Study Guide

FOR MS ANAESTHESIA POST GRADUATE RESIDENTS

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INTRODUCTION TO STUDY GUIDE

Dear Post Graduate Resident,

Welcome to Department of Anesthesia, the Sharif Medical City Hospital Lahore. There are 11 elective operation theatres, endoscopy, angiography and intervention radiology suites along with their respective pre-operative and post anesthesia care units to facilitate your learning.
The purpose of the study guide is to help you learn the subject of Anesthesia. It is designed to help you manage your learning and access the resources available to you. It takes you through the general objectives of learning the subject, divides the subject into year wise study modules for easy learning and helps you understand the course work, clinical skills and attitudes that are desired of a good doctor.

Methods of assessment have also been written so that you can relate teaching to assessment and have a fair idea of the assessment methods and what internal and external assessment is all about.

We hope the students take time out to go through the guide and to use it effectively to learn the subject of Anaesthesia and ICU. We look forward to the feedback from the students and faculty so that the guide can be improved further.

Program Objectives

Patient or population care occupies the pivotal center. Patient care includes all clinical skills such as history taking, physical examination, ordering investigations, making diagnoses and managing the care. The inner leaves of the model represent the five major competencies directly related to patient care, while the three competencies in the outer circle are mega-competencies related to patient care and also incorporate education, professionalism, leadership, advocacy and population health. By the end of the Residency Programme, residents are expected to acquire these competencies and their constituent learning outcomes, and provide promotive, preventive, curative and rehabilitative patient- centered (or population-centered) care.

1. Knowledge and Critical Thinking
2. Technical Skills
3. Communication Skills
4. Teamwork
5. Research
6. Professionalism
7. Pedagogy
8. Advocacy

ROLE AND RESPONSIBILITIES OF RESIDENT

- Accept responsibility for their own learning and ensure that it is in accord with the requirements of the particular discipline

- Play an informed role in the selection of the supervisor

- Seek reasonable infrastructure support from their institution and supervisor, and use this support effectively

- Ensure that all outlined aspects of training are covered during the defined training period

- Work with their supervisors in writing the synopsis/research proposal and submit the synopsis/research proposal by the end of first year of their registration with the R&RC

- Accept responsibility for the dissertation and plan to execute the research within the time limits defined

- Be responsible for arranging regular meetings with the supervisor to discuss and document progress. If the supervisor is not able/willing to meet with the resident on a regular basis, he/she must notify the College

- Provide the supervisor with word processed updated synopsis and dissertation drafts (ensure it has been checked for spelling, grammar and typographical errors, prior to submission) and provide the raw data to the supervisor if required

- Submit completed dissertation to R&RC or evidence of publication/acceptance for publication of two research papers in CPSP approved journal(s) or JCPSP six months before the completion of (last year of) training. The resident should be the first or second author of both papers and the synopsis of both papers must have a prior approval of R&RC

- Follow the College complaint procedure if serious problem arises

- Complete all requirements for sitting an examination

CURRICULUMAIMS AND OBJECTIVES

Scope of Anesthesia is widening with the anesthesiologist playing a pivotal role not only in the operating room but also as a peri-operative Physician in critical care units, pain management clinics and trauma & emergency departments. An Anesthesiologist as a physician has to be aware of diseases and interventions in all clinical specialties in general and surgical specialties in particular. Moreover, they have to be well versed with the physiology of human body, pharmaco-dynamics and kinetics of the drugs.

AIMS

The aim of the Fellowship Programme in Anaesthesiology is to produce specialists in the field who have attained the required competencies. By the end of the residency programme, the graduate will be able to:

- Take appropriate histories
- Demonstrate proficiency in the requisite physical examinations
- Justify the ordering and interpretation of tests and investigations
- Appropriately diagnose & rule in and rule out contending conditions
- Manage the problem in accost effective manner
- Apply the requisite knowledge and skills to think critically and solve problems
- Be an effective team player, leading the team if necessary Communicate effectively
- Demonstrate risk analysis and emphasis on prevention
- Ensure patient safety
- Manage emergencies related to the specialty

