

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

[AHS 0321]

MARCH 2021

Sub. Code: 1249

(AUGUST 2020 EXAM SESSION)

B.Sc. CRITICAL CARE TECHNOLOGY

SECOND YEAR (From 2018-2019 onwards)

PAPER IV – PATHOLOGY, PATHOPHYSIOLOGY & PHARMACOLOGY

Q.P. Code : 801249

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Enumerate various routes of drug administration with examples . Discuss the merits and demerits of oral route and intravenous route of drug administration.
2. Describe the classification , clinical uses and adverse effects of bronchodilators.
3. Define Ischemic heart disease. Describe the pathogenesis , morphology , clinical features and complications of myocardial infarction.

II. Write notes on:

(8 x 5 = 40)

1. Define bioavailability of drug. Describe the factors affecting the bioavailability of drug.
2. Peripherally acting skeletal muscle relaxants .
3. Status asthmaticus .
4. Management of Snake Bite.
5. Therapeutic uses of Adrenocorticosteroids.
6. Pulmonary embolism .
7. Define Pneumothorax, types of pneumothorax , write a note on tension pneumothorax.
8. Hypoglycemia .

III. Short answers on:

(10 x 3 = 30)

1. Mention the types of hypersensitivity reactions with examples .
2. Transudate Vs Exudates
3. Midazolam
4. Name 4 inotropic drugs used in emergencies
5. Mucolytics
6. Ondansetron
7. Mention 4 first line Anti Tuberculous drugs .
8. Clotting Time
9. Cetrizine
10. List major growth factors involved in process of healing .

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

[AHS 0222]

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

Sub. Code: 1249

**B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (From 2018-2019 onwards)
PAPER IV – PATHOLOGY, PATHOPHYSIOLOGY & PHARMACOLOGY
Q.P. Code : 801249**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Classify sympathomimetic drugs. Write the cardiovascular actions of adrenaline . List the therapeutic uses and adverse effects of adrenaline.
2. Describe the symptoms of organophosphorus poisoning . Discuss the treatment of organophosphorus poisoning.
3. Define Cerebrovascular accident . Mention the causes, risk factors and management of Cerebrovascular accident.

II. Write notes on:

(8 x 5 = 40)

1. Local and systemic routes of drug administration
2. Drugs used in status epilepticus.
3. Laboratory investigation in Myocardial infarction .
4. Granulomatous inflammation .
5. Uses of Radioactive Iodine and its contraindications.
6. Drugs for Gastro Esophageal Reflux Disease.
7. Type I hypersensitivity reaction
8. Pulmonary hypertension

III. Short answers on:

(10 x 3 = 30)

1. Clinical uses of opioid antagonist
2. Name 4 anti hypertensive drugs used in emergency .
3. Therapeutic uses of O₂.
4. Bleeding time
5. Atropine substitutes.
6. Propranolol
7. Transdermal therapeutic system
8. Hyponatremia
9. Morphological patterns of acute inflammation
10. Management of Diabetic Keto acidosis

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1249

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

**B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation from 2018-2019)
PAPER IV – PATHOLOGY, PATHOPHYSIOLOGY & PHARMACOLOGY
Q.P. Code : 801249**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define ARDS. Enumerate the conditions associated with ARDS. Describe the pathogenesis and morphology of ARDS.
2. Classify the Non Steroidal Anti – Inflammatory Drugs. Write the pharmacological actions of Aspirin. Mention its adverse effects and contraindications.
3. Enumerate the drugs used in the management of Heart failure. Write the mode of action, pharmacological effects, therapeutic uses and adverse effects of digoxin.

II. Write notes on:

(8 x 5 = 40)

1. Anaphylactic shock and its management.
2. Heat stroke.
3. Preparations of insulin.
4. Role of nitrous oxide in anaesthesia and critical care.
5. Renal failure in ICU.
6. Preanaesthetic medication.
7. Define Inflammation. Mention the types of Inflammation. Describe the vascular changes in acute inflammation.
8. Atelectasis.

III. Short answers on:

(10 x 3 = 30)

1. Name five causes of Upper GI bleeding.
2. Types of Embolism.
3. Central cough suppressants.
4. What are the precautions to be taken while giving IV drug?
5. Antiseptics and Disinfectants.
6. Name four fungal opportunistic infections in AIDS.
7. Name two specific and two non specific respiratory stimulants.
8. Write five general characters of benign and malignant tumors.
9. Guillain Barre Syndrome.
10. Thiopentone sodium.

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

[AHS 0423]

APRIL 2023

Sub. Code: 1249

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER IV – PATHOLOGY, PATHOPHYSIOLOGY & PHARMACOLOGY
Q.P. Code: 801249

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Classify Anti Hypertensive Drugs. Discuss the Mechanism of Action and Adverse Effects of β -blockers.
2. Describe in detail about Etiology and Pathogenesis and Clinical Features of Pneumonia.
3. Define Shock. Write about the Classification of Shock, Causes and Management.

II. Write notes on:

(8 x 5 = 40)

1. Merits and demerits of Intravenous Drug Administration.
2. Drug Dose Calculation in Pharmacodynamics.
3. Pathophysiology of Acute Coronary Syndrome.
4. Clinical features and complications of Acute Myocardial Infarction.
5. Respiratory Stimulants.
6. Explain Opportunistic Infections caused by bacteria with example.
7. Acute Respiratory Distress Syndrome.
8. Myasthenia Gravis.

III. Short answers on:

(10 x 3 = 30)

1. Transdermal Therapeutic System.
2. Pulmonary Thromboembolism.
3. Aortic Aneurysm.
4. Acute Inflammation.
5. First line Antituberculosis drugs.
6. Mucolytic Agents.
7. Bleeding Disorders.
8. Guillain Barre Syndrome.
9. Hepatic Coma.
10. Define Pharmacovigilance.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 1249

B.Sc. CRITICAL CARE TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER IV – PATHOLOGY, PATHOPHYSIOLOGY & PHARMACOLOGY
Q.P. Code: 801249

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Explain in detail about the Mode of Action, Uses, Side Effects and Contraindications of Non-Steroidal Anti-inflammatory Drugs.
2. Classify Antibacterial Agents. Add a note on Antimicrobial Resistance.
3. Describe the Pathophysiology of Congestive Cardiac Failure. Explain in detail about the Mechanism of Action, Uses and Adverse Effects of Digoxin.

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

1. Pneumoconiosis.
2. Myasthenia Gravis.
3. Clotting disorders.
4. Role of N₂O in Critical care.
5. Bronchiectasis and Lung abscess.
6. Adverse effects of Glucocorticoids.
7. Mucolytic agents.
8. Ketamine.

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

1. Name four insulin analogues.
2. COPD.
3. Antiseptic agents.
4. Immunosuppressive drugs.
5. Define Neuromuscular Blocker with example.
6. Transdermal Therapeutic System.
7. Ventilator Associated Pneumonia.
8. Classify Shock.
9. Pleural Effusion.
10. Name four Opportunistic infections associated with HIV infection.
