

## Annex 6: Summative Assessment for preservice anesthesia education

### Introduction to anesthesia I

Module sessions	OSCE area 30%	Station	Remark
Professionalism	-Evaluate the ability of health care provider in establishing rapport with client/family	Communication/professionalism	
CRC	-Establish and maintain a positive, respectful collaborative working relationship with colleagues and teams - Explain ways to provide care in a compassionate and respectful manner in a simulated environment		

Sessions for Introduction to anesthesia I	structured Oral examination 10%	Remark
History of anesthesia		Addressed by other method
Scope of BSc anesthetist		Addressed by other method
Principles of ethics	✓ Describe the basic principles of ethics	
Principles of CRC	✓ Discuss the principles of CRC	
Legal aspects of anesthesia	✓ Analyze legal aspects of anesthesia practice	

Sessions for Introduction to anesthesia I	standard written examination 30%	Remark
History of anesthesia	✓ Describe history of Anesthesia	
Scope of BSc anesthetist	<ul style="list-style-type: none"> <li>✓ Describe the role of an anesthetist in the emergency unit, OR, PACU, and ICU</li> <li>✓ Differentiate the specific scopes of anesthetists at different levels</li> </ul>	
Principles of ethics	✓ Explain the basic principles of ethics	
Principles of CRC	<ul style="list-style-type: none"> <li>✓ Explain the principles of CRC</li> <li>✓ Identify features of compassionate and respectful care</li> </ul>	
Legal aspects of anesthesia	✓ Analyze legal aspects of anesthesia practice	

Sessions for Introduction to anesthesia I	Case study 20%	Remark
History of anesthesia		addressed by others method
Scope of BSc anesthetist		addressed by others method
Principles of ethics and professionalism	<ul style="list-style-type: none"> <li>-Analyze attributes of professionalism</li> <li>- Discuss ways of healthcare disclosure to the patient and his/her family</li> </ul>	
Legal aspects of anesthesia	- analysis of medicolegal cases	

Sessions for Introduction to anesthesia I	continuous assessment 10%	Remark
History of anesthesia	-Assignment on history of anesthesia	
Scope of BSc anesthetist		addressed by others method
Principles of ethics and professionalism	-Assignment on identifying ethical guidelines	
Legal aspects of anesthesia	-Assignment on minimizing patient injury	

## Introduction to anesthesia II

Session for	OSCE 20%	Station	Remark
Introduction to anesthesia II			
Introduction to anesthesia (general anesthesia, regional anesthesia and local anesthesia)			Addressed by other method
preoperative assessment and optimization	-Evaluating patient for surgery and anesthesia	Preoperative patient evaluation	
preparation of anesthesia workstation	-Checking anesthesia Machine -Assembling anesthesia equipment	Machine checking	
Induction, maintenance and emergence of anesthesia	-Perform preoperative airway assessment	preoperative airway evaluation	
Postoperative anesthesia care	-Perform postoperative patient positioning	Patient positioning	
Perioperative complications of anesthesia			Addressed by other method
Operation room techniques and infection prevention	- Perform Nasogastric tube insertion - Secure IV line - Perform positioning of surgical patients - Prepare equipment for Enema for patient with altered bowel function	-Perform -Nasogastric tube insertion - IV cannulation	

	- Insert urinary catheter	- urinary catheterization	
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Session for Introduction to anesthesia II	structured Oral examination 10%	
Introduction to anesthesia (general anesthesia, regional anesthesia and local anesthesia)	-Describe type of anesthesia -discuss the advantage and disadvantage of Regional versus general anesthesia	
preoperative assessment and optimization	-Discuss the components of informed consent - Explain preparation of patients for surgery and anesthesia	
preparation of anesthesia workstation	-prepare and assembly anesthesia equipment	
Induction, maintenance and emergence of anesthesia	-Describe methods of induction, maintenance and emergence of anesthesia	
Postoperative anesthesia care	-Identify routine Postoperative anesthesia care	
Perioperative complications of anesthesia	- Describe common perioperative complications of anesthesia	
Operation room techniques and infection prevention	- discuss possible infection that can happen in the operation room -discuss infection prevention methods in the operation room -discuss operation room waste management system	

Anesthetic hazards and patient safety	- Discuss Anesthetic hazards and patient safety -Discuss scavenging system/electrical hazards/explosive gases/	
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Session for Introduction to anesthesia II	Written 30%	
Introduction to anesthesia (general anesthesia, regional anesthesia and local anesthesia)	-Compare the advantage and disadvantage of Regional versus general anesthesia	
preoperative assessment and optimization	-Explain the components of informed consent - Explain preparation of patients for surgery and anesthesia	
preparation of anesthesia workstation		Addressed by other methods
Induction, maintenance and emergence of anesthesia	-Discuss methods of induction, maintenance and emergence of anesthesia	
Postoperative anesthesia care		Addressed by other methods
Perioperative complications of anesthesia	- Explain common perioperative complications of anesthesia	
Operation room techniques and infection prevention	- discuss possible infection that can happen in the operation room -discuss infection prevention methods in the operation room -discuss operation room waste management system	

Anesthetic hazards and patient safety	- Discuss Anesthetic hazards and patient safety -Discuss scavenging system/electrical hazards/explosive gases/	
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Session for Introduction to anesthesia II	Continuous 10%	
Introduction to anesthesia (general anesthesia, regional anesthesia and local anesthesia)	Quiz on Introduction to anesthesia (general anesthesia, regional anesthesia and local anesthesia)	
preoperative assessment and optimization		
preparation of anesthesia workstation		
Induction, maintenance and emergence of anesthesia		
Postoperative anesthesia care	-Assignment on routine post anesthesia care	
Perioperative complications of anesthesia	-quiz on Perioperative complications of anesthesia	
Operation room techniques and infection prevention		
Anesthetic hazards and patient safety	- Assignment on Anesthetic hazards and patient safety	

## Basics of Anesthesia

Sessions for Basics of Anesthesia course in Year II	OSCE 20%	Station
Fluid Management	<ul style="list-style-type: none"> <li>❖ Calculating and prescribing fluid replacement for a patient with dehydration</li> <li>❖ Secure Intravenous (IV) line</li> </ul>	-IV cannulation -Fluid calculation
Blood Transfusion	<ul style="list-style-type: none"> <li>❖ Calculating and prescribing appropriate blood products for a patient with anemia</li> </ul>	-Blood transfusion
Sodium Balance and Disturbance	<ul style="list-style-type: none"> <li>❖ Calculating and prescribing appropriate fluid replacement for a patient with sodium disturbance</li> </ul>	
Potassium Balance and Disturbance	<ul style="list-style-type: none"> <li>❖ Calculating and prescribing appropriate electrolyte replacement for a patient with potassium disturbance</li> </ul>	-electrolyte calculation
Acid Base balance and Disorder	<ul style="list-style-type: none"> <li>❖ Calculating and prescribing appropriate treatment for a patient with acid-base disturbance</li> </ul>	
Medical Gas Supply	<ul style="list-style-type: none"> <li>❖ Calculating and prescribing appropriate oxygen flow rate for a patient</li> </ul>	
Anaesthetic Machine	<ul style="list-style-type: none"> <li>❖ Perform anesthesia machine Check</li> <li>❖ Assembly different breathing systems</li> </ul>	-Machine check
Anesthesia monitoring	<ul style="list-style-type: none"> <li>❖ Interpretation of common ECG arrhythmia</li> <li>❖ Interpretation of Capnography and pulse-oximetry finding</li> </ul>	-ECG interpretation -Capnography interpretation -SPo2 interpretation
Airways	<ul style="list-style-type: none"> <li>❖ Selecting and inserting an appropriate airway device for a patient</li> </ul>	
Tracheal Intubation Equipment	<ul style="list-style-type: none"> <li>❖ Selecting and using appropriate tracheal intubation equipment for a patient</li> </ul>	-Tracheal intubation
Ventilators	<ul style="list-style-type: none"> <li>❖ Adjusting ventilator settings for a patient with respiratory distress</li> </ul>	



Personal Protective Equipment application	Protective (PPE)	❖ Perform gloving and gowning	-Gloving -Gowning
Anesthesia practice		❖ Obtaining informed consent from surgical patient ❖ Producing complete anesthetic record sheet	-Informed consent - Anesthetic record sheet

<b>Sessions for Basics of Anesthesia course in Year II</b>	Structured Oral examination <b>10%</b>
Fluid Management	<ul style="list-style-type: none"> <li>❖ Describe fluid status Assessment and electrolyte balance in a patient undergoing surgery</li> <li>❖ Discuss fluid overload management in a patient with congestive heart failure</li> </ul>
Blood Transfusion	<ul style="list-style-type: none"> <li>❖ Identifying blood transfusion reaction in a patient</li> <li>❖ Describe Monitoring of a patient during a blood transfusion</li> </ul>
Sodium Balance and Disturbance	❖ Discuss management of a patient with hyponatremia/hypernatremia
Potassium Balance and Disturbance	❖ Discuss management of a patient with hypokalemia/hyperkalemia
Acid Base balance and Disorder	<ul style="list-style-type: none"> <li>❖ Identifying acid-base imbalances in a patient</li> <li>❖ Describe Monitoring of a patient during treatment for acid-base disturbance</li> <li>❖ Discuss management of a patient with metabolic acidosis</li> <li>❖ Discuss management of a patient with respiratory acidosis</li> <li>❖ Discuss management of a patient with metabolic alkalosis</li> <li>❖ Discuss management of a patient with respiratory alkalosis</li> </ul>
Clinical Implication of perioperative Acid Base Disorder	❖ Discuss management of a patient with acid-base disturbance during surgery

	<ul style="list-style-type: none"> <li>❖ Describe monitoring a patient during anesthesia to prevent acid-base disturbance</li> <li>❖ Discuss responding to an emergency situation where a patient develops an acid-base disturbance during surgery</li> </ul>
Medical Gas Supply	<ul style="list-style-type: none"> <li>❖ Discuss management of a gas supply failure in the anesthesia machine</li> <li>❖ Identifying appropriate gas supply for a patient with a specific clinical condition</li> </ul>
Electrical Safety	<ul style="list-style-type: none"> <li>❖ Identifying and responding to an electrical hazard in the operating room</li> <li>❖ Identifying and managing an electrical malfunction in the anesthesia machine</li> </ul>
Breathing Systems	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each component of a breathing system</li> <li>❖ Troubleshooting a malfunction in the breathing system</li> <li>❖ Identifying and responding to a breathing system alarm</li> </ul>
Humidification and Filtration	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each component of a humidification and filtration system</li> <li>❖ Troubleshooting a malfunction in the humidification and filtration system</li> <li>❖ Identifying and responding to a humidification and filtration system alarm</li> </ul>
Airways	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each type of airway device</li> <li>❖ Troubleshooting a malfunction with an airway device</li> </ul>
Tracheal Intubation Equipment	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each type of tracheal intubation equipment</li> <li>❖ Troubleshooting a malfunction with tracheal intubation equipment</li> </ul>
Ventilators	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each component of a ventilator</li> </ul>