- Present well in clinics, rounds and conferences
- Document concise and accurate histories, prescriptions, progress notes, discharge summaries and referrals
- Keep up to date and practice evidence based medicine
- Demonstrate putting patient's first
- Demonstrate honesty, integrity and timeliness(punctuality and task completion)
- Maintain confidentiality, patient autonomy, take appropriate consent and do no harm
- Consults with colleagues
- Demonstrates effective teaching skills
- Exhibit advocacy for their patients, practice (service/ department), profession (discipline/specialty) and population-based problems related to their specialty

- Participate in clinical governance and clinical audit
- Demonstrate research, and use of research in improving clinical practice
- Maintain highest standards of practice
- Demonstrate conflict resolution, management skills and leadership

GOALS

The goals of fellowship program in Anaesthesiology are to produce specialists who:

- Practice quality anesthesia of all types and forms and deal with complicated cases and complications.
- Resuscitate peri-operatively and in trauma care.
- Manage pain clinics and units.
- Manage critical care cases and units.
- Work as a planner, teacher, trainer and team leader.
- Plan and conduct Research& Audit.
- Develop Protocols/Guidelines.
- Follow principles of Medical Ethics and Quality Assurance in practice.
- Participate in Continuing Professional Development activities and keep updated with Recent Advances.

STRUCTURE OF 5YEARS OF RESIDENCY IN ANESTHESIA

Trainees will follow the following rotational program.

Components of Training

The Five (05) years of core training in Anesthesia consist of Year I, Year II, Year III , Year IV & Year V

Year I:

a.	Pre-op/ Post-op	2 months
b.	General Surgery	3 months
c.	Urology	2 months
d.	Orthopedics and Trauma	3 months
e.	Obs / Gynae	2 months

Year 2:

a.	ICU	2 months
b.	Obs / Gynae	3 months
c.	ENT / Dental / Faciomaxillary	2 months
d.	Day Care	1 months
e.	Ophthalmology	1 months
f.	General Surgery	1 months
g.	Orthopedics & Trauma	2 months

Year 3 ,4 & Year 5:

a.	General Surgery.	12 months
b.	Urology & Plastic Surgery.	9 months
c.	ENT, Eye and Faciomaxillary Surgery.	6 months
d.	Orthopedic Surgery & Trauma, Geriatric anesthesia.	6 months
e.	Neurosurgery and Cardiothoracic Surgery.	3 months
f.	Pediatric Anaesthesia.	3 months
g.	Obstetrics, Gynecology, Local blocks & pain management.	6 months
h.	ICU or ITU training.	6 months

MODALITIES OF LEARNNG

The Anesthesiology residency program uses the following teaching methods at UCHS:

- Lectures
- Small Group Discussions
- Problem-Based Learning
- Teaching in OR, ICU, Out-of-OR Suites & ER
- Workshops
- Seminars
- Multi disciplinary Meetings(CPC)
- Journal Clubs
- Morbidity & Mortality Meetings
- Peer & Near-Peer Assisted Learning

LEARNING OBJECTIVES (LOs) FORDIFFERENT ROTATIONS

After a completed rotation, the residents must attain the knowledge & skills regarding the following:

General Learning Objectives of all rotations:

- To be able to do a comprehensive Preoperative Assessment of ASA I-IV patients including airway assessment, counseling of patient/attendants & obtaining informed written consent & making an appropriate anaesthesia plan.
- To acclimatize with Drugs Trolley, Airway Trolley & its gadgets, Anaesthesia Machine, Defibrillator & various Oxygen Delivery Devices
- To understand the working of the Anaesthesia Machine, including safety checklist protocols
- To prepare anaesthesia drugs for GA/Sedation, according to Institutional Drug Protocol
- To secure& maintain IV access a tall times.
- To be able to set up Standard II monitors & infer the information from them.
- To secure & maintain airway with appropriate airway device for the specific surgery needs.
- To understand & implement the Post-Anaesthesia Care Unit (PACU) Protocols including Discharge Criteria, PONV Prophylaxis/Management & Pain Management.
- To establish professional working relationship with nursing staff, para-medics & allied OR staff
- To be able to uphold the sterilization & infection control protocols of the OR instruments & equipment & ICU

- To understand & implement the Anaesthesia Crisis Management Algorithms & Protocols including BLS/ACLS, PALS, DAS Algorithms, Drug Over dose, Malig Hyperthermia , Sux Apnea, Bronchospasm, Laryngospas etc.

