

[LB 0212]

AUGUST 2012

Sub. Code: 1113

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR

PAPER III – PRINCIPLES OF ANAESTHESIA-I

Q.P. Code : 801113

Time : Three hours

Maximum : 100 marks

(180 Mins) Answer ALL questions in the same order.

I. Elaborate on:

**Pages Time Marks
(Max.)(Max.)(Max.)**

- | | | | |
|---|---|----|----|
| 1. Discuss in brief the things you will check for in the operation theatre before induction of anaesthesia. | 7 | 20 | 10 |
| 2. How will you receive the patient in the post operative recovery room? | 7 | 20 | 10 |
| 3. What care will you take for a patient under anaesthesia to be put in prone position in the operating room? | 7 | 20 | 10 |

II. Write notes on:

- | | | | |
|--|---|----|---|
| 1. ASA Physical status classification. | 4 | 10 | 5 |
| 2. Recovery position in tonsillectomy patient. | 4 | 10 | 5 |
| 3. Hose test. | 4 | 10 | 5 |
| 4. Airway equipments. | 4 | 10 | 5 |
| 5. Intra-operative monitoring. | 4 | 10 | 5 |
| 6. Informed consent. | 4 | 10 | 5 |
| 7. August Bier. | 4 | 10 | 5 |
| 8. Bain circuit. | 4 | 10 | 5 |

III. Short Answers on:

- | | | | |
|---|---|---|---|
| 1. Breathing Bag (Reservoir Bag). | 2 | 4 | 3 |
| 2. Reversal agents in anaesthesia. | 2 | 4 | 3 |
| 3. Indications of temperature monitoring in operation room. | 2 | 4 | 3 |
| 4. Advantages of pre-medication. | 2 | 4 | 3 |
| 5. Common components of breathing system. | 2 | 4 | 3 |
| 6. Pin Index for oxygen and nitrous oxide. | 2 | 4 | 3 |
| 7. Soda lime. | 2 | 4 | 3 |
| 8. Name any two local anaesthetics. | 2 | 4 | 3 |
| 9. Mention three routine investigations. | 2 | 4 | 3 |
| 10. Name three inhalational agents. | 2 | 4 | 3 |

[LC 0212]

FEBRUARY 2013

Sub. Code: 1113

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR

PAPER III – PRINCIPLES OF ANAESTHESIA-I

Q.P. Code : 801113

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Elaborate on:

(3 x 10= 30)

1. Discuss in brief about the safety measures in anaesthesia machine.
2. Enumerate the various inhalational agents used in operation theatre and write a note on vaporizer.
3. Discuss in detail the checklist for receiving the patient in preoperative room from ward.

II. Write notes on:

(8x 5 = 40)

1. William T.G.Morton.
2. Care of Laryngoscope
3. Importance of temperature probe.
4. Pin Index System
5. Intra-operative monitoring parameters.
6. Jackson Rees System.
7. Measures to overcome fire hazards in operation room.
8. Sodalime.

III. Short Answers on:

(10x 3 = 30)

1. Importance of oxygen saturation in general anaesthesia.
2. Propofol.
3. Capnography
4. Name two different types of endotracheal tube.
5. ASA Grading (American Society of Anaesthesiologist)
6. Components of Magill's circuit.
7. Lignocaine.
8. Various sizes of face mask.
9. Oropharyngeal airway.
10. Advantages of Premedication.

[LE 0212] FEBRUARY 2014 Sub. Code: 1113
B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR
PAPER III – PRINCIPLE OF ANAESTHESIA – I

Q.P. Code: 801113

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Elaborate on:

(3 x 10 = 30)

1. Describe your role in Operation Room asepsis.
2. Write a note on Manifold. Discuss advantages of Central Pipeline System & its safety features.
3. Enumerate any four different positions given to a patient in operating room and care for each positioning taken.