	<ul style="list-style-type: none"> <li>❖ Troubleshooting a malfunction with a ventilator</li> </ul>
Pulse Oximeter	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of a pulse oximeter</li> <li>❖ Monitoring a patient's oxygen saturation using a pulse oximeter</li> <li>❖ Troubleshooting a malfunction with a pulse oximeter</li> </ul>
Non-Invasive Blood Pressure Monitoring	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of non-invasive blood pressure monitoring equipment</li> <li>❖ Monitoring a patient's blood pressure using non-invasive equipment</li> <li>❖ Troubleshooting a malfunction with non-invasive blood pressure monitoring equipment</li> </ul>
Capnography	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of capnography</li> <li>❖ Monitoring a patient's end-tidal carbon dioxide using capnography</li> <li>❖ Troubleshooting a malfunction with capnography equipment</li> </ul>
Neuromuscular Blockade Monitoring	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of neuromuscular blockade monitoring equipment</li> <li>❖ Monitoring a patient's neuromuscular blockade using monitoring equipment</li> <li>❖ Troubleshooting a malfunction with neuromuscular blockade monitoring equipment</li> </ul>
Anaesthetic Circuit Monitoring	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of anaesthetic circuit monitoring equipment</li> <li>❖ Monitoring a patient's anaesthetic circuit using monitoring equipment</li> <li>❖ Troubleshooting a malfunction with anaesthetic circuit monitoring equipment</li> </ul>

<b>Sessions for Basics of Anesthesia course in Year II</b>	<b>Written Examination 30%</b>
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Fluid Management	<ul style="list-style-type: none"> <li>❖ Calculating and prescribing fluid replacement for a patient with dehydration</li> </ul>
Blood Transfusion	<ul style="list-style-type: none"> <li>❖ Describe blood transfusion reaction</li> </ul>
Sodium Balance and Disturbance	<ul style="list-style-type: none"> <li>❖ Discuss management of a patient with hyponatremia/hypernatremia</li> <li>❖ Calculating and prescribing appropriate fluid replacement for a patient with sodium disturbance</li> </ul>
Potassium Balance and Disturbance	<ul style="list-style-type: none"> <li>❖ Discuss management of a patient with hypokalemia/hyperkalemia</li> <li>❖ Calculating and prescribing appropriate electrolyte replacement for a patient with potassium disturbance</li> </ul>
Acid Base balance and Disorder	<ul style="list-style-type: none"> <li>❖ Identifying acid-base imbalances</li> <li>❖ Discuss management of a patient with acid-base imbalances</li> </ul>
Medical Gas Supply	<ul style="list-style-type: none"> <li>❖ Identifying and managing a gas supply failure in the anesthesia machine</li> <li>❖ Identifying appropriate gas supply for a patient with a specific clinical condition</li> </ul>
Electrical Safety	<ul style="list-style-type: none"> <li>❖ Identifying and responding to an electrical hazard in the operating room</li> <li>❖ Responding to a patient electrocution during surgery</li> <li>❖ Identifying and managing an electrical malfunction in the anesthesia machine</li> </ul>
Breathing Systems	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each component of a breathing system</li> <li>❖ Troubleshooting a malfunction in the breathing system</li> <li>❖ Identifying and responding to a breathing system alarm</li> </ul>
Humidification and Filtration	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each component of a humidification and filtration system</li> <li>❖ Troubleshooting a malfunction in the humidification and filtration system</li> </ul>

	<ul style="list-style-type: none"> <li>❖ Identifying and responding to a humidification and filtration system alarm</li> </ul>
Airways	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each type of airway device</li> <li>❖ Selecting and inserting an appropriate airway device for a patient</li> <li>❖ Troubleshooting a malfunction with an airway device</li> </ul>
Tracheal Intubation Equipment	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each type of tracheal intubation equipment</li> <li>❖ Selecting and using appropriate tracheal intubation equipment for a patient</li> <li>❖ Troubleshooting a malfunction with tracheal intubation equipment</li> </ul>
Ventilators	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of each component of a ventilator</li> <li>❖ Adjusting ventilator settings for a patient with respiratory distress</li> <li>❖ Troubleshooting a malfunction with a ventilator</li> </ul>
Pulse Oximeter	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of a pulse oximeter</li> <li>❖ Monitoring a patient's oxygen saturation using a pulse oximeter</li> <li>❖ Troubleshooting a malfunction with a pulse oximeter</li> </ul>
Non-Invasive Blood Pressure Monitoring	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of non-invasive blood pressure monitoring equipment</li> <li>❖ Monitoring a patient's blood pressure using non-invasive equipment</li> <li>❖ Troubleshooting a malfunction with non-invasive blood pressure monitoring equipment</li> </ul>
Capnography	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of capnography</li> <li>❖ Monitoring a patient's end-tidal carbon dioxide using capnography</li> </ul>

	❖ Troubleshooting a malfunction with capnography equipment
Neuromuscular Blockade Monitoring	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of neuromuscular blockade monitoring equipment</li> <li>❖ Monitoring a patient's neuromuscular blockade using monitoring equipment</li> <li>❖ Troubleshooting a malfunction with neuromuscular blockade monitoring equipment</li> </ul>
Anaesthetic Circuit Monitoring	<ul style="list-style-type: none"> <li>❖ Identifying and explaining the function of anaesthetic circuit monitoring equipment</li> <li>❖ Monitoring a patient's anaesthetic circuit using monitoring equipment</li> <li>❖ Troubleshooting a malfunction with anaesthetic circuit monitoring equipment</li> </ul>

### Preoperative and postoperative assessment and care

Sessions	OSCE 20%	Station	Remark
preoperative patient assessment	<ul style="list-style-type: none"> <li>• Perform body system-based physical examination</li> <li>• Demonstrate pre-anesthetic history taking</li> <li>• Demonstrate obtaining informed consent</li> </ul>	<ul style="list-style-type: none"> <li>-Physical examination</li> <li>-pre-anesthetic history taking</li> <li>- Informed consent</li> </ul>	
preoperative patient optimization			Addressed by other method
PACU	demonstrate patient handover to PACU	-Patient handovering	
Postoperative complications			Addressed by other method

Sessions	Structured oral exam 10%	
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preoperative patient assessment	<ul style="list-style-type: none"> <li>• Describe maintaining patient autonomy during an examination</li> <li>• Explain on providing adequate information to patients and patient families regarding clinical status (as applied)</li> <li>• Discuss clinical reasoning skills in stratifying the risk of patients based on assessment findings</li> </ul>	
preoperative patient optimization	<ul style="list-style-type: none"> <li>• Determine preoperative principles in administering premedication to patients</li> <li>• Discuss on NPO guideline</li> <li>• Optimize unstable patients for anesthesia and surgery</li> </ul>	
PACU	<ul style="list-style-type: none"> <li>• Explain discharge criteria (Modified Aldrete Criteria )from PACU (in-hospital or home)</li> <li>• Identify organizational and structural requirements of the PACU</li> </ul>	
Postoperative complications	<ul style="list-style-type: none"> <li>• Identify common postoperative complications in PACU.</li> </ul>	

Sessions	written examination 30%	
preoperative patient assessment	<ul style="list-style-type: none"> <li>• Recognize different risk scoring and stratification methods</li> <li>• Identify patients at risk of perioperative complications</li> <li>• Formulate an anesthetic management plan based on pre-anesthetic assessment findings</li> <li>• Prepare patients for surgery and anesthesia</li> </ul>	

	<ul style="list-style-type: none"> <li>• Recognize the effects of routine medications on a body system</li> <li>• Identify drugs with potential interaction with anesthetic drugs</li> <li>• Review laboratory data preoperatively</li> <li>• Identify relevant laboratory and diagnostic investigations as per patient indication</li> <li>• Demonstrate compassion in avoiding unnecessary investigations</li> <li>• Order basic laboratory and diagnostic modalities</li> <li>• Interpret common laboratory and diagnostic investigations</li> <li>• Reach relevant pre-anesthetic diagnosis</li> <li>• Determine the clinical status of a patient using the American Society of Anesthesiologists (ASA) clinical status classification</li> </ul>	
preoperative patient optimization	<ul style="list-style-type: none"> <li>• Identify symptoms of common comorbidities</li> <li>• Plan strategies to manage patients who are on medical treatment of coexisting diseases</li> <li>• Optimize unstable patients for anesthesia and surgery</li> </ul>	
PACU	<ul style="list-style-type: none"> <li>• Describe the required equipment and monitoring in the PACU.</li> <li>• Explore patient follow-up strategies in the PACU.</li> <li>• Identify common critical incidents (Cardiorespiratory arrest) in the PACU and early warning assessment methods</li> </ul>	



	<ul style="list-style-type: none"> <li>• Arrange the organization and requirements of safe PACU</li> </ul>	
Postoperative complications	<ul style="list-style-type: none"> <li>• Discussed adverse outcomes of untreated postoperative complications</li> <li>• Describes the causes and management of postoperative complications</li> <li>• Identify conditions that need a higher level of postoperative care.</li> </ul>	

## Airway

Sessions for Airway module	OSCE 20%	Station	Remark
Airway Assessment	<ul style="list-style-type: none"> <li>▪ Assemble different airway equipment to utilize in airway management</li> <li>▪ Perform airway assessment with different techniques</li> </ul>	-Airway assessment	
Simple airway management	<ul style="list-style-type: none"> <li>▪ Perform bag, mask, and valve ventilation</li> <li>▪ Demonstrate use of supraglottic devices (SGDs) LMAs, ILMA...</li> <li>▪ Demonstrate endotracheal intubation (nasal and oral)</li> </ul>	-Bag mask ventilation -LMA - Endotracheal intubation	
Difficult airway management	<ul style="list-style-type: none"> <li>• Demonstrate different airway management according to recommended guidelines (BMV, SGD, laryngoscopy, endotracheal intubation)</li> <li>• Perform cricothyrotomy</li> </ul>	-Cricothyrotomy	

complications of difficult airway management modality			addressed by others method
Intubation and its complication			addressed by others method
Extubation and its complications	<ul style="list-style-type: none"> <li>▪ Perform extubation based on extubation criteria</li> </ul>		

Sessions for Airway module	structured Oral examination 10%	Remark
Airway Assessment	<ul style="list-style-type: none"> <li>▪ Discuss different modalities of airway management (simple airway maneuvers, BMV, Gudel airways, SGD, laryngoscopy, endotracheal intubation)</li> <li>▪ Discuss features of anticipated difficult airway</li> <li>▪ Discuss airway assessment with different techniques</li> </ul>	
Simple airway management	<ul style="list-style-type: none"> <li>▪ Discuss applications of BMV, supraglottic devices (SGDs) LMAs, ILMA and endotracheal intubation (nasal and oral)</li> </ul>	addressed by others method
Difficult airway management	<ul style="list-style-type: none"> <li>▪ Discuss on indications and techniques of cricothyrotomy and tracheostomy</li> <li>▪ Explain techniques of jet-ventilatio</li> </ul>	
complications of difficult airway management modality	<ul style="list-style-type: none"> <li>▪ Recognize complications of different airway management modalities.</li> </ul>	
Intubation and its complication	<ul style="list-style-type: none"> <li>▪ Prevent and manage complications of endotracheal intubation.</li> </ul>	