- To be able to document preoperative assessment, intraoperative management, postop status/management & any adverse anaesthesia event in an established manner & keep record of all of it. To keep abreast with the latest research & advances in the field of Anaesthesi

LEARNING OBJECTIVES ROTATIONWISE

1. Pre-Operative Clinic

A. **CLINICAL SKILLS**

- History taking, Physical examination, Interpretation of Investigations, including Radiology; CXR & X-ray Cervical Spine
- Management of concurrent illness and pre-operative assessment with relevance to anesthesia. Advice on pre-operative medications &preparation
- Decision making on referral/consult
- Risk assessment, anesthesia plan & administration of anesthesia
- Crisis Management
- Recovery and post-operative care
- Documentation/Recordkeeping

B. **COMMUNICATION & COUNSELING SKILLS**

- Counsel patients and their relatives about the anesthetic interventions in minor & moderate surgeries
- Obtain informed consent
- Counsel on crisis situation and management of complications
- Presentation skills

1. ANESTHESIA FOR GENERAL SURGERY

To know the anaesthesia concerns & be able to implement a comprehensive anaesthesia plan of:

a. Laparoscopic Surgery
b. Abdominal Surgery including hepa to biliary, bowel & adrenals.
c. Perineal Surgery
d. Thyroid Surgery
e. Cancer Surgery
f. Geriatric Surgery
g. Bariatric Surgery

• To know the anaesthesia concerns & be able to implement a comprehensive anaesthesia plan of patients with co-morbidities such as Hypertension, IHD, CHD, Asthma, COPD, CKD, Diabetes etc.
• To be able to perform Central Neuraxia l& Truncal Blocks with complete aseptic measures.

2. ANNESTHESIA FOR ORTHOPAEDIC SURGERY

Orthopedic Surgery:

- To know the anaesthesia concerns &be able to implement a comprehensive anaesthesia plan of:
- Common orthopedic surgeries of Upper& Lower Limb Spine Surgery

• To know the concerns & manage DVT, Tourniquet Syndrome, Bone Cement Implantation Syndrome, Fat Embolism, Compartment

• Syndrome & Pulmonary Embolism. To learn the use of Peripheral Nerve Stimulator.

• To be able to perform Peripheral Nerve Blocks with complete aseptic measures.

3. ANESTHESIA FOR UROLOGY SURGERY

To know the anaesthesia concerns & be able to implement a comprehensive anaesthesia plan of:

a. Common Endoscopic Urology Surgeries (TURP, URS, PCNL)
b. Lithotripsy
c. Surgeries for urological cancers
d. Renal Transplant Surgery

4. ANESTHESIA FOR NEURO SURGERY

To know the anaesthesia concerns & be able to implement a comprehensive anaesthesia plan of:

a. Posterior Fossa Surgery
b. Head Trauma Surgery including hematoma evacuation.
c. Brain Tumors
d. Craniotomy for SOL

• To know protocols of Brain Death
• To learn methods of Brain Protection including hypothermia
• To know concerns of Air Embolism, ICH,SAH & Seizures.

5. ANESTHESIA FOR ER

To know the anaesthesia concerns & be able to implement a comprehensive anaesthesia plan of:

a. Trauma Surgery(Head /Neck ,Spine, Abdominal, Thoracic, Long Bones)
b. Surgeries with incomplete NPO, needing RSI
c. Damage Control Surgery

• To be able to implement Massive Transfusion Protocols & know all about blood/blood products transfusion & the adverse reactions of transfusion/ massive transfusion
• To know the use of various resuscitation fluids
• To attain expertise in managing Acid-Base Imbalances
• To be able to manage patients with difficult airway with techniques such as Emergency Tracheostomy.