II. Write notes on:

(8x 5 = 40)

1. William .T.G. Morton.
2. Reservoir bag.
3. Toxicity of local anaesthetics.
4. Renal function tests.
5. Hazards of Blood transfusion.
6. Technicians` responsibilities during Lumbar Puncture.
7. Atropine sulphate.
8. Laryngeal Mask Airway.

III. Short Answers on:

(10x 3 = 30)

1. Name any 3 Muscle Relaxants.
2. Advantages of Premedication.
3. Common components of breathing system.
4. Yoke Assembly.
5. 5% Dextrose Injection.
6. Dopamine.
7. ASA Grade III (American Society of Anaesthesiologist)
8. Capnography.
9. Name any 3 drugs in emergency tray.
10. Parts of a Laryngoscope.

[LF 0212]

AUGUST 2014

Sub. Code: 1113

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three hours

Maximum : 100 marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. What is a central manifold? Elaborate on the things you will check in the manifold. Add a note on safety precautions to be taken in a manifold.
2. Enlist the things to be kept ready prior to the surgery in the operating room.
3. How will you receive a patient from ward to the preoperative room? Mention the importance of each point.

II. Write notes on:

(8 x 5 = 40)

1. John snow.
2. Oropharyngeal airway.
3. Pressure reducing valve (Pressure Regulator)
4. Multipara monitor.
5. Indications of Blood transfusion.
6. Prone position.
7. Safety features in a vaporizer.
8. Emergency oxygen flush.

III. Short Answers on:

(10 x 3 = 30)

1. Dobutamine.
2. ASA Grade II (American Society Of Anaesthesiologist)
3. Infusion pump.
4. Lignocaine.
5. Any 3 criteria of adequate reversal from effects of nondepolarizing muscle relaxants.
6. Anti-emetics.
7. IV Ringer lactate.
8. Glycopyrrolate.
9. Ventimask.
10. Any 3 special investigations

[LG 0215]

FEBRUARY 2015

Sub. Code: 1113

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Classify Muscle relaxants. Discuss in detail about any 3 muscle relaxants.
2. What are the physiological effects of Sub arachnoid block? Discuss in detail about complication of spinal anesthesia.
3. Classify opioids. Discuss in detail about any three opioids.

II. Write notes on:

(8 x 5 = 40)

1. Ankle block.
2. Jackson Rees circuit.
3. Capnography.
4. Conscious sedation.
5. Massive blood transfusion.
6. Caudal anesthesia.
7. ACLS.
8. Cylinder colour coding system.

III. Short Answers on:

(10 x 3 = 30)

1. Renal function test.
2. Name any 3 antiarrhythmic drugs.
3. Guedels Airway.
4. Care of ET tube in ICU patients.
5. Types of LMA.
6. Write three uses of 5 % Dextrose IV fluid.
7. Name any 3 drugs used in postop analgesia.
8. Atropine.
9. Pin Index.
10. Ephedrine.

[LH 0815]

AUGUST 2015

Sub. Code: 1113

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. What is Pre-Operative Assessment? Describe about Mallampatti classification of an adult oral cavity. Write about any one premedication drug, uses and side effects?
2. Where is Respiratory centre situated? What are all components of respiration? Describe in detail about lung volumes. Give five examples of muscle relaxants.
3. What is blood grouping? How to start transfusion in operation theatre? Complication of blood transfusion.

II. Write notes on:

(8 x 5 = 40)

1. Sodalime.
2. Non Invasive monitors in OT.
3. Daycare Anesthesia.
4. Nasal Airway.
5. Epinephrine.
6. Hepatitis B.
7. Routes of Administration of Drugs.
8. Precaution to be taken in prone Position.

III. Short Answers on:

(10 x 3 = 30)

1. Amnesia.
2. Fentanyl.
3. Airway.
4. PONV.
5. Capnography.
6. Hydroxyl Ethyl Starch.
7. Diuretic.
8. NSAIDS.
9. TETANUS.
10. Recovery Room.