Extubation and its complications	<ul style="list-style-type: none"> <li>▪ Explain extubation criteria</li> <li>▪ Discuss management of prevention and management of complications of extubation</li> </ul>	

Sessions for Airway module	Written examination 30%	Remark
Airway Assessment	<ul style="list-style-type: none"> <li>▪ Explain the normal anatomy and physiology of the airway</li> <li>▪ Predict features of the airway using different airway assessment methods</li> <li>▪ Interpret airway assessment parameters</li> <li>▪ Prepare an airway management plan according to parameters.</li> <li>▪ Collect ancillary airway equipment</li> </ul>	
Simple airway management	<ul style="list-style-type: none"> <li>▪ Explain different equipment utilized in airway management.</li> <li>▪ Apply simple airway maneuvers (jaw thrust, head tilt, chin lift...)</li> <li>▪ Utilize airways (nasopharyngeal or oro-tracheal)</li> <li>▪ Discuss proper placement of endotracheal intubation</li> <li>▪ Prevent and manage complications of cricothyrotomy</li> <li>▪ Prepare patients with anticipated difficult airway</li> <li>▪ Manage anticipated difficult airway according to acceptable guidelines</li> <li>▪ Practice tracheostomy care</li> </ul>	

Difficult airway management	<ul style="list-style-type: none"> <li>▪ Outline the management of potential airway threats such as external compressions, blood clots, foreign bodies</li> <li>▪ Explain the management of complications of tracheostomy</li> <li>▪ Explain techniques of jet-ventilation</li> </ul>	
complications of difficult airway management modality	<ul style="list-style-type: none"> <li>▪ Recognize complications of different airway management modalities.</li> </ul>	
Intubation and its complication	<ul style="list-style-type: none"> <li>▪ Prevent and manage complications of endotracheal intubation.</li> </ul>	
Extubation and its complications	<ul style="list-style-type: none"> <li>▪ Explain extubation criteria</li> <li>▪ Perform extubation based on extubation criteria</li> <li>▪ Prevent and manage complications of extubation</li> </ul>	

### Module: Pharmacology for Anesthetists

Module Sessions	Assessment	Station	Remark
	OSCE (10 %)		
Pharmacology of IV Anesthesia drug including opioids, BDZs, NSAIDs	<p>Recognize the right dose, route &amp; concentration of commonly used IVAA</p> <ul style="list-style-type: none"> <li>• Practice IVAA preparation, titration, labeling and dose adjustment and , IV cannulation</li> <li>• Observe the effect of commonly used IVAA on patient hemodynamic status</li> </ul>	-Drug preparation	

	<ul style="list-style-type: none"> <li>Monitoring side effects of medication</li> </ul>		
Inhalational anesthetic drug pharmacology	<ul style="list-style-type: none"> <li>Recognize the right dose &amp; concentration of commonly used Inhalational anesthetic agents</li> <li>Observe the effect of commonly used AA on patient hemodynamic status</li> <li>Monitoring side effects of medication</li> </ul>		addressed by others method
Local Anesthesia pharmacology	<ul style="list-style-type: none"> <li>Practice drug preparation, IV cannulation</li> <li>Assessment and monitoring of acute surgical and non-surgical pain</li> <li>Monitoring side effects of medication</li> </ul>	-IV cannulation	
Neuromuscular blocking drugs and cholinergic/Anticholinergics	<ul style="list-style-type: none"> <li>Practice Muscle relaxant drugs preparation, titration, labeling, dose adjustment and IV cannulation</li> <li>Monitoring side effects of medication</li> </ul>		
Antagonists	<ul style="list-style-type: none"> <li>Practice drug preparation</li> <li>Monitoring side effects of medication</li> </ul>		

Module Sessions	Assessment	Remark
	Structured oral examination (10%)	
Pharmacology of IV Anesthesia drug including opioids, BDZs, NSAIDs	<ul style="list-style-type: none"> <li>• Describe the principles of Pharmacodynamics, pharmacokinetics, teratogenicity, and toxicity of anesthetic drugs and adjuvant.</li> <li>• Explain the indications, contraindications &amp; adverse effects of commonly used IVAA</li> <li>• State the different systemic effects of commonly used IAA</li> <li>• Describe the indications, contraindications &amp; adverse effects of commonly used IAA</li> <li>• Describe the mechanism of action for different types of NSAIDs including Paracetamol</li> <li>• Describe the role of NSAIDs in the WHO analgesic ladder for the management of Perioperative pain</li> <li>• Differentiate the indications, contraindications, and side effects of NSAIDs</li> <li>• State the systemic effects of opioids</li> <li>• Describe indications contraindications and adverse effects of opioids</li> <li>• Explain the safe usage including the rate and dangers of addiction to commonly used opioids</li> <li>• Describe the use of different classes of BDZs and their clinical use</li> <li>• State the systemic effects of BDZs</li> <li>• Describe the adverse effects of BDZs</li> </ul>	
Inhalational anesthetic drug pharmacology	<ul style="list-style-type: none"> <li>• State the different systemic effects of commonly used IAA</li> <li>• Describe the indications, contraindications &amp; adverse effects of commonly used IAA</li> </ul>	

Local Anesthesia pharmacology	<ul style="list-style-type: none"> <li>• Explain the mechanism of action of local anesthetics along with peripheral nerve anatomy</li> <li>• Outline the indications, contraindications &amp; adverse effects of commonly used LA</li> </ul>	
Neuromuscular blocking drugs and cholinergic/Anticholinergics	<ul style="list-style-type: none"> <li>• Describe the neuromuscular anatomy physiology &amp; mechanism of action of (muscle relaxants)</li> <li>• State the different systemic effects right dose and route of commonly used muscle relaxants</li> <li>• List the indications, contraindications &amp; adverse effects of commonly used MRs</li> <li>• Differentiate the indications, contraindications, and systemic adverse effects of cholinergic and anticholinergic.</li> </ul>	
Antagonists	<ul style="list-style-type: none"> <li>• Describe the principles &amp; purpose of antagonism of neuromuscular blockade</li> <li>• Recognize the use of opioids antagonists along with their mechanism of action</li> <li>• Rationalize the use of BDZs antagonists</li> </ul>	

Module Sessions	Assessment	Remark
	Written examination (40%)	
Pharmacology of IV Anesthesia drug including opioids, BDZs, NSAIDs	<ul style="list-style-type: none"> <li>• Describe the principles of Pharmacodynamics, pharmacokinetics, teratogenicity, and toxicity of anesthetic drugs and adjuvant.</li> <li>• Explain the indications, contraindications &amp; adverse effects of commonly used IVAA</li> <li>• State the different systemic effects of commonly used IAA</li> <li>• Describe the indications, contraindications &amp; adverse effects of commonly used IAA</li> </ul>	

	<ul style="list-style-type: none"> <li>• Describe the mechanism of action for different types of NSAIDs including Paracetamol</li> <li>• Describe the role of NSAIDs in the WHO analgesic ladder for the management of Perioperative pain</li> <li>• Differentiate the indications, contraindications, and side effects of NSAIDs</li> <li>• State the systemic effects of opioids</li> <li>• Describe indications contraindications and adverse effects of opioids</li> <li>• Explain the safe usage including the rate and dangers of addiction to commonly used opioids</li> <li>• Describe the use of different classes of BDZs and their clinical use</li> <li>• State the systemic effects of BDZs</li> <li>• Describe the adverse effects of BDZs</li> </ul>	
<p>Inhalational anesthetic drug pharmacology</p>	<ul style="list-style-type: none"> <li>• State the different systemic effects of commonly used IAA</li> <li>• Describe the indications, contraindications &amp; adverse effects of commonly used IAA</li> </ul>	
<p>Local Anesthesia pharmacology</p>	<ul style="list-style-type: none"> <li>• Explain the mechanism of action of local anesthetics along with peripheral nerve anatomy</li> <li>• Outline the indications, contraindications &amp; adverse effects of commonly used LA</li> </ul>	
<p>Neuromuscular blocking drugs and cholinergic/Anticholinergics</p>	<ul style="list-style-type: none"> <li>• Describe the neuromuscular anatomy physiology &amp; mechanism of action of (muscle relaxants)</li> <li>• State the different systemic effects right dose and route of commonly used muscle relaxants</li> <li>• List the indications, contraindications &amp; adverse effects of commonly used MRs</li> <li>• Differentiate the indications, contraindications, and systemic adverse effects of cholinergic and Anticholinergics.</li> </ul>	



Antagonists	<ul style="list-style-type: none"> <li>• Describe the principles &amp; purpose of antagonism of neuromuscular blockade</li> <li>• Recognize the use of opioids antagonists along with their mechanism of action</li> <li>• Rationalize the use of BDZs antagonists</li> </ul>	
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### Anesthesia for General surgery and Thoracic Emergency surgery

Sessions for Anesthesia for General surgery and Thoracic Emergency surgery module	OSCE 10%	Station	Remark
Anesthesia management for GI surgeries	<ul style="list-style-type: none"> <li>• Perform preoperative anesthetic evaluation for GI surgery</li> </ul>	preoperative anesthetic evaluation	
Anesthesia management for Genitourinary surgeries	<ul style="list-style-type: none"> <li>• Perform preoperative anesthetic evaluation for GU surgery</li> <li>• Perform Spinal anesthesia</li> </ul>	Spinal anesthesia	
Anesthesia management for hepatobiliary surgeries	<ul style="list-style-type: none"> <li>• <b>Describe anatomy of the liver and biliary ducts</b></li> <li>• Perform preoperative anesthetic evaluation for Hepato-biliary surgery</li> </ul>		
Anesthesia management for endocrine surgeries	<ul style="list-style-type: none"> <li>• Perform preoperative anesthetic evaluation for endocrine surgery.</li> </ul>		
Anesthesia management for thoracic emergency surgeries	<ul style="list-style-type: none"> <li>• Perform preoperative anesthetic evaluation for thoracic emergency surgery</li> <li>• Perform DLI for thoracic emergency surgeries</li> </ul>	DLT insertion	
Anesthesia management for oncologic surgeries	<ul style="list-style-type: none"> <li>• Perform preoperative anesthetic evaluation for oncology surgery</li> </ul>		

