

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

[AHS 0321]

MARCH 2021

Sub. Code: 1138

(AUGUST 2020 EXAM SESSION)

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (From 2018-2019 onwards)

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code : 801138

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write a note on Manifold. Discuss the advantages of Central pipeline system and its safety features.
2. How will you receive a patient from ward to the Pre Operative Room? Mention the importance of each point.
3. Classify Opioids. Discuss in detail about any 3 Opioids.

II. Write notes on:

(8 x 5 = 40)

1. Fire hazards in Operation Theatre.
2. Soda Lime.
3. Facemask.
4. Sterilization of Anaesthesia Equipments.
5. Hazards of Blood Transfusion.
6. Laryngeal mask Airway.
7. Prone position.
8. Cylinder color coding system.

III. Short answers on:

(10 x 3 = 30)

1. Name two Local Anaesthetic.
2. Intravenous Anaesthetic Agents.
3. NSAIDs.
4. Liver function Test.
5. Parts of Laryngoscope.
6. Cylinder valve.
7. Suction catheter.
8. ASA grading.
9. HIV
10. Nerve Block.

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

[AHS 0222]

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

Sub. Code: 1138

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR (From 2018-2019 onwards)
PAPER III – PRINCIPLES OF ANAESTHESIA - I
*Q.P. Code : 801138***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define Cardiac arrest. Mention the differences between Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS). Describe the airway management in ACLS?
2. Enumerate the oxygen therapy devices. Briefly explain about the indications & usages of oxygen delivery devices used in COVID 19 patients.
3. How will you prepare the operation theatre for an elective surgery which is going to be taken under General Anaesthesia?

II. Write notes on:

(8 x 5 = 40)

1. Axillary block.
2. Jackson Rees circuit.
3. Ketamine.
4. Sterilisation of Anaesthesia equipments.
5. Dead space & its importance in Anaesthesia.
6. Oxygen dissociation curve.
7. W.T.G. Morton.
8. Complications of Blood Transfusion.

III. Short answers on:

(10 x 3 = 30)

1. Safety features of Rotameter.
2. Filling Ratio.
3. Residual volume.
4. Entonox.
5. Mallampati classification.
6. NPO guidelines.
7. Nasal prongs.
8. Tuohy needle.
9. Body Mass Index.
10. Tramadol.

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1138

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulation from 2018-2019)

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code : 801138

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Classify Hypoxia. Mention the signs and symptoms of Hypoxia. Enumerate the causes of Hypoxia and its management.
2. How will you prepare the operation theatre for an elective surgery which is going to be taken under Spinal Anaesthesia?
3. Classify Laryngeal Mask Airway (LMA). Briefly mention the indications, advantages and disadvantages of LMA.

II. Write notes on:

(8 x 5 = 40)

1. John Snow.
2. Oxygen cylinder.
3. ASA grading.
4. Glasgow Coma Scale.
5. Tourniquet.
6. Hypoglycemia.
7. Liver function tests.
8. Basic Life support.

III. Short answers on:

(10 x 3 = 30)

1. Ringer lactate.
2. Contraindications for Thiopentone.
3. Vital capacity.
4. Oxygen flush.
5. Guedel Airway.
6. Hydroxyl Ethyl Starch.
7. Spinal needles.
8. Suction catheter.
9. Liquid Oxygen.
10. Intercostal Block.

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

[AHS 0423]

APRIL 2023

Sub. Code: 1138

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER III – PRINCIPLES OF ANAESTHESIA - I
Q.P. Code: 801138**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. What is Breathing System and Classification of Mapleson's system?
2. How will you Prepare the OT for Elective Surgery?
3. What are the Methods of Confirmation of Endotracheal Tube Placement and write in detail about End-Tidal Carbondioxide (ETCO₂) Monitoring.

II. Write notes on:

(8 x 5 = 40)

1. Pulse Oximeter.
2. Central Venous Pressure Monitoring.
3. Flow meter.
4. Tourniquet and its uses.
5. Atropine.
6. Methods of Humidification.
7. Preoperative Fasting guidelines.
8. Basic Life Support.