[LI 0216]

FEBRUARY 2016

Sub. Code: 1113

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. What are all physiological changes in pregnancy? How does it influence the monitoring during Anaesthesia? How are you going to prepare OT for Emergency LSCS at night?
2. What are coagulation factors? Mention about intrinsic and extrinsic path way. Mention about blood components therapy.
3. Describe about motor end plate? What are the types of muscle relaxants? Mechanism of action of each type of muscle relaxant? What is advantage and disadvantage of Atracurium?

II. Write notes on:

(8 x 5 = 40)

1. Vecuronium.
2. CPR.
3. Pulmonary Function Test.
4. Hypothermia.
5. GCS.
6. Lignocaine.
7. Trans Dermal Patch.
8. HIV.

III. Short Answers on:

(10 x 3 = 30)

1. LMA.
2. Glycopyrolate.
3. Tuohy Needle.
4. Nitrous Oxide.
5. APL Valve.
6. Ambu bag.
7. Esmolol.
8. Cardiac Arrest.
9. Hyper Capnia.
10. Body Mass Index.

[LJ 0816]

AUGUST 2016

Sub. Code: 1113

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Preparation, positioning and assisting for Central Venous Cannulation.
2. Endotracheal tubes and airways.
3. Multiparameter monitoring – ECG, SpO₂, NIBP, Temperature and their importance during anaesthesia.

II. Write notes on:

(8 x 5 = 40)

1. Oxygen cylinder.
2. ASA grading.
3. Safety systems in anaesthesia machine.
4. Types of laryngoscopes.
5. AMBU.
6. Managing vomiting in the recovery room.
7. Antihypoxic flowmeters.
8. Spinal needles.

III. Short Answers on:

(10 x 3 = 30)

1. Invasive monitoring.
2. Intravenous anaesthetic agents.
3. Preoxygenation.
4. Mention liver function tests.
5. Drugs required to maintain anaesthesia.
6. Ventimask.
7. Types of Endotracheal tube cuffs.
8. Pressure gauge.
9. Bains circuit.
10. Things required for IV access.

[LK 0217]

FEBRUARY 2017

Sub. Code: 1113

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Various positions during anaesthesia. How to execute each position?
2. Circle absorption system – Components and function.
3. Preparation of Operation Theatre for Emergency laparotomy under General anaesthesia.

II. Write notes on:

(8 x 5 = 40)

1. Preanaesthetic assessment.
2. Epidural needle.
3. Pin index safety system.
4. Hyperbaric bupivacaine.
5. Total Intravenous anaesthesia.
6. Bougie.
7. Pulse oximetry.
8. Laryngeal Mask Airway

III. Short Answers on:

(10 x 3 = 30)

1. Preoperative nil oral guidelines.
2. Hypoxia.
3. Cylinder valve.
4. Nasal prong.
5. Bronchospasm.
6. Tests for bleeding and coagulation.
7. X-ray changes in pneumothorax.
8. Suction catheter.
9. Soda lime.
10. Central venous pressure.

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Classify induction agents. Discuss in detail about any 2 induction agents.
2. Discuss about Non-invasive and invasive monitoring in the operation theatre.
3. Describe in detail about Safety systems in Anaesthesia machine and Medical gas supply.

II. Write notes on:

(8 x 5 = 40)

1. Mapleson's Circuit.
2. Balanced Anaesthesia.
3. Laryngeal Mask Airway (LMA).
4. Capnography (ETCO₂).
5. Liver Function test.
6. Oxygen Therapy.
7. Reversal Agents.
8. World Anaesthesia Day.

III. Short Answers on:

(10 x 3 = 30)

1. Complications of spinal anaesthesia.
2. Methods of humidification.
3. NPO guidelines.
4. Pulse Oxymetry.
5. Premedication.
6. Post operative nausea and vomiting.
7. Horace wells.
8. Emergency Drugs.
9. ASA grading.
10. Different types of Laryngoscopes.