Sessions for Anesthesia for General surgery and Thoracic Emergency surgery module	Structured oral examination 10%	Remark
Anesthesia management for GI surgeries	<ul style="list-style-type: none"> <li>• Discuss patient optimization for GI procedures</li> <li>• Discuss the anesthesia considerations for GI surgeries</li> <li>• Manage intraoperative complications during GI surgeries</li> <li>• Manage postoperative pain for GI surgeries</li> <li>• Manage postoperative complications associated with GI procedures</li> </ul>	
Anesthesia management for Genitourinary surgeries	<ul style="list-style-type: none"> <li>• Discuss patient optimization for GU procedures</li> <li>• Discuss anesthesia considerations for GU surgeries</li> <li>• Manage intraoperative anesthesia for GU surgeries</li> <li>• Manage intraoperative complications of GU surgeries</li> <li>• Manage postoperative pain for GU surgeries</li> <li>• Manage postoperative complications associated with GU procedures</li> </ul>	
Anesthesia management for hepatobiliary surgeries	<ul style="list-style-type: none"> <li>• Describe anatomy of the liver and biliary ducts</li> <li>• Analyze the effect of anesthesia and surgery on Hepatic function</li> <li>• Explain Anesthetic consideration for laparoscopic surgery</li> <li>• Discuss patient optimization for Hepato biliary surgery</li> <li>• Discuss the anesthetic considerations for Hepato biliary surgery</li> <li>• Manage intraoperative anesthesia for hepato-biliary surgeries</li> </ul>	

	<ul style="list-style-type: none"> <li>• Manage anesthesia related complications during Hepato biliary surgeries</li> <li>• Manage postoperative pain for Hepato biliary surgeries</li> <li>• Manage postoperative complications associated with Hepato biliary procedures</li> </ul>	
Anesthesia management for endocrine surgeries	<ul style="list-style-type: none"> <li>• Discuss patient optimization for endocrine surgery</li> <li>• Discuss the anesthesia considerations during endocrine surgeries</li> <li>• Manage intraoperative anesthesia for endocrine surgeries</li> <li>• Discuss complications related to endocrine surgeries</li> <li>• Manage postoperative pain for endocrine surgeries</li> <li>• Manage postoperative complications associated with endocrine procedures.</li> </ul>	
Anesthesia management for thoracic emergency surgeries	<ul style="list-style-type: none"> <li>• Discuss patient optimization for thoracic emergency surgery</li> <li>• Manage one lung ventilation during thoracic emergency surgeries</li> <li>• Manage intraoperative anesthesia for thoracic emergency surgeries</li> <li>• Manage postoperative pain for thoracic emergency surgeries</li> <li>• Manage postoperative complications associated with thoracic emergency procedures</li> <li>• Participate in the management of anesthesia for elective thoracic surgical procedures</li> </ul>	
Anesthesia management for oncologic surgeries	<ul style="list-style-type: none"> <li>• Discuss patient optimization for oncology surgery</li> </ul>	

Sessions for Anesthesia for General surgery and Thoracic Emergency surgery module	Written examination 30%	Remark
Anesthesia management for GI surgeries	<ul style="list-style-type: none"> <li>• Describe anatomy of GI system</li> <li>• Discuss the physiology of GI system</li> <li>• Describe common pathophysiology of GI disorders</li> <li>• Interpret common investigation results of GI disorders</li> <li>• Explain effect of different drugs on GI system</li> <li>• Manage intraoperative complications during GI surgeries</li> <li>• Manage postoperative complications associated with GI procedures</li> </ul>	
Anesthesia management for Genitourinary surgeries	<ul style="list-style-type: none"> <li>• Describe anatomy of GUS</li> <li>• Explain the physiology of GUS</li> <li>• Explain effect of different drugs on GU function</li> <li>• Describe common pathophysiology GU disorders</li> <li>• Interpret common investigation results of GU disorders</li> <li>• Optimize patients for GU procedures</li> <li>• Discuss anesthesia considerations for GU surgeries</li> <li>• Manage intraoperative anesthesia for GU surgeries</li> <li>• Manage intraoperative complications of GU surgeries</li> </ul>	
Anesthesia management for hepatobiliary surgeries	<ul style="list-style-type: none"> <li>• Describe anatomy of the liver and biliary ducts</li> <li>• Discuss the physiology of liver and biliary ducts</li> <li>• Describe common pathophysiology of Hepato-biliary disease</li> <li>• Discuss the function of liver on drug metabolism</li> <li>• Explain the effect of different drugs on hepatic function</li> </ul>	

	<ul style="list-style-type: none"> <li>• Interpret common investigation results of Hepato-biliary diseases</li> <li>• Analyze the effect of anesthesia and surgery on Hepatic function</li> <li>• Explain Anesthetic consideration for laparoscopic surgery</li> <li>• Manage intraoperative anesthesia for hepato-biliary surgeries</li> <li>• Manage anesthesia related complications during Hepato biliary surgeries</li> <li>• Manage postoperative complications associated with Hepato biliary procedures</li> </ul>	
<p>Anesthesia management for endocrine surgeries</p>	<ul style="list-style-type: none"> <li>• Describe physiology of endocrine system</li> <li>• Describe common pathophysiology of endocrine disorder</li> <li>• Explain effect of different drugs on endocrine function</li> <li>• Interpret common investigation results of endocrine disorder.</li> <li>• Discuss the anesthesia considerations during endocrine surgeries</li> <li>• Manage intraoperative anesthesia for endocrine surgeries</li> <li>• Discuss complications related to endocrine surgeries.</li> </ul>	
<p>Anesthesia management for thoracic emergency surgeries</p>	<ul style="list-style-type: none"> <li>• Describe anatomy of the thorax relevant to thoracic surgery</li> <li>• Discuss the physiology of thorax relevant to thoracic surgery</li> <li>• Explain effect of different drugs on respiratory and cardiovascular system</li> <li>• Describe common pathophysiology of thoracic emergencies</li> <li>• Interpret common investigations and imaging modality results of thoracic emergency</li> </ul>	

	<ul style="list-style-type: none"> <li>• Discuss the effects of positioning, relaxation and anesthesia on respiratory mechanics</li> <li>• Manage one lung ventilation during thoracic emergency surgeries</li> <li>• Manage intraoperative anesthesia for thoracic emergency surgeries</li> <li>• Manage postoperative pain for thoracic emergency surgeries</li> <li>• Manage postoperative complications associated with thoracic emergency procedures</li> <li>• Participate in the management of anesthesia for elective thoracic surgical procedures</li> </ul>	
Anesthesia management for oncologic surgeries	<ul style="list-style-type: none"> <li>• Describe pathophysiology of cancer on different system</li> <li>• Identify effect of chemo/radio therapy on different system</li> <li>• Describe pharmacologic consideration of cancer patients</li> <li>• Interpret common investigation results for oncologic surgery</li> </ul>	

**Module: Regional anesthesia and pain management**

	<b>Assessment</b>	<b>Station</b>	<b>Remark</b>
<b>Module Sessions</b>	<b>OSCE (20%)</b>		

<p>Acute and Chronic Pain</p>	<ul style="list-style-type: none"> <li>• Application of pain assessment scales</li> <li>• Safe use of equipment used to manage pain including equipment used for PCA and epidurals</li> <li>• Undertake a significant role in acute pain management services.</li> <li>• Engage in a multidisciplinary approach in the management of pain</li> <li>• Demonstrate the importance of regular ongoing monitoring of pain management/follow up</li> <li>• Demonstrate the ability to assess and manage acute pain for special groups which include children, infants, elders, the cognitively impaired, those with communication difficulties, and the unconscious and critically ill patients</li> <li>• Demonstrate the assessment and Perioperative management of pain in opioid dependent patients</li> </ul>	<p>Pain assessment</p>	
<p>Central Neuraxial blocks (spinal and epidural Anesthesia)</p>	<ul style="list-style-type: none"> <li>• Perform spinal block</li> <li>• perform on caudal block</li> <li>• Manage patients who already had epidurals</li> <li>• Manage complications of regional blocks</li> </ul>	<p>Spinal block Caudal block</p>	
<p>upper extremity blocks</p>	<ul style="list-style-type: none"> <li>• Perform a wrist block</li> <li>• Perform axillary block</li> <li>• Demonstrate the anatomy of brachial plexus</li> </ul>	<p>Wrist block Axillary block</p>	
<p>Abdominal field blocks</p>	<ul style="list-style-type: none"> <li>• Perform abdominal field block</li> <li>• Demonstrate the anatomy of abdomen</li> </ul>	<p>Abdominal field block</p>	
<p>Lower extremity blocks</p>	<ul style="list-style-type: none"> <li>• Perform ankle and digital blocks</li> <li>• Demonstrate the lumbosacral anatomy</li> </ul>	<p>Ankle and digital blocks</p>	

Module Sessions	Assessment	Remark
	Structural oral examination (10%)	
Acute and chronic Pain	<ul style="list-style-type: none"> <li>• Describe pain pathways and dermatomes</li> <li>• Manage pain effectively in different settings using national and WHO guideline</li> <li>• Discuss the anatomy and physiology of pain including nociceptive, visceral, and neuropathic pain.</li> <li>• Discuss the different classifications of pain.</li> <li>• Describe drugs used to manage pain and their pharmacology</li> <li>• Describe the assessment methods of pain and management of surgical and non-surgical pain.</li> <li>• Describe a basic understanding of acute and chronic pain in adults.</li> <li>• Explain the importance of the psychosocial aspects of pain.</li> <li>• Describe the organization and objectives of an acute pain service.</li> <li>• Describe the requirement for the multidisciplinary management of chronic pain</li> </ul>	
Central Neuraxial blocks (spinal and epidural Anesthesia)	<ul style="list-style-type: none"> <li>• Explain the different types of regional anesthesia</li> <li>• Identify the distinctive features of regional anesthesia from GA</li> <li>• Describe the concerns of anticoagulation in performing regional anesthesia</li> <li>• Identify indications &amp; contraindications of regional anesthesia</li> <li>• Identify the optimum position for specific regional anesthesia</li> <li>• Monitor patients with regional anesthesia Intraoperatively</li> </ul>	
upper extremity blocks	<ul style="list-style-type: none"> <li>• Explain different peripheral nerve blocks using the loss of resistance technique</li> <li>• Manage complications of regional blocks</li> </ul>	
Abdominal field blocks	<ul style="list-style-type: none"> <li>• Manage complications of regional blocks</li> </ul>	



