

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

[AHS 0321]

MARCH 2021

Sub. Code: 1136

(AUGUST 2020 EXAM SESSION)

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (From 2018-2019 onwards)

PAPER I – PHARMACOLOGY & MICROBIOLOGY

Q.P. Code : 801136

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain in detail about Sterilization.
2. Define Local Anaesthesia. Explain the Mechanism of Action, Uses, and Various preparations of Lignocaine.
3. Classification of Bronchodilators and Add a note on Theophylline.

II. Write notes on:

(8 x 5 = 40)

1. Prevention of Hospital Acquired Infection.
2. Classify Muscle Relaxants.
3. Paracetamol.
4. NSAIDS.
5. Gram Stains.
6. Anti – Arrhythmic Drug.
7. Salmonella Typhi.
8. Laboratory diagnosis of HIV infection.

III. Short answers on:

(10 x 3 = 30)

1. Heparin.
2. Incineration.
3. Succinylcholine.
4. Adverse reaction of Insulin.
5. Mantoux Test.
6. Streptococci.
7. Anti – Emetics.
8. Control of Wound Infections.
9. Pasteurization.
10. Aspirin.

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

[AHS 0222]

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

Sub. Code: 1136

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR (From 2018-2019 onwards)
PAPER I – PHARMACOLOGY AND MICROBIOLOGY
*Q.P. Code : 801136***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the types, colour codes and methods of Biomedical Waste management?
2. Discuss the mode of administration, dilution, dosage, effects, uses and side effects of Adrenaline.
3. Antihypertensives.

II. Write notes on:

(8 x 5 = 40)

1. Sterilization Indicators.
2. NSAIDS.
3. Personal Protective Equipment (PPE).
4. Anti ulcer drugs.
5. H₂ blockers.
6. Atenolol
7. Nosocomial infection
8. Type 1 Hypersensitivity.

III. Short answers on:

(10 x 3 = 30)

1. Urinary Tract infection.
2. Prevention of hospital acquired infection.
3. Vasodilators.
4. Antifungal antibiotics.
5. Muscle relaxants.
6. Salmonella Typhimurium.
7. What is Antisepsis?
8. Sterilization by filtration.
9. Theatre surveillance.
10. Fumigation.

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1136

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulation from 2018-2019)

PAPER I – PHARMACOLOGY & MICROBIOLOGY

Q.P. Code : 801136

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define Local Anaesthesia. Explain the Mechanism of Action, Uses and Various preparations of Lignocaine.
2. Classify antihypertensive drugs. Discuss the mechanism of action, therapeutic uses and adverse effects of Angiotensin receptor blockers.
3. What is Bio-Medical waste? Why Biomedical waste management is important and how Biomedical waste are segregated, collected and disposed?

II. Write notes on:

(8 x 5 = 40)

1. Anaphylaxis – Pathogenesis, clinical features and management.
2. Nosocomial infection.
3. Spaulding classification of medical devices.
4. Depolarizing muscle relaxants – mechanism of action, adverse effects and contraindication.
5. Donning and Doffing.
6. NSAIDs – Classification with examples, mechanism of action and uses.
7. Neuromuscular blockers – Classification with examples, mechanism of action and uses.
8. Pharmacotherapy of status asthmaticus.

III. Short answers on:

(10 x 3 = 30)

1. Catheter Associated Urinary Tract Infection.
2. Sterilization controls in Autoclave.
3. Pseudomembranous colitis.
4. Beta lactam antibiotics – Classification with examples.
5. Antimicrobial Stewardship (AMS).
6. Enumerate four agents transmitted by aerosols.
7. Enumerate four transfusion transmitted infections.
8. Low Molecular Weight Heparin (LMWH).
9. Anti-emetics.
10. Viral vaccines.

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

[AHS 0423]

APRIL 2023

Sub. Code: 1136

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER I –PHARMACOLOGY AND MICROBIOLOGY
Q.P. Code: 801136**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Classify Anti-hypertensive drugs. Discuss the adverse effects and therapeutic uses of Beta blockers. Discuss the drug therapy of Hypertensive Emergency.
2. Classify Sterilization process. Describe the principle, mechanism and uses of Autoclave.
3. Define Local Anaesthesia. Explain the Mechanism of Action, Uses and Various Preparations of Lignocaine.

II. Write notes on:

(8 x 5 = 40)

1. Operation theatre Surveillance.
2. Biomedical Waste Management.
3. Personal Protective Equipment (PPE).
4. Commonly used Hospital disinfectants.
5. Angiotensin Converting Enzyme (ACE) Inhibitors-Mechanism of action and its uses.
6. Pharmacotherapy of status asthmaticus.
7. Pre-anaesthetic medication.
8. Hospital Acquired Infection.

