

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

[AHS 0321]

**MARCH 2021
(AUGUST 2020 EXAM SESSION)**

Sub. Code: 2744

B.OPTOM

SECOND YEAR (Regulation 2018-2019)

PAPER IV – PATHOLOGY, MICROBIOLOGY AND PHARMACOLOGY

Q.P. Code : 802744

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the structure, classes and functions of Immunoglobulins.
2. Discuss the etiology and pathogenesis of Endophthalmitis.
3. Classify Atropine substitutes. Write the pharmacology, action and uses of atropine.

II. Write notes on:

(8 x 5 = 40)

1. Papilloedema and its etiopathogenesis.
2. Choroidal melanoma.
3. Ocular features of leprosy.
4. Staining techniques in bacteriology.
5. Flagella.
6. Catalase test.
7. Hypovitaminosis A.
8. H₂ receptor antagonist.

III. Short answers on:

(10 x 3 = 30)

1. Name two appendages of Bacteria.
2. Name two nematodes that can affect the eye.
3. Name two methods of Dry heat sterilization.
4. Name two enriched media.
5. Define pancytopenia.
6. Types of Shock.
7. Give two examples for granulomatous inflammation.
8. Name four immunosuppressants.
9. Name the agents used in ocular diagnosis.
10. List out the toxicity of aminoglycosides.

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

[AHS 0222]

**FEBRUARY 2022
(AUGUST 2021 EXAM SESSION)**

Sub. Code: 2744

**B.OPTOM
SECOND YEAR (Regulation 2018-2019)
PAPER IV – PATHOLOGY, MICROBIOLOGY AND PHARMACOLOGY
Q.P. Code : 802744**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Retinoblastoma-explain the clinical condition, pathological features and differential diagnosis.
2. Define sterilization. Describe in detail the different methods of moist heat sterilization.
3. Write in detail about the use of local anaesthetics in the eye.

II. Write notes on:

(8 x 5 = 40)

1. Discuss the features of Hypertensive retinopathy.
2. Orbital cellulitis.
3. Antibiotic susceptibility testing.
4. ELISA.
5. Thyroid eye disease.
6. Ketamine.
7. Adverse effects of corticosteroids.
8. Differences between exotoxins and endotoxins.

III. Short answers on:

(10 x 3 = 30)

1. Define anemia.
2. Name the TORCH agents.
3. What is Pterygium.
4. Inflammatory lesions of eyelid.
5. What is Transport medium. Give three examples.
6. What is incubation period.
7. Choristoma.
8. Mention any four tear substitutes.
9. Write two uses of anticoagulants.
10. Define prodrug and give four examples.

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 2744

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.OPTOM

SECOND YEAR (Regulation from 2018-2019)

PAPER IV – PATHOLOGY, MICROBIOLOGY AND PHARMACOLOGY

Q.P. Code : 802744

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the routes of drug administration with their advantages and is advantages.
2. Mention the different types of allergic reactions and discuss their mechanisms.
3. Explain about the natural resistance of the host to microorganisms.

II. Write notes on:

(8 x 5 = 40)

1. General and ocular side effects of corticosteroid therapy.
2. Describe the sources of drugs.
3. Oral antidiabetic drugs.
4. Ketamine.
5. Write a note on ocular manifestations of HIV.
6. Anaerobic culture methods.
7. Pathology of lens in cataract.
8. Staining techniques in bacteriology.

III. Short answers on:

(10 x 3 = 30)

1. Surface anaesthesia.
2. Preferential COX2 inhibitors.
3. What are the anticancer antibiotics?
4. Mucolytics.
5. Name the dyes used in examination of eye.
6. Arthus reaction.
7. Universal precautions.
8. Causes and pathology of papilledema.
9. Define Anaemia and mention the types.
10. What are Negri bodies?

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

[AHS 0423]

APRIL 2023

Sub. Code: 2744

B.OPTOM

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER IV – PATHOLOGY, MICROBIOLOGY AND PHARMACOLOGY

Q.P. Code: 802744

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Classify the drugs used in the treatment of Glaucoma. Describe their mechanism of action.
2. Write about the clinical features and management of Inflammation.
3. Describe Various Methods of Cultivation of Bacteria in detail.