Lower extremity blocks	<ul style="list-style-type: none"> <li>• Explain different peripheral nerve blocks using the loss of resistance technique</li> <li>• Manage complications of regional blocks</li> </ul>	
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Module Sessions	Assessment	Remark
	Written examination (30%)	
Acute and chronic Pain	<ul style="list-style-type: none"> <li>• Describe pain pathways and dermatomes</li> <li>• Manage pain effectively in different settings using national and WHO guideline</li> <li>• Discuss the anatomy and physiology of pain including nociceptive, visceral, and neuropathic pain.</li> <li>• Discuss the different classifications of pain.</li> <li>• Describe drugs used to manage pain and their pharmacology</li> <li>• Describe the assessment methods of pain and management of surgical and non-surgical pain.</li> <li>• Describe a basic understanding of acute and chronic pain in adults.</li> <li>• Explain the importance of the psychosocial aspects of pain.</li> <li>• Describe the organization and objectives of an acute pain service.</li> <li>• Describe the requirement for the multidisciplinary management of chronic pain</li> <li>•</li> </ul>	
Central Neuraxial blocks (spinal and epidural Anesthesia)	<ul style="list-style-type: none"> <li>• Explain the different types of regional anesthesia</li> <li>• Identify the distinctive features of regional anesthesia from GA</li> <li>• Describe the concerns of anticoagulation in performing regional anesthesia</li> </ul>	

	<ul style="list-style-type: none"> <li>• Identify indications &amp; contraindications of regional anesthesia</li> <li>• Identify the optimum position for specific regional anesthesia</li> <li>• Monitor patients with regional anesthesia Intraoperatively</li> <li>•</li> </ul>	
upper extremity blocks	<ul style="list-style-type: none"> <li>• Explain different peripheral nerve blocks using the loss of resistance technique</li> <li>• Manage complications of regional blocks</li> </ul>	
Abdominal field blocks	<ul style="list-style-type: none"> <li>• Manage complications of regional blocks</li> </ul>	
Lower extremity blocks	<ul style="list-style-type: none"> <li>• Explain different peripheral nerve blocks using the loss of resistance technique</li> <li>• Manage complications of regional blocks</li> </ul>	

### Anesthesia for Obstetrics and Gynecologic Surgeries

Sessions for Anesthesia for Obstetrics and Gynecologic Surgeries module	OSCE 10%	Station	Remark
perioperative anesthetic care for obstetrics surgery	<ul style="list-style-type: none"> <li>❖ Perform spinal anesthesia for elective and emergency Cesarean section</li> <li>❖ Evaluate difficult airway in obstetrics</li> <li>❖ perform difficult Airway management in obstetrics</li> <li>❖ Perform obstetric CPR</li> <li>❖ Assemble necessary neonatal resuscitation equipment's</li> <li>❖ Perform neonatal resuscitation</li> </ul>	Spinal anesthesia Airway assessment Endotracheal intubation CPR Neonatal resuscitation	
perioperative anesthetic care for pregnant woman	<ul style="list-style-type: none"> <li>❖ Perform pre-operative evaluation for pregnant woman undergoing non-obstetric surgery</li> </ul>	pre-operative evaluation	

undergoing non-obstetric surgery	❖ Perform obstetric CPR		
Perioperative anesthetic care for gynecologic surgery	<ul style="list-style-type: none"> <li>❖ Perform pre-operative evaluation for gynecologic surgeries</li> <li>❖ Perform spinal anesthesia for elective and emergency gynecologic surgeries</li> <li>❖ Perform endotracheal intubation for gynecologic surgeries</li> </ul>		

Sessions for Anesthesia for Obstetrics and Gynecologic Surgeries module	structured Oral examination 10%	Remark
perioperative anesthetic care for obstetrics surgery	<ul style="list-style-type: none"> <li>❖ Discuss anesthetic considerations for high risk parturient undergoing obstetrics surgery</li> <li>❖ Discuss General anesthesia for elective and emergency caesarean section</li> <li>❖ Analyze spinal anesthesia for elective and emergency Cesarean section</li> <li>❖ Administer anesthesia for pregnant woman undergoing non-obstetric surgery</li> <li>❖ Discuss difficult airway management in obstetrics</li> </ul>	
perioperative anesthetic care for pregnant woman undergoing non-obstetric surgery	<ul style="list-style-type: none"> <li>❖ Discuss safe anesthesia for pregnant woman undergoing non-obstetric surgery</li> </ul>	
Perioperative anesthetic care for gynecologic surgery	<ul style="list-style-type: none"> <li>❖ Optimize patients presenting for pelvic gynecologic surgery (DVT, neuropathy)</li> </ul>	

	<ul style="list-style-type: none"> <li>❖ Discuss safe anesthesia for common gynecologic surgeries/ procedures</li> <li>❖ Discuss safe anesthesia for gynecological laparoscopic procedures</li> </ul>	
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Sessions for Anesthesia for Obstetrics and Gynecologic Surgeries module	Written 30%	Remark
perioperative anesthetic care for obstetrics surgery	<ul style="list-style-type: none"> <li>❖ Describe maternal anatomic, physiologic and pharmacological changes with its anesthesia implication during pregnancy</li> <li>❖ Describe utero- placental and fetal circulation</li> <li>❖ Describe neonatal physiologic transition period and fetal circulation</li> <li>❖ Explain the risk of anesthesia drug for pregnant mothers</li> <li>❖ Describe techniques used in labor analgesia</li> <li>❖ Monitor laboring mothers with epidural analgesia</li> <li>❖ Identify fluid and electrolyte management in pregnant patients</li> <li>❖ Describe anesthetic considerations for high risk parturient undergoing obstetrics surgery</li> <li>❖ Discuss management of General anesthesia for elective and emergency caesarean section</li> <li>❖ Discuss management of spinal anesthesia for elective and emergency Cesarean section</li> <li>❖ Administer anesthesia for pregnant woman undergoing non-obstetric surgery</li> <li>❖ Predict difficult airway in obstetrics</li> <li>❖ Discuss management of difficult Airway in obstetrics</li> </ul>	

perioperative anesthetic care for pregnant woman undergoing non-obstetric surgery	<ul style="list-style-type: none"> <li>❖ Discuss pre-operative evaluation of pregnant woman undergoing non-obstetric surgery</li> <li>❖ Discuss safe anesthesia management for pregnant woman undergoing non-obstetric surgery</li> </ul>	
Perioperative anesthetic care for gynecologic surgery	<ul style="list-style-type: none"> <li>❖ Optimize patients presenting for pelvic gynecologic surgery (DVT, neuropathy)</li> <li>❖ Discuss safe anesthesia for common gynecologic surgeries/ procedures</li> <li>❖ Discuss safe anesthesia for gynecological laparoscopic procedures</li> </ul>	

### Module: Anesthesia for Neonatal and Pediatric surgeries

Module Sessions	Assessment	Station	Remark
	OSCE (20%)		
Anatomy, physiology and pharmacology of pediatrics			See written /oral exam
Perioperative pediatrics anesthesia management	<ul style="list-style-type: none"> <li>• Prepare drugs for a pediatric patient</li> <li>• Selection and preparation of equipment for pediatric anesthesia</li> <li>• Perform endotracheal intubation of pediatrics and newborns</li> <li>• Prepare fluid and electrolyte status of pediatric patients</li> <li>• Demonstrate Neonatal and pediatrics IV access (intraosseous cannulation).</li> </ul>	<ul style="list-style-type: none"> <li>• Drug preparation</li> <li>• Endotracheal intubation</li> <li>• Fluid calculation</li> <li>• IV cannulation</li> </ul>	
Congenital Anomalies	<ul style="list-style-type: none"> <li>• Perform preoperative care for a child with congenital heart diseases</li> </ul>		

	<ul style="list-style-type: none"> <li>• Perform Intraoperatively care for a child with congenital heart diseases</li> <li>• Perform postoperative care for a child with congenital heart diseases</li> </ul>		
Anesthetics management for neonatal neurosurgeries	<ul style="list-style-type: none"> <li>• Perform documentation, admission and discharge of patient process</li> </ul>		
Pediatrics basic and advanced life support	<ul style="list-style-type: none"> <li>• Perform Pediatrics basic and advanced cardiac life support</li> </ul>	<ul style="list-style-type: none"> <li>• Pediatrics basic cardiac life support</li> <li>• Pediatrics advanced cardiac life support</li> </ul>	

Module Sessions	Assessment	Remark
	Structural Oral examination (10%)	
Anatomy, physiology and pharmacology of pediatrics	<ul style="list-style-type: none"> <li>• Define neonate, infant, and children</li> <li>• Describe the principles of pediatric anesthesia</li> <li>• Explain anatomical differences between pediatric and adult patients</li> <li>• Explain physiological differences between pediatric and adult patients</li> <li>• Explain the psychological considerations of pediatric patients.</li> <li>• Communicate with children and their caregivers</li> <li>• Explain the pharmacological considerations of pediatric patients.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Describe the thermoregulation mechanism of pediatric patients</li> </ul>	
<p>Perioperative pediatrics anesthesia management</p>	<ul style="list-style-type: none"> <li>• Explain the adverse effects of starvation and hypoglycemia in neonates and children</li> <li>• Formulate Fluid and electrolyte management of neonate and pediatric patients.</li> <li>• Perform preoperative evaluation for pediatric patients</li> <li>• Describe premedication in pediatrics</li> <li>• Prepare relevant equipment and drugs for pediatric anesthesia</li> <li>• Identify pediatric patients who are at risk of aspiration and techniques to avoid it.</li> <li>• Identify investigation modalities with the existing diagnosis</li> <li>□ Prepare pediatric patient for surgery and anesthesia <ul style="list-style-type: none"> <li>• Formulate anesthesia management options for pediatric patients</li> <li>• Manage Perioperative complications occurring during anesthesia for pediatrics</li> </ul> </li> </ul>	
<p>Congenital Anomalies</p>	<ul style="list-style-type: none"> <li>• Describe the anesthetic management for neonatal congenital heart diseases</li> <li>• Discuss the Anesthetic management for neonatal Neurosurgeries (Hydrocephalus and Meningomyelocele, scoliosis)</li> </ul>	

	<ul style="list-style-type: none"> <li>• Discuss the perioperative anesthetic consideration for Neonatal Hypertrophic Pyloric Stenosis (Olive Tumors)</li> <li>• Discuss the perioperative anesthetic consideration for neonatal Tracheoesophageal Fistula and esophageal Atresia</li> <li>• Discuss the perioperative anesthetic considerations for neonatal Analatresia. (Imperforated Anus)</li> <li>• Discuss the Perioperative anesthetic consideration for neonatal Abdominal wall defects (Gastroschisis &amp; Omphalocele)</li> <li>• Discuss the Perioperative anesthetic consideration for neonatal congenital Diaphragmatic Hernia</li> <li>• Discuss the anesthetic management of a child with a common cold and murmurs</li> </ul>	
Anesthetics management for neonatal neurosurgeries	<ul style="list-style-type: none"> <li>• Formulate anesthesia management of neurosurgery</li> </ul>	
Pediatrics basic and advanced life support	<ul style="list-style-type: none"> <li>• Discuss Pediatric Basic and advanced cardiac life support</li> </ul>	