6. ANESTHESIA FOR GYNAE/OBS

To know the anaesthesia concerns& be able to implement a comprehensive anaesthesia plan of:

a. Cesarean Section including Emergency C- Section & C-Section for patients with various hypertensive disorders of pregnancy & different placenta types.
b. Obstetrical Haemorrhage
c. Labor Analgesia
d. Hysterectomies/ Myomectomy
e. Non-Obstetrical Surgeries in Obstetric Patients
f. D&C

To know & be able to perform CPR in pregnant patients & Neonatal Resuscitation.

7. ANESTHESIA FOR PLASTIC SURGERY

• To know the anaesthesia concerns & be able to implement a comprehensive anaesthesia plan of common surgical procedures of Burn & Plastic Surgery

• To be able to manage airway & fluid administration in Burn Patients.

8. ANESTHESIA FOR ENT/MAXILLOFACIAL /EYE

To know the anaesthesia concerns& be able to implement a comprehensive anaesthesia plan of:

a. Mastoid Surgery
b. Nasal Surgeries
c. Tonsil/Adenoid Surgery
d. Strabismus Surgery
e. Other Eye Surgeries(Elective& Emergency)
f. Cancer Surgery of Head &Neck
g. Endoscopic Surgery
h. Bronchoscopy
i. FB Removal
j. LASER Surgery

- To understand the concerns of Shared Airway Surgeries
- To be able to comprehend the IOP Dynamics & Occulo-Cardiac Reflex
- To be able to perform Nasal & Fiber optic intubation

9. PAINMANAGEMENT

- To be able to identify, assess& manage Acute& Chronic Pain
- To identify & give management plan of Cancer Pain ,CRPS& Neuropathic Pain
- To understand the concept of Multi-Modal Analgesia,

Neurolytic Blocks

• To assist in administration of Neuraxial, Peripheral Plexus & Truncal Blocks

10. OUT OF OR ANESTHESIA

• To be able to identify the needs of OR Personnel, Patient Selection, Monitoring, Transport & Recovery

• To know the anaesthesia concerns & be able to implement a comprehensive anaesthesia plan of:

a. Radiologic Procedures likeCT, MRI
b. Angiography
c. GI Endoscopy
d. Cardio version
e. ECT

11. ICU

To be able to select appropriate ventilator mode & settings for critically ill patient.

To understand the concepts of:

a. Modes of Ventilator
b. VAP&ARDS
c. Sepsis
d. Shock &its types
e. AKI&RRT
f. Nutrition in Critically Ill (Enteral, Parenteral, TPN)
g. Asthma/COPD in ICU
h. ICU Scoring System
i. Sedation & Analgesia in ICU
j. General Care of ICU Patients
k. Acid-Base Analysis

l. Weaning/ Extubation Criteria
m. Infection Control
n. Structure of ICU
o. ICU Bundles
p. Antibiotics in ICU
q. Tetanus &GB Syndrome
r. Pancreatitis& DKA
s. Toxicology & Snake Bite/ Envenomation
t. Delirium/Agitation
u. Tracheostomy / Bronchoscopy
v. Brain Death
w. Counseling of Critically ill patient

ESSENTIALCOMPETENCIES

The level of competencies in to be achieved each year is specified according to the key, as follows:

Key to competency levels in clinical skills:

1. Observer status
2. Assistant status
3. Performed under supervision
4. Performed independently

INTERMEDIATEMODULE

COMPETENCIES	YEARS I,II	
	Level	Total Cases
A. CLINICALSKILLS History taking, Physical examination, Interpretation of Investigations, including Radiology for CXR & X-ray Cervical Spine	3,4	100peryear
Management of concurrent illness and pre-operative assessment with relevance to anesthesia. Advice on pre-operative medications & preparation	3,4	100per year
Decision making on referral/ consult	1,2,3,4	100per year
Risk a assessment, Anesthesia plan & Administration of Anesthesia	1,2,3	100per year
Crisis management	1,2	10 per year
Recovery and Post-operative care	2,3	50 per year
Documentation/Recordkeeping	3,4	100per year
B.COMMUNICATION&COUNSELINGSKILLS Counsel patients and their relatives about the anesthetic interventions in minor & moderate surgeries	2,3	100per year
Obtain informed consent	3,4	100per year
Counsel on crisis situation and management of complications	2,3	100per year
Presentation skills	3	03peryear