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Classify inhalational agents. Discuss in detail about Isoflurane and Sevoflurane.
2. How will you prepare the operation theatre for an elective surgery?
3. Discuss in detail about invasive and non-invasive monitoring.

II. Write notes on:

(8 x 5 = 40)

1. Tuohy needle.
2. Oxygen Mask.
3. Pancuronium.
4. Mallampatti classification .
5. Laryngeal Mask Airway (LMA).
6. Hypoxia.
7. Horace wells.
8. Complications of spinal anaesthesia.

III. Short Answers on:

(10 x 3 = 30)

1. Bupivacaine.
2. Bain's circuit.
3. Vapourisers.
4. Pulse Oximetry.
5. Neostigmine .
6. Pin index system.
7. NYHA classification.
8. Digital Block.
9. HIV.
10. IV Normal Saline.

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Enlist the things to be kept prior to all the surgery in the operating room.
2. Preparation, positioning and assisting of central venous cannulation.
3. Draw all the mapelson circuits and discuss 3 points on each circuit.

II. Write notes on:

(8 x 5 = 40)

1. Describe laryngoscope and its types.
2. ASA physical status classification.
3. Pulse oximeter.
4. Define laryngeal mask airway and its types.
5. Recovery room.
6. Ambu bag and uses.
7. Epidural needle.
8. APL valve.

III. Short Answers on:

(10 x 3 = 30)

1. Pin index for oxygen air and entonox.
2. Mention basic four blood investigations.
3. Two uses of adensetron.
4. Ephidrine.
5. Suction catheter.
6. Propofol.
7. Name any 3 drugs in Emergency tray.
8. William T.G. Morton.
9. ASA grade IV.
10. Name three regional nerve blocks.

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Classification of the Mapleson's breathing system.
2. Non invasive monitoring during anaesthesia.
3. Recovery room setup and things needed.

II. Write notes on:

(8 x 5 = 40)

1. Medical gas cylinders.
2. Capnography.
3. Bain's circuit.
4. Ambu bag.
5. Soda lime.
6. Epidural needles.
7. LMA.
8. John Snow.

III. Short Answers on:

(10 x 3 = 30)

1. Pin index.
2. Central venous pressure (CVP).
3. Temperature monitoring.
4. Bougie.
5. Endo tracheal tube.
6. Flow meter assembly.
7. Pulse oximeter.
8. Humidification.
9. Tuohy needle.
10. Pressure regulator.

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Manifold room and medical gas supply.
2. Jackson Rees breathing system and Bains's circuit.
3. Invasive monitors (CVP, Arterial line, PA pressure, LA pressure) during anaesthesia.

II. Write notes on:

(8 x 5 = 40)

1. Postoperative management of nausea and vomiting.
2. LMA.
3. Intra venous anaesthesia.
4. Non-rebreathing valve.
5. Informed consent.
6. Flow meter assembly.
7. NPO guidelines.
8. Pre medication drugs.

III. Short Answers on:

(10 x 3 = 30)

1. Capnography.
2. Laryngoscope.
3. Magills forceps.
4. Propofol.
5. Adrenaline injection.
6. Lignocaine.
7. Glycopyrrolate.
8. Blood transfusion checklist.
9. Hypoxia.
10. Oxygen cylinder.

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR**

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code: 801113

Time : Three Hours

Maximum : 100 Marks

Answer All Questions.

I. Elaborate on:

(3 x 10 = 30)

1. Circle system components.
2. Pre-operative assessment clinic and methods.
3. Non invasive monitoring during anaesthesia.

II. Write notes on:

(8 x 5 = 40)

1. Pin index.
2. Safety features in a vaporizer.
3. Reversal agents.
4. John Snow.
5. Types of laryngoscopes.
6. Lignocaine.
7. Post operative nausea and vomiting management.
8. Spinal needles.