Module Sessions	Assessment	Remark
	Written examination (30%)	
Anatomy, physiology and pharmacology of pediatrics	<ul style="list-style-type: none"> <li>• Define neonate, infant, and children</li> <li>• Describe the principles of pediatric anesthesia</li> <li>• Explain anatomical differences between pediatric and adult patients</li> <li>• Explain physiological differences between pediatric and adult patients</li> <li>• Explain the psychological considerations of pediatric patients.</li> <li>• Communicate with children and their caregivers</li> </ul>	



	<ul style="list-style-type: none"> <li>• Explain the pharmacological considerations of pediatric patients.</li> <li>• Describe the thermoregulation mechanism of pediatric patients</li> </ul>	
<p>Perioperative pediatrics anesthesia management</p>	<ul style="list-style-type: none"> <li>• Explain the adverse effects of starvation and hypoglycemia in neonates and children</li> <li>• Formulate Fluid and electrolyte management of neonate and pediatric patients.</li> <li>• Perform preoperative evaluation for pediatric patients</li> <li>• Describe premedication in pediatrics</li> <li>• Prepare relevant equipment and drugs for pediatric anesthesia</li> <li>• Identify pediatric patients who are at risk of aspiration and techniques to avoid it.</li> <li>• Identify investigation modalities with the existing diagnosis</li> <li>▣ Prepare pediatric patient for surgery and anesthesia <ul style="list-style-type: none"> <li>• Formulate anesthesia management options for pediatric patients</li> <li>• Manage Perioperative complications occurring during anesthesia for pediatrics</li> </ul> </li> </ul>	
<p>Congenital Anomalies</p>	<ul style="list-style-type: none"> <li>• Describe the anesthetic management for neonatal congenital heart diseases</li> <li>• Discuss the Anesthetic management for neonatal Neurosurgeries (Hydrocephalus and Meningomyelocele, scoliosis)</li> </ul>	

	<ul style="list-style-type: none"> <li>• Discuss the perioperative anesthetic consideration for Neonatal Hypertrophic Pyloric Stenosis (Olive Tumors)</li> <li>• Discuss the perioperative anesthetic consideration for neonatal Tracheoesophageal Fistula and esophageal Atresia</li> <li>• Discuss the perioperative anesthetic considerations for neonatal Analatresia. (Imperforated Anus)</li> <li>• Discuss the Perioperative anesthetic consideration for neonatal Abdominal wall defects (Gastroschisis &amp; Omphalocele)</li> <li>• Discuss the Perioperative anesthetic consideration for neonatal congenital Diaphragmatic Hernia</li> <li>• Discuss the anesthetic management of a child with a common cold and murmurs</li> </ul>	
Anesthetics management for neonatal neurosurgeries	<ul style="list-style-type: none"> <li>• Formulate anesthesia management of neurosurgery</li> </ul>	
Pediatrics basic and advanced life support	<ul style="list-style-type: none"> <li>• Discuss Pediatric Basic and advanced cardiac life support</li> </ul>	

**Anesthesia for trauma, burn, and orthopedic surgeries**

Sessions for	OSCE 10%	Station	Remark
Anesthesia for trauma, burn, and orthopedic surgeries			
Anesthesia for trauma care and management	<ul style="list-style-type: none"> <li>• Perform preanesthetic evaluation for trauma patients</li> </ul>	<ul style="list-style-type: none"> <li>• Preanesthetic evaluation</li> <li>• regional anesthesia</li> </ul>	

	<ul style="list-style-type: none"> <li>• Perform regional anesthesia for trauma patients</li> <li>• Perform ETI for trauma patients</li> <li>• Perform LMA insertion for trauma patients</li> <li>• Perform trauma basic life support</li> <li>• Perform advanced trauma life support</li> </ul>	(spinal and others) <ul style="list-style-type: none"> <li>• ETI</li> <li>• LMAI</li> <li>• BTLS</li> <li>• ATLS</li> </ul>	
Anesthesia for Burn care and management	<ul style="list-style-type: none"> <li>• Perform preanesthetic evaluation for burn patients</li> <li>• Perform regional anesthesia for burn patients</li> <li>• Perform ETI for burn patients</li> <li>• Perform LMA insertion for burn patients</li> </ul>		Addressed by other method
Anesthesia for orthopedic care and management	<ul style="list-style-type: none"> <li>• Perform preanesthetic evaluation for orthopedic surgeries</li> <li>• Perform Spinal anesthesia for orthopedic surgeries</li> <li>• Perform ETI for orthopedic surgeries</li> <li>• Perform LMA insertion for orthopedic surgeries</li> <li>• Perform BLS for indicated orthopedic surgeries</li> </ul>		

Sessions for Anesthesia for trauma, burn, and orthopedic surgeries	structured oral examination 10%	
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<p>Anesthesia for trauma care and management</p>	<ul style="list-style-type: none"> <li>• Discuss trauma patients assessment approach</li> <li>• Discuss types of shock and their management</li> <li>• Discuss on Primary Survey including pediatrics and obstetrics</li> <li>• Discuss on Secondary Surveys including for pediatrics, and obstetrics</li> <li>• Discuss on Tertiary Surveys including pediatrics and obstetrics</li> <li>• Discuss on Pre-anesthetic management for Head and Spinal cord injury patients.</li> <li>• Discuss on anesthesia for chest, abdominal, and extremity trauma</li> <li>• Discuss on safe anesthesia for pregnant mothers with trauma</li> </ul>	
<p>Anesthesia for Burn care and management</p>	<ul style="list-style-type: none"> <li>• Discuss the classification of burn based on the degree, size, site of injury and its implication for anesthesia management.</li> <li>• Explain the pathophysiology of burn, burn shock and their management</li> <li>• Discuss fluid management principle for burned patients</li> <li>• Discuss on anesthesia for burn patients</li> </ul>	
<p>Anesthesia for orthopedic care and management</p>	<ul style="list-style-type: none"> <li>• Discuss on anesthesia for different orthopedic surgeries</li> <li>• Discuss on complications related to orthopedic surgery (VTE)</li> </ul>	

<p>Sessions for Anesthesia for trauma, burn, and orthopedic surgeries</p>	<p>Written 30%</p>	
<p>Anesthesia for trauma care and management</p>	<ul style="list-style-type: none"> <li>• Describe concepts of trauma care</li> <li>• Describe types of shock and their management</li> <li>• Manage life-threatening conditions of trauma &amp; shock</li> <li>• Apply Massive Transfusion Protocols in Trauma Care</li> <li>• Perform Primary Survey including pediatrics and obstetrics</li> <li>• Perform Secondary Surveys including for pediatrics, and obstetrics</li> <li>• Perform Tertiary Surveys including pediatrics and obstetrics</li> <li>• Pre-anesthetic management for Head and Spinal cord injury patients.</li> <li>• Provide anesthesia for chest, abdominal, and extremity trauma</li> <li>• Provide safe anesthesia for pregnant mothers with trauma</li> </ul>	
<p>Anesthesia for Burn care and management</p>	<ul style="list-style-type: none"> <li>• Describe the epidemiology of burn injury</li> <li>• Describe the classification of burn based on the degree, size, and site of injury.</li> <li>• Identify anesthesia implication of burn based on the degree, size, and site of injury</li> <li>• Describe the pathophysiology of burn, and burn shock</li> <li>• Apply fluid management principle for burned patients</li> </ul>	

	<ul style="list-style-type: none"> <li>• Provide anesthesia for burn patients</li> </ul>	
Anesthesia for orthopedic care and management	<ul style="list-style-type: none"> <li>• Describe concepts and epidemiology of orthopedic surgeries</li> <li>• Manage anesthesia for different orthopedic surgeries</li> <li>• Identify complications related to orthopedic surgery (VTE)</li> </ul>	

### Day-care and Remote anesthesia

Sessions for Day-care and Remote anesthesia	OSCE 20%	Station	Remark
Anesthesia management for Day care surgeries	<ul style="list-style-type: none"> <li>• Perform preanesthetic evaluation for day care surgery</li> <li>• Perform Spinal anesthesia for day care surgery</li> <li>• Perform airway management (BMV, LMAI, ETI) for day care surgery</li> </ul>	<ul style="list-style-type: none"> <li>• Preanesthetic evaluation</li> <li>• Spinal anesthesia</li> <li>• BMV,</li> <li>• LMAI,</li> <li>• ETI</li> </ul>	
Anesthesia for procedural sedation	<ul style="list-style-type: none"> <li>• Perform preanesthetic evaluation for day care surgery</li> <li>• Perform Spinal anesthesia for day care surgery</li> <li>• Perform airway management (BMV, LMAI, ETI) for day care surgery</li> </ul>		

Sessions for Day-care and Remote anesthesia	Structural oral examination 10%	
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<p>Anesthesia management for Day care surgeries</p>	<ul style="list-style-type: none"> <li>• Discuss the principles and considerations of Anesthesia for day-care surgery</li> <li>• Explain basic considerations for office-based anesthesia and procedure outside the operating room</li> <li>• Discuss optimization strategies of day-care surgical patients</li> <li>• Interpret appropriate diagnosing investigation for day-care anesthesia and surgery</li> <li>• Manage pain using multimodal analgesia technique for day-care surgical patients</li> <li>• Provide post-anesthetic care for day-care surgical patients</li> <li>• Apply discharging criteria for day-care anesthesia</li> </ul>	
<p>Anesthesia for procedural sedation</p>	<ul style="list-style-type: none"> <li>• Describe indications for procedural sedation</li> <li>• Discuss the advantages and risks of procedural sedation</li> <li>• Discuss procedural sedation guidelines/sedation scales appropriately</li> <li>• Manage complications related to procedural sedation</li> <li>• Apply the principles of discharging criteria after procedural sedation</li> <li>• Apply principles of Enhanced recovery after surgery (ERAS)</li> </ul>	

Sessions for Day-care and Remote anesthesia	Written examination 30%	
Anesthesia management for Day care surgeries	<ul style="list-style-type: none"> <li>• Describe the principles and considerations of Anesthesia for day-care surgery</li> <li>• Describe basic considerations for office-based anesthesia and procedure outside the operating room</li> <li>• Describe the pharmacologic and non-pharmacologic optimization strategies of day-care surgical patients</li> <li>• Assess and optimize Day-care surgical patients in a compassionate respectful and caring manner</li> <li>• Manage pain using multimodal analgesia technique for day-care surgical patients</li> <li>• Provide post-anesthetic care for day-care surgical patients</li> <li>• Describe discharging criteria for day-care anesthesia</li> </ul>	
Anesthesia for procedural sedation	<ul style="list-style-type: none"> <li>• Define procedural sedation</li> <li>• Describe indications for procedural sedation</li> <li>• Identify what equipment, staffing, and the venue are required before proceeding with the procedural sedation</li> <li>• Discuss the advantages and risks of procedural sedation</li> <li>• Perform preoperative evaluation for patients who require procedural sedation</li> </ul>	



	<ul style="list-style-type: none"> <li>• Apply those procedural sedation guidelines/sedation scales appropriately</li> <li>• Manage complications related to procedural sedation</li> <li>• Describe the principles of discharging criteria after procedural sedation</li> <li>• Describe principles of Enhanced recovery after surgery (ERAS)</li> </ul>	
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**Module: Anesthesia for patients with Coexisting diseases**