COMPETENCIES	YEARS I,II	
	Level	Total Cases
C.PROCEDURAL SKILLS		
Intra-Vascular Access and Interpretation of Invasive Monitoring		
Peripheral I/ Vcannulation	4	100peryear
Central I/V cannulation	2,3	12 per year
Arterial cannulation	2,3	5 per year
Airway Management		
Mask & Airways (Oral/Nasal)	4	75 per year
Supra glottic devices	2,3,4	75 per year
Endo tracheal Intubation	2,3,4	75 per year
MallampatiI & II	2,3,4	75 per year
MallampatiIII & IV	1,2,3	10 per year
Cricothyroidotomy	1	01peryear
Percutaneous Dilatational Tracheostomy	1	01 per year
Video Assisted Intubation	2,3	03 per year
Fiberoptic Bronchoscopy	1,2	03 per year
Thoracostomy/ChestIntubation	1	01 per year
Anesthesia Equipment		
Use of Anesthesia equipment & sun dries	2,3,4	100peryear
Use of monitors & interpretation of information; Oximetry, Capnography, NIBP, ECG, Temperature, PNS	2,3,4	100peryear

COMPETENCIES	YEARS I,II	
	Level	Total Cases
Regional Techniques		
Sub-arachnoid Block	2,3,4	50 per year
Epidural/ Caudal	1,2,3	20 per year
Combined Spinal Epidural	1,2,3	10 per year
Local Blocks		
Brachial Plexus Blocks	1,2	05 per year
Wrist Block	1,2,3	05 per year
Intercostal Block	1,2,3	05 per year
TAP Block	1,2,3	05 per year
Sciatic Block	1,2	05 per year
Femoral Block	1,2	05 per year
Popliteal Block	1,2	05 per year
Biers Block	1,2,3	05 per year
Ankle Block	1,2,3	05 per year

COMPETENCIES	YEARS I,II	
	Level	Total Cases
D.PAIN MANAGEMENT		
a. Acute Pain		
Systemic	2,3,4	50 per year
Epidural/ Caudal	1,2,3	10 per year
Patient Controlled Analgesia	2,3	5 per year
Nerve Blocks/Ultrasound guided	1,2,3	10 per year
b.Labour Epidural		
Epidural for Labour Analgesia	1,2	10 per year

POSTINTERMEDIATEMODULE

COMPETENCIES	YEARS III& IV	
	Level	Total Cases
A. CLINICALSKILLS History taking, Physical examination, Interpretation of Investigations ,including Radiology for CXR&X-ray Cervical Spine	4	50 per year
Management of concurrent illness and pre-operative assessment with relevance to anesthesia. Advice on pre- operative medications & preparation	4	50 per year
Decision making on referral/ consult	4	50 per year
Risk assessment, Anesthesia plan & Administration of Anesthesia	4	40 per year
Crisis management	4	20 per year
Recovery and Post-operative care	4	40 per year
Documentation/Recordkeeping	4	50 per year
B.COMMUNICATION&COUNSELINGSKILLS Counsel patients and their relatives about the anesthetic interventions in minor & moderate surgeries	4	50 per year

Obtain informed consent	4	50 per year
Counsel on crisis situation and management of complications	4	50 per year
Presentation skills	4	05peryear