II. Write notes on:

(8 x 5 = 40)

1. Different preparation of Insulin.
2. What are the actions of Atropine in the Eye?
3. Second Generation Antihistamines.
4. Acyclovir.
5. Congenital toxoplasmosis.
6. Write a note on Acanthamoeba Keratitis.
7. Dry heat sterilization.
8. Intraocular tumours.

III. Short answers on:

(10 x 3 = 30)

1. Tear substitutes.
2. Mention the adverse effects of Chloroquine.
3. What are Proton pump inhibitors? Write their uses.
4. Drug tolerance.
5. Define Thrombosis.
6. ELISA.
7. Blood brain barrier.
8. KOH mount.
9. Name three Parasitic infections of the Eye.
10. Iridocyclitis.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 2744

B.OPTOM

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER IV – PATHOLOGY, MICROBIOLOGY AND PHARMACOLOGY

Q.P. Code: 802744

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Define Inflammation. Explain the Cardinal signs of Inflammation.
2. Uses of various dyes for diagnostic procedures in Ophthalmology.
3. Explain in detail about Mydriatics and Cycloplegics.

II. Write notes on: **(8 x 5 = 40)**

1. Briefly explain about pharmacological actions of Insulin.
2. Types of Anti-hypertensive drugs.
3. Types of Anti-glaucoma drugs.
4. Morphology of a bacterial cell.
5. Corneal Dystrophies.
6. Gram negative bacteria.
7. Factors affecting wound healing.
8. Orbital tumours.

III. Short answers on: **(10 x 3 = 30)**

1. Intumescent cataract.
2. Endophthalmitis.
3. Fungal infections of the Eye.
4. Name any three chemical disinfectants.
5. Non-Steroidal Anti-Inflammatory Drugs.
6. Name any three Sterilization (NSAIDS) techniques.
7. Choroidal melanoma.
8. Atropine and its uses.
9. Define general anaesthetics.
10. Types of immunity.

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

[AHS 0424]

APRIL 2024

Sub. Code: 2744

B.OPTOM

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER IV – PATHOLOGY, MICROBIOLOGY AND PHARMACOLOGY

Q.P. Code: 802744

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain in detail about tumors of eyelids.
2. Discuss in detail about the various Sterilization techniques.
3. What are Anti-biotics? Discuss the various types of Anti-biotics.

II. Write notes on:

(8 x 5 = 40)

1. Corticosteroids.
2. Classify sedatives and hypnotics.
3. Mechanism of action of NSAIDs.
4. Organo phosphorus poisoning and its treatment.
5. Chlamydial infections of the Eye.
6. Nosocomial infections.
7. Anti-diuretics - Indications.
8. Hypertensive Retinopathy.

III. Short answers on:

(10 x 3 = 30)

1. Optic perineuritis.
2. Lymphogranuloma venerium.
3. Name the oral antidiabetic drugs.
4. Name the types of immunoglobulins.
5. Identification techniques for bacteria.
6. Scleritis and Episcleritis – How will you differentiate between the two?
7. Types of anemia.
8. Ocular toxicity of ethyl alcohol.
9. Anti-hypertensive agents.
10. Pharyngo conjunctival fever.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 2744

B. OPTOM

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER IV – PATHOLOGY, MICROBIOLOGY AND PHARMACOLOGY

Q.P. Code: 802744

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain the various phases of Ophthalmic wound healing.
2. Define Parasite. Write in detail about parasites causing eye infections.
3. Write in detail account on corticosteroids.

II. Write notes on:

(8 x 5 = 40)

1. Plasmid.
2. Diuretics.
3. Fungal conjunctivitis.
4. Opportunistic infection.
5. Antihistamine.
6. Role of anti-inflammatory drugs.
7. Choroidal melanoma.
8. Hemophilia.

III. Short answers on:

(10 x 3 = 30)

1. Cytokine.
2. Antiserum.
3. Antiseptics.
4. Bacteremia.
5. Endo flagella.
6. CRP (C-Reactive Protein) blood test.
7. Epidemic Keratoconjunctivitis.
8. Bilirubin.
9. Hemoglobin.
10. Loa loa.