Module Sessions	Assessment	Station	Remark
	OSCE (20%)		
Anesthesia for patient with cardiovascular disease			Addressed in written examination
Anesthesia for patient with respiratory problem	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with obstructive lung disease</li> <li>• Provide safe anesthesia for patients with restrictive lung diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Preoperative Evaluation</li> <li>• Patient handovering</li> <li>• BMV,</li> <li>• LMAI,</li> <li>• ETI</li> <li>• Spinal anesthesia</li> </ul>	
Anesthesia for patient with endocrine disorder	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for diabetic patients.</li> <li>• Provide Perioperative anesthesia management for hypertensive patients</li> <li>• Provide safe anesthesia for patients with thyroid gland disorders</li> </ul>		

	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with parathyroid gland disorders</li> </ul>		
Anesthesia for patient with neuromuscular disorder			Link to written examination
Anesthesia and CNS disorder			
Hematologic, oncologic and infections disease and anesthesia	<ul style="list-style-type: none"> <li>• Perform Optimization of patients coming for surgery with hematologic disorders (anemia, coagulopathy)</li> <li>• Perform preoperative anesthetic evaluation for patients infected by malaria</li> </ul>		
Anesthesia for psychiatric patient	<ul style="list-style-type: none"> <li>• Perform history taking and physical examination for a inpatient with psychiatric problem</li> <li>• Provide safe anesthesia for patients with psychiatric problem</li> </ul>		

Module Sessions	Assessment	Remark
	Structural oral examination (10%)	
Anesthesia for patient with cardiovascular disease	<ul style="list-style-type: none"> <li>• Optimize cardiac patients presented for non-cardiac surgery</li> <li>• Provide safe anesthesia for cardiac patients presented for non-cardiac surgery</li> <li>• Provide perioperative anesthesia management for hypertensive patients</li> </ul>	

<p>Anesthesia for patient with respiratory problem</p>	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with obstructive lung disease.</li> <li>• Provide safe anesthesia for patients with restrictive lung diseases</li> </ul>	
<p>Anesthesia for patient with endocrine disorder</p>	<ul style="list-style-type: none"> <li>• Optimize glucose level of diabetic patients for anesthesia and surgery</li> <li>• Provide safe anesthesia for diabetic patients</li> </ul>	
<p>Anesthesia for patient with neuromuscular disorder</p>	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with neuromuscular disorders (Guillain-Barresyndrome, muscle dystrophy, and myasthenia gravis).</li> </ul>	
<p>Anesthesia and CNS disorder</p>	<ul style="list-style-type: none"> <li>• Discuss perioperative anesthetic management of patients with Parkinson's disease</li> </ul>	
<p>Hematologic, oncologic and infections disease and anesthesia</p>	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with HIV</li> <li>• Provide safe anesthesia for cancer patients coming for surgery</li> <li>• Provide safe anesthesia for patients with malnutrition coming for surgery</li> <li>• Perform preoperative anesthetic evaluation for patients infected by malaria</li> <li>• Provide safe anesthesia for patients with PTB</li> </ul>	
<p>Anesthesia for psychiatric patient</p>	<ul style="list-style-type: none"> <li>• Explain anesthetic considerations for schizophrenia,</li> <li>• Describe Mood disorder and their types</li> <li>• Explain the pathophysiology and type of seizures</li> <li>• discuss anesthetic implications for patients with epilepsy</li> <li>• Explain anticonvulsants and their interactions with anesthesia</li> <li>• Provide safe anesthesia for a psychiatric patient.</li> <li>• Provide safe anesthesia for electroconvulsive therapy</li> </ul>	

Module Sessions	Assessment	Remark
	Written (30%)	
Anesthesia for patient with cardiovascular disease	<ul style="list-style-type: none"> <li>• Optimize cardiac patients presented for non-cardiac surgery</li> <li>• Provide safe anesthesia for cardiac patients presented for non-cardiac surgery</li> <li>• Provide perioperative anesthesia management for hypertensive patients</li> </ul>	
Anesthesia for patient with respiratory problem	<p>Provide safe anesthesia for patients with obstructive lung disease.</p> <ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with restrictive lung diseases</li> </ul>	
Anesthesia for patient with endocrine disorder	<ul style="list-style-type: none"> <li>• Optimize glucose level of diabetic patients for anesthesia and surgery</li> <li>• Provide safe anesthesia for diabetic patients</li> </ul>	
Anesthesia for patient with neuromuscular disorder	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with neuromuscular disorders (Guillain-Barresyndrome, muscle dystrophy, and myasthenia gravis).</li> </ul>	
Anesthesia and CNS disorder	<ul style="list-style-type: none"> <li>• Discuss perioperative anesthetic management of patients with Parkinson's disease</li> </ul>	
Hematologic, oncologic and infections disease and anesthesia	<ul style="list-style-type: none"> <li>• Provide safe anesthesia for patients with HIV</li> <li>• Provide safe anesthesia for cancer patients coming for surgery</li> <li>• Provide safe anesthesia for patients with malnutrition coming for surgery</li> <li>• Perform preoperative anesthetic evaluation for patients infected by malaria</li> <li>• Provide safe anesthesia for patients with PTB</li> </ul>	
Anesthesia for psychiatric patient	<ul style="list-style-type: none"> <li>• Explain anesthetic considerations for schizophrenia,</li> <li>• Describe Mood disorder and their types</li> <li>• Explain the pathophysiology and type of seizures</li> </ul>	

	<ul style="list-style-type: none"> <li>• discuss anesthetic implications for patients with epilepsy</li> <li>• Explain anticonvulsants and their interactions with anesthesia</li> <li>• Provide safe anesthesia for a psychiatric patient.</li> <li>• Provide safe anesthesia for electroconvulsive therapy</li> </ul>	
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**Module: ENT, Maxillofacial, and Ophthalmic Anesthesia**

Module Sessions	Assessment	Station	Remark
	OSCE (20%)		
Anesthesia for ENT surgery	<ul style="list-style-type: none"> <li>• Perform preoperative evaluation for ENT surgical patients</li> <li>• Perform nasal and awake intubation (except awake FOI)</li> <li>• Manage difficult airways using an alternative technique</li> </ul>	<ul style="list-style-type: none"> <li>• preoperative evaluation</li> <li>• nasal intubation</li> <li>• awake intubation</li> </ul>	
Anesthesia for maxillofacial surgery	<ul style="list-style-type: none"> <li>• Perform nasal and awake intubation (except awake FOI)</li> <li>• Perform preoperative evaluation for maxillofacial surgical patients</li> </ul>		
Anesthesia for ophthalmic surgery	<ul style="list-style-type: none"> <li>• Perform regional anesthesia (retro bulbar, per bulbar/ Fisher nerve blocks) block for various types of eye procedure</li> <li>• Provide and manage anesthesia for various types of Ophthalmic surgical patients</li> <li>• Perform vanlit /obren/ attiksen block</li> </ul>	<ul style="list-style-type: none"> <li>• Regional anesthesia (retro bulbar, per bulbar/ Fisher nerve blocks)</li> </ul>	

Module Sessions	Assessment	Remark
	Structured oral examination (10%)	
Anesthesia for ENT surgery	<ul style="list-style-type: none"> <li>• Discuss the anatomy and physiology of the Ear, Nose, and Throat.</li> <li>• Explain the coagulation status of the ENT patient</li> <li>• Describe Leo fort's classification and its implication for anesthesia management</li> <li>• Describe the concerns of nitrous oxide and other gas during ear and ophthalmic surgery</li> <li>• Discuss postoperative complications of ENT and maxillofacial surgery and anesthesia</li> <li>• Discuss Ludwig's angina</li> <li>• Describe the equipment used and the technique of jet ventilation</li> <li>• Discuss laser surgery anesthesia and its biological effect.</li> <li>• Order and interpret appropriate investigation for ENT and maxillofacial procedures</li> </ul>	
Anesthesia for maxillofacial surgery	<ul style="list-style-type: none"> <li>• Discuss techniques of anesthesia for various types of throat surgical procedures</li> <li>• Discuss techniques of anesthesia for various types of throat surgical procedures</li> </ul>	
Anesthesia for ophthalmic surgery	<ul style="list-style-type: none"> <li>• Discuss the anatomy and physiology of the eye</li> <li>• Discuss IOP and OCR and their effect on anesthetic management</li> <li>• Describe the challenges of open eye injury and full stomach in anesthetic management</li> <li>• Describe the effects of ophthalmic drugs on anesthesia management</li> <li>• Discuss the Assessment and optimization of Ophthalmic surgical patients</li> </ul>	

Module Sessions	Assessment	Remark
	Written examination (30%)	
Anesthesia for ENT surgery	<ul style="list-style-type: none"> <li>• Discuss the anatomy and physiology of the Ear, Nose, and Throat.</li> <li>• Explain the coagulation status of the ENT patient</li> <li>• Describe Leo fort's classification and its implication for anesthesia management</li> <li>• Describe the concerns of nitrous oxide and other gas during ear and ophthalmic surgery</li> <li>• Discuss postoperative complications of ENT and maxillofacial surgery and anesthesia</li> <li>• Discuss Ludwig's angina</li> <li>• Describe the equipment used and the technique of jet ventilation</li> <li>• Discuss laser surgery anesthesia and its biological effect.</li> <li>• Order and interpret appropriate investigation for ENT and maxillofacial procedures</li> </ul>	
Anesthesia for maxillofacial surgery	<ul style="list-style-type: none"> <li>• Discuss techniques of anesthesia for various types of throat surgical procedures</li> <li>• Discuss techniques of anesthesia for various types of throat surgical procedures</li> </ul>	
Anesthesia for ophthalmic surgery	<ul style="list-style-type: none"> <li>• Discuss the anatomy and physiology of the eye</li> <li>• Discuss IOP and OCR and their effect on anesthetic management</li> <li>• Describe the challenges of open eye injury and full stomach in anesthetic management</li> </ul>	

	<ul style="list-style-type: none"> <li>• Describe the effects of ophthalmic drugs on anesthesia management</li> <li>• Discuss the Assessment and optimization of Ophthalmic surgical patients</li> </ul>	
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### Neurosurgery Anesthesia

Sessions for Neurosurgery Anesthesia	OSCE 10%	station	Remark
Anesthesia for head injury	<ul style="list-style-type: none"> <li>• Participate in the preoperative evaluation for head injury patient.</li> <li>• Perform ETI for head injury patient.</li> <li>• Perform RSI for head injury patient.</li> <li>• Maintain proper documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Preoperative Evaluation</li> <li>• Patient handovering</li> <li>• BMV,</li> <li>• LMAI,</li> <li>• RSI</li> </ul>	
Anesthesia for spinal cord injury	<ul style="list-style-type: none"> <li>• Participate in the preoperative evaluation for spinal cord injury patient.</li> <li>• Perform ETI for spinal cord injury patient.</li> <li>• Perform RSI for spinal cord injury patient</li> </ul>		