COMPETENCIES	YEARS III&IV	
	Level	Total Cases
C.PROCEDURAL SKILLS		
Intra-Vascular Access and Interpretation of Invasive Monitoring		
Peripheral I/V cannulation	4	50 per year
Central I/V cannulation	3,4	20 per year
Arterial cannulation	3,4	10 per year
Airway Management		
Mask, Guedel's Airway, Nasal airways	4	50 per year
Supraglottic devices	4	50 per year
Endotracheal Intubation	4	50 per year
MallampatiI&II	4	50 per year
MallampatiIII&IV	3,4	15 per year
Cricothyroidotomy	4	01peryear
Percutaneous Dilatational Tracheostomy	4	01 per year
Video Assisted Intubation	4	05 peryear
Fiberoptic Bronchoscopy	4	05 per year
Thoracostomy /Chest Intubation	3,4	01 per year
Anesthesia Equipment		
Use of Anesthesia equipment & sundries	4	50 per year
CNS monitoring :BIS	2,3,4	25 per year
PNS monitoring: Nerve Stimulator/ Locator	3,4	25 per year
Respiratory Monitoring: Oximetry-All forms Capnography, Flow-Volume loops, Compliance graphs, Airway Pressure, Arterial Blood Gases, Pulmonary Function Tests	3,4	50 per year

COMPETENCIES	YEARS III&IV	
	Level	Total Cases
Cardio-Vascular Monitoring: BP, Non-Invasive/ Invasive, ECG	3,4	50 per year
Haematologic, Hepatic Renal Systems and Acid Base Balance: Order correct battery of investigations and interpretation of the obtained information	3,4	50 per year
Regional Techniques		
Sub-arachnoid Block	4	75 per year
Epidural/ Caudal	3,4	20 per year
Combined Spinal Epidural	3,4	20 per year
Local Blocks		
Brachial Plexus Blocks	3,4	05 per year
Wrist Block	3,4	05 per year
Intercostal Block	3,4	05 per year
TAP Block	3,4	05 per year
Sciatic Block	3,4	05 per year
Three in One Block	3,4	05 per year
Popliteal Block	3,4	05 per year
Biers Block	3,4	05 per year
Ankle Block	3,4	05 per year

COMPETENCIES	YEARS III&IV	
	Level	Total Cases
D.PAIN MANAGEMENT		
a. Acute Pain		
Systemic	4	50 per year
Epidural/ Caudal	3,4	10 per year
Patient Controlled Analgesia	3,4	10 per year
Nerve Blocks/Ultrasound guided	3,4	15 per year
Epidural for Labour Analgesia	3,4	10 per year
b.Chronic Pain		
Blocks under Imaging	2,3	05 per year
TENS	2,3	05 per year
Radiofrequency	1,2	05 per year
c. Fluoroscopy		
Fluoroscopy	1,2	05 per year
E.ICU SKILLS		
Ventilatory Support		
Assembly of Ventilator	4	20 per year
Select correct respiratory support by choosing correct Variable sand modes	4	20 per year
Selection of Sedation & Analgesia	4	20 per year
Cardiovascular Support Provide cardiovascular support with correct selection of drugs and infusion devices	4	20 per year

COMPETENCIES	YEARS III&IV	
	Level	Total Cases
Renal Support		
Drugs	2,3	10Per Year
Dialysis	2,3	10Per Year
Hematologic Support		
Fluids, Blood and Blood Products	4	20Per Year
Nutritional Support		
Delivery Devices	4	20Per Year
Choice of Enteral/ Parenteral Nutrition	4	20Per Year
Calculation of Nutritional requirements	4	20Per Year
General Patient Care, Physiotherapy		
Advice the paramedics	4	20Per Year
Infection Control and Barrier Nursing		
Selection of Antibiotics	3,4	20Per Year
Developing Protocols	3,4	20Per Year
Monitoring of Infection Control	3,4	20Per Year
Implementation of" Bundle Therapy"		
Centralline Bundle	4	20Per Year
Ventilator Bundle	4	20Per Year
Sepsis Resuscitation Bundle	4	20Per Year

Sepsis Management Bundle	4	20Per Year

MANDATORYWORKSHOPS/COURSES

For Residents, following workshops are mandatory before IMM:

1. Introduction to Computer & Internet
2. Research Methodology & Biostatistics
3. Communication Skills
4. Basic Life Support(BLS)
5. Advance Cardiac Life Support(ACLS)

RESEARCHPUBLICATION

One of the requirements of the residency program is the Research Publication by the end of residency, on a topic related to the field of specialization.

