal apparatus with a diagram.
2. Draw and label Morphology of Bacteria.
3. Routes of drug administration in ophthalmology.

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

1. Ciliary body.
2. Different types of tonometer used in ophthalmology.
3. Mydriatics and Cycloplegics.
4. Pupillary reflex.
5. The openings of orbit at its apex.
6. Classify bacteria by staining property.
7. How do you measure visual acuity in children?
8. Aqueous humor production, circulation and drainage.
9. Binocular Single vision.
10. Side effects of topical and systemic steroids.

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

1. Name two Gram negative bacteria.
2. SOF.
3. Name two antifungal drugs.
4. Carbonic Anhydrase Inhibitor.
5. Contents of optic foramen.
6. Prostaglandin analogues.
7. Contraindication of phenylephrine eye drops.
8. Uses of Ketorolac Tromethamine.
9. What is HPMC?
10. Name two injectable stains in ophthalmology.

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

[AHS 0423] **APRIL 2023** **Sub. Code: 1631**

DIPLOMA IN OPHTHALMIC NURSING ASSISTANT/
DIPLOMA IN OPHTHALMIC ASSISTANT
FIRST YEAR (Regulations 2014-2015 & 2017-2018 onwards)
PAPER I – OCULAR ANATOMY, OCULAR PHYSIOLOGY, OCULAR PHARMACOLOGY & MICROBIOLOGY
Q.P. Code : 841631

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

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

1. Define Sterilization. Explain Dry Heat and Moist Heat Sterilization.
2. Routes of Drug Administration in Eye.
3. Anatomy of Uveal Tract.

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

1. Eye Lids.
2. Binocular Single Vision.
3. Life cycle of Bacteria.
4. KOH mount.
5. Ocular movements.
6. Bones of Orbit.
7. Vital stains used in Ophthalmology.
8. Different Mydriatics, their indications and contraindications.
9. Tests for Colour vision.
10. Classify Bacteria by Morphology.

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

1. Name two Gram Positive Bacteria.
2. Two conditions where Atropine Eye drops are used?
3. Name two Antiviral drugs.
4. Name two Anti-glaucoma medications.
5. Name two NSAID.
6. Contraindication of Topical steroid.
7. 4^{th} Cranial nerve.
8. Vitreous Humor.
9. Drugs used for Ocular Anaesthesia.
10. Name two Anti-Allergic drops.

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