III. Short answers on:

(10 x 3 = 30)

1. Five moments of Hand Hygiene.
2. Sterilization indicators.
3. Antibiotic Associated Diarrhea (AAD).
4. Define Tachyphylaxis. Give examples.
5. Enumerate the advantages in using Nitrous Oxide for general anesthesia.
6. Plasma half-life.
7. Name four Anti-Platelet drugs.
8. Enlist the advantages of Low Molecular Weight Heparin over conventional Heparin.
9. Inhalational Steroids.
10. Antihistamines and their therapeutic uses.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 1136

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER I –PHARMACOLOGY AND MICROBIOLOGY

Q.P. Code: 801136

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Classify Anti-anginal drugs with suitable examples. Explain the mechanism of action and therapeutic use of any one class of Anti-anginal drug.
2. Write about classification of Bronchodilators. Add note on Theophylline.
3. Explain the different types of Hypersensitivity Reactions.

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

1. Serological markers of Hepatitis B infection.
2. Emergency drugs.
3. Name the H₂ blockers and add a note Ranitidine.
4. Midazolam – Mechanism of action, interaction, side effects and uses.
5. Morphine – Mechanism of action, interaction, side effects and uses.
6. Non depolarizing muscle relaxants.
7. Commonly used Hospital Disinfectants.
8. Sterilization indicators.

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

1. Negative staining – Principles and its application.
2. Malignant hyperthermia.
3. Catheter associated infections.
4. Opportunistic infections in Human Immunodeficiency Virus (HIV).
5. Point of care test in Infectious diseases.
6. Enumerate enzymes and substrates used in Enzyme Linked Immunosorbent Assay (ELISA).
7. Disinfection of operation theatre.
8. Polymerase Chain Reaction – Principle and its application.
9. Emergency use of Intramuscular (IM) Adrenaline.
10. Ventilator Associated Pneumonia (VAP).

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

[AHS 0424]

APRIL 2024

Sub. Code: 1136

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)**

PAPER I –PHARMACOLOGY AND MICROBIOLOGY

Q.P. Code: 801136

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Classify Narcotics. Write in detail the mechanism of action, side effects and therapeutic uses of Pethidine.
2. Write in detail the mode of administration, dilution dosage, effects, uses and side effects of Adrenaline.
3. Write in detail about the pathogenesis and laboratory diagnosis of Enteric fever.

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

1. Hot air oven
2. Laboratory diagnosis of Urinary Tract Infection.
3. Hepatitis C virus
4. Laboratory diagnosis of COVID -19 infection
5. Ketamine.
6. Pharmacological actions, contraindications and uses of Atropine.
7. Therapeutic uses of Suxamethonium.
8. Antihypertensives used in pregnancy.

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

1. Hepatitis B Vaccination.
2. Name three device associated infection.
3. Write three distinguishing features of immediate and delayed type of Hypersensitivity.
4. Name three parasites which cause blood stream infection.
5. Name three fungi which causes opportunistic infections in HIV infected patients.
6. Name six inhalational anaesthetics.
7. Glycopyrrolate.
8. Systemic corticosteroid therapy in Asthma.
9. Name three third generation Cephalosporins.
10. Uses of Diuretics.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 1136

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER I –PHARMACOLOGY AND MICROBIOLOGY

Q.P. Code: 801136

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Discuss properties of an Ideal Disinfectant. Describe High Level Disinfectant (HLD) and Low-Level Disinfectant (LLD) and add a note on methods to test the efficacy of disinfectants.
2. Describe in detail the various Inhalational agents used in Anaesthesia practice.
3. Describe Adrenergic Receptors. Discuss the various Adrenergic Agonists and Antagonists. Explain their uses in Anaesthetic practice.

II. Write notes on:

(8 x 5 = 40)

1. Plasma sterilization – Principles and its application.
2. Angiotensin Converting Enzyme (ACE) Inhibitors.
3. Transmission based precautions in Infection control measures.
4. Antiarrhythmic drugs.
5. Inotropes used in Anaesthesia.
6. Catheter Related Blood Stream Infections (CRBSI).
7. Vaccines for Health care workers.
8. Categories, treatment and disposal of Biomedical Waste (BMW).

III. Short answers on:

(10 x 3 = 30)

1. Drug induced postoperative nausea and vomiting.
2. Interferons – Types, Mechanism of action and its uses.
3. Oxygen toxicity.
4. Enumerate Aerosol Generating Procedures.
5. HEPA filters – Principle and its application.
6. Sterilization indicators.
7. Opportunistic infections in Human Immunodeficiency Virus (HIV).
8. Mannitol.
9. Biomarkers of sepsis.
10. Polymerase Chain Reaction (PCR) – Principles, Types and Application.