SYNOPSIS:

- Topic will be selected within first 6 months of residency.
- Residents will prepare & submit their synopsis by the end of Second Year of Training, before IMM Exam, as per guidelines of Advance Studies & Research Board of the university.
- Synopsis should be duly approved by the Institutional Ethical Review Committee.
- It should have adequate sample size and sufficient number of variables to give training to the candidate to conduct research, to collect & analyze the data

THESIS:

- Thesis shall be submitted by the candidate duly recommended by the Supervisor.
- The minimum duration between approvals of synopsis and submission of thesis shall be One Year.
- The research thesis must be compiled and bound in accordance with the Thesis Format Guidelines approved by the University.
- The research thesis will be submitted along with the fee prescribed by the University.

LOGBOOK

Log book system is mandatory for all residents.
The concerned supervisor is required to verify the entries made by the trainee. This system ensures timely entries by the trainee and prompt verification by the supervisor. It also helps in monitoring the progress of trainees and the vigilance of the supervisors.
Following is the list of minimal number of logbook entries required during 4-year residency to be eligible for Exit Exam:

Pre-Operative Assessments	100
General Surgery	100
Gynae/ Obs	100
Orthopedics/Trauma	50
Neurosurgery	30
ENT/EYE	50
Urology	75
Maxillofacial	25
Plastic Surgery/Burns	25
Paediatric Surgery	50
Emergency Surgeries	100
ICU	35
Day Case	30
Out of OR Procedures	30
Total	**800**

Assessment

It will consist of action and the professional growth oriented student- centered integrated assessment, with additional components of the internal assessment, formative assessment and summative assessment

Student-Centered Integrated Assessment

It views trainees as decision makers in need of information about their own performance, integrated assessment is meant to student's responsibility to decide what to evaluate as well as how to evaluate, it encourages students to "own" the evaluation and to use it as a basis for self-improvement. Therefore, it tends to be growth oriented, student controlled, collaborative, dynamic, contextualized, and flexible and action oriented.

It will be based on:

- Self-assessment by the trainees
- Peer assessment
- Internal assessment by the faculty.

Formative assessment

1. Formative Assessment: End-of-rotation test, Workplace-based assessment (Mini CEX, DOPS, 3600 Evaluation).Long cases, short cases, E-Log, E-portfolio.

This will be helpful to improve the existing instruction al method sand course contents in use. Feedback will be given to the students to improve their short comings and deficiencies.

Summative assessment

Abridged Examination (Mid Term Assessment) (At the end of 2nd year Program)

Theory Exam:

Paper1 = 100MCQs

Paper2 = 100MCQs

Total Marks= 200

Clinical Exam:

Four Table Vivas = 200 Marks TOACS (15 Stations) = 150Marks

Total Marks = 300

Result:

The Candidate will have to score 65% marks in theory & 65% in clinical to be declared successful in the IMM Examination.

FINALEXAMINATION

Theory Exam:

Paper1 MCQS= 100

Paper2 MCQS= 100

Total Marks= 200

Clinical Exam:

Two Table Vivas = 100 Marks One Long Case = 100 Marks
TOACS (15 Stations) = 150Marks

Total Marks = 350

Declaration of Result:

For the declaration of result,

I. The candidate must have his/her research papers published/ thesis submitted.
II. The candidate must have passed the final theory examination with 65% marks and the clinical examination securing 65% marks.
III. The MS degree shall be awarded after acceptance of thesis/publication of paper and success in the final examination.
IV. On completion of stipulated training period, irrespective of the result (pass or fail) the training slot of the candidate shall be declared vacant.

LEARNING RE SOURCES

1. Morgan & Mikhail anesthesia
2. Smith & Aitkenhead anesthesia
3. Miller's anesthesia
4. Clinical anesthesia by Barash
5. Atotw articles
6. British journal of anesthesia
7. Open anesthesia