III. Short answers on:

(10 x 3 = 30)

1. Korotkoff sounds.
2. Anticholinergic drugs.
3. Post dural puncture Headache.
4. Contraindications of Neuraxial Blockade.
5. Segregation, Collection and Treatment of Biomedical Waste.
6. What is Mean Arterial Pressure? How to calculate it?
7. Name the Local Anesthetics used in Spinal Anesthesia.
8. Suction Apparatus.
9. Classify the Blood Groups and give the physiological basis of Blood Grouping.
10. Lithotomy position.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 1138

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801138

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Elaborate about Pre-Anesthesia check out by Technician. What are the items to be completed “Daily”?
2. Classify the various Regional Anesthetic Techniques. Elaborate how to set up the operating room for Sub Arachnoid Block for Lower Segment Caesarean Section.
3. Enumerate the Intravenous Inducing Agents. Elaborate the Mechanism of Action, Uses, Adverse Effects and Caution of Propofol.

II. Write notes on:

(8 x 5 = 40)

1. Types of Endotracheal Tubes and their Advantages and Disadvantages.
2. Suxa methonium and its Contraindications.
3. Pin index system.
4. Desflurane vaporizer and its safety features.
5. Types of techniques to do Capnography.
6. Technician role in Rapid Sequence Induction.
7. Trendelenbrug’s position.
8. Packed Red Blood Cell Transfusion.

III. Short answers on:

(10 x 3 = 30)

1. What is E Fast scanning?
2. Positive End Expiratory Pressure (PEEP).
3. ASA Physical Status III.
4. Nothing by Mouth guidelines for clear liquids and water.
5. Mention any three co-morbid diseases in assessment and three complications of Diabetes Mellitus.
6. Any three Universal Work Precaution techniques for technicians.
7. What are the Triad of Anesthesia?
8. What is ABG? Name any three parameters of ABG.
9. What is DLT and its types.
10. Sir Robert Reynolds Macintosh.

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

[AHS 0424]

APRIL 2024

Sub. Code: 1138

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801138

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Classify inhalational agents. Discuss in detail about Isoflurane and Sevoflurane.
2. Elaborate on the types of positioning of patient and the precautions to be followed during positioning of patient.
3. Draw all the Mapelson circuits and discuss three points on each circuit.

II. Write notes on:

(8 x 5 = 40)

1. Laryngeal Mask Airway (LMA).
2. American Society of Anesthesiologists (ASA) physical status classification.
3. Epidural needle.
4. Noninvasive monitoring during anaesthesia.
5. Postoperative management of nausea and vomiting.
6. Informed consent.
7. Pre medication drugs.
8. Difficult airway cart.

III. Short answers on:

(10 x 3 = 30)

1. Nitrous Oxide.
2. Muscle Relaxants.
3. Humidification.
4. Emergency drugs.
5. Test for bleeding and coagulation.
6. 5 % Dextrose.
7. Name the oxygen delivery devices.
8. Atropine.
9. Types of Arrhythmia observed in cardiac arrest.
10. Hyperbaric oxygen.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 1138

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulation 2018-2019 onwards)

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801138

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. Describe in detail the Circle Absorption System.
2. Preparation, position and assistance for Spinal Anaesthesia.
3. Intravenous Anaesthetic Agents.

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

1. Medical Gas Cylinders.
2. Factors Influencing Vaporizer output.
3. Capnography.
4. Stages of Anaesthesia.
5. Difference between Central Neuraxial Block and General Anesthesia.
6. Complications of Subarachnoid block.
7. Postdural puncture headache.
8. Endotracheal intubation- Indications and its complications.

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

1. List the factors determining Cardiac output.
2. Antiemetics.
3. Causes and effects of Hypothermia during and after Anaesthesia.
4. Contraindications of Neuraxial blockade.
5. Routes and doses of Ketamine.
6. Muscles of Respiration.
7. Name the Gases having explosive property.
8. Two commonly used indicators in Circle absorber.
9. Pressure regulator.
10. List the preparations of Lignocaine and its uses.