III. Short Answers on:

(10 x 3 = 30)

1. Ambu bag.
2. ECG.
3. Bain's circuit.
4. Sodalime.
5. Fentanyl.
6. Flow meter assembly.
7. Pressure regulator.
8. Sevoflurane.
9. Glycopyrolate.
10. Oxygen face mask.

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

[AHS 0321]

MARCH 2021

Sub. Code: 1113

(AUGUST 2020 EXAM SESSION)

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (From 2010-2011, 2014-2015 and 2015-2016 onwards)

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code : 801113

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write a note on Manifold. Discuss advantages of Central Pipeline System and its safety features.
2. What is Pre-Operative Assessment? Describe about Mallampati classification of an adult oral cavity. Write about any one premedication drug, uses and side effects?
3. What is blood grouping? How to start transfusion in operation theatre? Complications of blood transfusion.

II. Write notes on:

(8 x 5 = 40)

1. Bain circuit.
2. Pin Index System.
3. Sodalime.
4. Enumerate complications of spinal anaesthesia.
5. Atropine sulphate.
6. Capnography.
7. ACLS.
8. Spinal needles.

III. Short Answers on:

(10 x 3 = 30)

1. Name any 3 Muscle Relaxants.
2. Lignocaine.
3. PONV.
4. Hyper Capnia.
5. Types of Endotracheal tube cuffs.
6. Methods of humidification.
7. NPO guidelines.
8. Glycopyrrollate.
9. Two uses of ondansetron.
10. Central Venous Pressure (CVP).

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

[AHS 0222]

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

Sub. Code: 1113

**B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY
SECOND YEAR (From 2010-2011, 2014-2015 and 2015-2016 onwards)
PAPER III – PRINCIPLES OF ANAESTHESIA - I
Q.P. Code : 801113**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Minimum mandatory monitoring during anaesthesia.
2. (a) Categorize and write short notes on the different types of Oxygen cylinders.
(b) Safety features in oxygen cylinder.
3. (a) Elaborate on the types of positioning of patient.
(b) Precautions to be followed during positioning of patient.

II. Write notes on:

(8 x 5 = 40)

1. TIVA.
2. Difficult airway cart.
3. Anaesthesia machine check list.
4. Drugs used for Premedication.
5. Non-depolarising muscle relaxants.
6. LMA and its types.
7. Types of Mapleson circuits.
8. Nasopharyngeal airway.

III. Short Answers on:

(10 x 3 = 30)

1. Videolaryngoscope.
2. Propofol.
3. Anaphylaxis.
4. Neostigmine.
5. W.T.G.Morton.
6. Name three peripheral nerve blocks.
7. Ionotropes.
8. CPR.
9. NIBP.
10. Hypothermia.

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

[AHS 0922]

SEPTEMBER 2022

Sub. Code: 1113

(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)

B.Sc. OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

SECOND YEAR (Regulations from 2010-2011, 2014-2015 & 2015-2016)

PAPER III – PRINCIPLES OF ANAESTHESIA - I

Q.P. Code : 801113

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Preparation, positioning and assisting for Central Venous Cannulation.
2. Describe in detail about Safety systems in Anaesthesia machine.
3. Briefly describe the physiology of Neuromuscular Junction. Classify Muscle relaxants. Discuss in detail about any 2 muscle relaxants.

II. Write notes on:

(8 x 5 = 40)

1. Hypothermia.
2. Adrenaline.
3. Mallampatti grading.
4. Soda lime.
5. Systemic effect of spinal anaesthesia.
6. Propofol.
7. Lithotomy position – indications and complications.
8. Tracheostomy.

III. Short answers on:

(10 x 3 = 30)

1. Normal Saline.
2. Contraindications for Ketamine.
3. Saddle Block.
4. Mention the Intravenous anaesthetic agents.
5. Uncuffed Endotracheal Tubes.
6. Vital capacity.
7. Mention the types of O₂ cylinder and its storage capacity and pressure.
8. Laryngeal Mask Airway.
9. PEEP.
10. Bier Block.