Sessions for Neurosurgery Anesthesia	Standard oral examination 10%	
Anesthesia for head injury	<ul style="list-style-type: none"> <li>• Discuss on cerebral protection strategies</li> <li>• Discuss on preoperative evaluation and optimization of a neurosurgery patient.</li> <li>• Describe the management of intracranial hypertension.</li> </ul>	



	<ul style="list-style-type: none"> <li>• Describe in the management of anesthesia for supratentorial.</li> <li>• Describe in the management of anesthesia for posterior fossa surgery.</li> <li>• Describe in the anesthesia management of pituitary gland surgery.</li> <li>• Explain in the anesthetic management of awake craniotomy.</li> <li>• Discuss intraoperative anesthesia management for patients undergoing emergency neurosurgery</li> <li>• Discuss intraoperative anesthesia management patients with a head injury.</li> <li>• Discuss post-operative anesthetic care for neurosurgery.</li> </ul>	
Anesthesia for spinal cord injury	<ul style="list-style-type: none"> <li>• Discuss on preoperative evaluation and optimization of spine and spinal cord surgery.</li> <li>• Explain anesthetic management for spine and spinal cord surgery.</li> </ul>	

Sessions for Neurosurgery Anesthesia	Written 30%	
Anesthesia for head injury	<ul style="list-style-type: none"> <li>• Explain the physiology of intracranial pressure.</li> <li>• Discuss the effects of anesthetic agents on cerebral physiology.</li> <li>• Describe adjuvant Pharmacology as it relates to neuro-anesthesia.</li> <li>• Identify neuro-anesthesia cerebral protection strategies</li> <li>• Participate in the preoperative evaluation of a neurosurgery patient.</li> <li>• Participate in interpreting findings of invasive monitoring</li> </ul>	

	<p>during neurosurgery</p> <ul style="list-style-type: none"> <li>• Discuss the effect of different neurosurgical positioning in anesthetic management</li> <li>• Describe the management of intracranial hypertension.</li> <li>• Participate in the management of anesthesia for supratentorial.</li> <li>• Participate in the management of anesthesia for posterior fossa surgery.</li> <li>• Participate in the anesthesia management of pituitary gland surgery.</li> <li>• Participate in the anesthetic management of awake craniotomy.</li> <li>• Manage intraoperative anesthesia for patients undergoing emergency neurosurgery</li> <li>• Manage intraoperative anesthesia for patients with a head injury.</li> </ul>	
Anesthesia for spinal cord injury	<ul style="list-style-type: none"> <li>• Discuss on preoperative evaluation and optimization of spine and spinal cord surgery.</li> <li>• Discuss anesthetic management for spine and spinal cord surgery.</li> </ul>	

**Module: Geriatrics Anesthesia**

Module Sessions	Assessment		Remark
	OSCE (10%)	stations	
Theories, mechanisms of aging and Anatomic			Address in the written

change of different organs			and oral examination
Perioperative geriatrics Anesthesia care	<ul style="list-style-type: none"> <li>• Perform comprehensive pre-operative history taking &amp; interpret the charts of the patient</li> <li>• Perform a thorough physical examination for geriatric patients</li> <li>• Optimize geriatric patients before surgery</li> <li>• provide post-operative care for geriatric patients</li> </ul>	<ul style="list-style-type: none"> <li>• preoperative evaluation</li> <li>• physical examination (CVS,Resp system )</li> </ul>	
Geriatrics and morbidity	<ul style="list-style-type: none"> <li>•</li> </ul>		Address in the written and oral examination

Module Sessions	Assessment	Remark
	Structured Oral examination (10%)	
Theories, mechanisms of aging and Anatomic change of different organs	<ul style="list-style-type: none"> <li>• Discuss anatomic &amp; physiological changes related to aging</li> </ul>	
Perioperative geriatrics Anesthesia care	<ul style="list-style-type: none"> <li>• Discuss pharmacokinetic and dynamic changes of drugs in geriatric patients</li> <li>• Request relevant investigation of geriatric patients</li> <li>• Interpret relevant investigation of geriatric patients</li> <li>• Optimize geriatric patients before surgery</li> <li>• Manage geriatric patients who undergo surgery</li> </ul>	

	<ul style="list-style-type: none"> <li>• Explain special challenges of anesthetic management of geriatric patients</li> <li>• List the contents of frailty criteria to assess the vulnerability of geriatric patients</li> <li>• List post-operative complications of geriatric patients</li> <li>• Manage post-operative complications of geriatric patients</li> </ul>	
Geriatrics and morbidity	<ul style="list-style-type: none"> <li>• Discuss the commonest comorbid disease related to aging</li> <li>• Explain the contents of the informed consent &amp; left the decision for patients, families, or caregivers</li> <li>• Discuss the psychosocial aspects of geriatric patients</li> <li>• Describe causes, Clinical features, and treatment of delirium and dementia</li> </ul>	

Module Sessions	Assessment	Remark
	Structured Oral examination (10%)	
Theories, mechanisms of aging and Anatomic change of different organs	<ul style="list-style-type: none"> <li>• Discuss anatomic &amp; physiological changes related to aging</li> </ul>	
Perioperative geriatrics Anesthesia care	<ul style="list-style-type: none"> <li>• Discuss pharmacokinetic and dynamic changes of drugs in geriatric patients</li> <li>• Request relevant investigation of geriatric patients</li> <li>• Interpret relevant investigation of geriatric patients</li> <li>• Optimize geriatric patients before surgery</li> <li>• Manage geriatric patients who undergo surgery</li> <li>• Explain special challenges of anesthetic management of geriatric patients</li> <li>• List the contents of frailty criteria to assess the vulnerability of geriatric patients</li> </ul>	

	<ul style="list-style-type: none"> <li>List post-operative complications of geriatric patients</li> <li>Manage post-operative complications of geriatric patients</li> </ul>	
Geriatrics and morbidity	<ul style="list-style-type: none"> <li>Discuss the commonest comorbid disease related to aging</li> <li>Explain the contents of the informed consent &amp; left the decision for patients, families, or caregivers</li> <li>Discuss the psychosocial aspects of geriatric patients</li> <li>Describe causes, Clinical features, and treatment of delirium and dementia</li> </ul>	

**Emergency and Critical care**

Sessions for Emergency and Critical care	OSCE 15%	stations	remark
Admission and discharge criteria of ICU			Addressed by other method
Participate in management of critically ill patients	<ul style="list-style-type: none"> <li>CVP and Arterial pressure monitoring &amp; interpretations</li> <li>Perform needle Cricothyrotomy</li> <li>Perform basic Life Support (BLS)</li> <li>Perform Advanced Cardiac Life Support (ACLS) and Defibrillation</li> <li>Interpretation of basic CXR</li> <li>Interpretation of basic 12 Lead ECG</li> </ul>	<ul style="list-style-type: none"> <li>Needle cricothyrotomy</li> <li>BLS</li> <li>ACLS</li> <li>CXER interpretation</li> <li>ECG interpretation</li> </ul>	

Mechanical ventilation and non-invasive ventilation in ICU	<ul style="list-style-type: none"> <li>• Setting and checking mechanical ventilator</li> <li>• Provide Continuous Positive Airway Pressure (CPAP)</li> </ul>	<ul style="list-style-type: none"> <li>• mechanical ventilator checking</li> <li>•</li> </ul>	
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Sessions for Emergency and Critical care	Standard oral examination 10%		
Admission and discharge criteria of ICU	<ul style="list-style-type: none"> <li>• Discuss on admission and discharge criteria of ICU</li> </ul>	Addressed by other method	
Participate in management of critically ill patients	<ul style="list-style-type: none"> <li>• Discuss comprehensive assessment and triage of emergency patients</li> <li>• Describe the management of patients with poisoning</li> <li>• Discuss the principle of daily FASTHUG (feeding, analgesia, sedation, thrombo-embolism prophylaxis, position (head up), ulcer prevention, glycemic control) in the critical care unit</li> <li>• Discuss the principles of oxygen therapy for critically ill patients</li> <li>• Discuss Basic and advanced cardiac life support for critical ill patients</li> </ul>		
Mechanical ventilation and non-invasive ventilation in ICU	<ul style="list-style-type: none"> <li>• Discuss ventilatory support (invasive and non-invasive ventilation) for critical patients</li> <li>• Explain the principles of weaning to relieve patients from mechanical ventilators</li> </ul>		

Sessions for Emergency and Critical care	Written examination 30%		
Admission and discharge criteria of ICU	<ul style="list-style-type: none"> <li>• Discuss on admission and discharge criteria of ICU</li> <li>• Recognize organization, structure, and staffing of ICU</li> <li>• Recognize the organization, structure, and staffing of</li> </ul>		

	the emergency department	
Participate in management of critically ill patients	<ul style="list-style-type: none"> <li>• Discuss comprehensive assessment and triage of emergency patients</li> <li>• Describe the management of patients with poisoning</li> <li>• Identify admission criteria for the critical care unit</li> <li>• Recognize critically ill patients/ the use of early warning signs scores</li> <li>• Apply the principle of daily FASTHUG (feeding, analgesia, sedation, thrombo-embolism prophylaxis, position (head up), ulcer prevention, glycemic control) in the critical care unit</li> <li>• Apply the principles of oxygen therapy for critically ill patients</li> <li>• Identify critically illness in emergency and critical care settings</li> <li>• Participate in the management of critically ill patients with various pathologies</li> <li>• Provide Basic and advanced cardiac life support for critical ill patients</li> <li>• Participate in nutritional support for critically ill patients</li> <li>• Handle ethical concerns related to the management of critically ill patients</li> <li>• Participate in the development and implementation of a local protocol for the management of life-threatening illnesses.</li> </ul>	
Mechanical ventilation and non-invasive ventilation in ICU	<ul style="list-style-type: none"> <li>• Participate in ventilatory support (invasive and non-invasive ventilation) for critical patients</li> <li>• Monitor patients on a mechanical ventilator</li> <li>• Apply the principles of weaning to relieve patients from mechanical ventilators</li> </ul>	

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## Module: Qualification Examination

Domain 1: Patient care

OSCE: 40%

Written examination: 30%

Structured oral examination: 30%

Competencies, tasks, and Objectives		Format + Methods	Emphasis
<b>Competency 1: Assess, optimize, and prepare patients for anesthesia and surgery</b>			
Task 1.1.1. Perform comprehensive pre-anesthetic patient assessment			
Assessment Objectives (AO)	AO1: Take pre-anesthetic history from patients relevant to anesthesia and surgery.	OSCE	
	AO2: Perform physical examination relevant to anesthesia and surgery.	OSCE	
	AO3: Choose relevant laboratory and diagnostic investigations as per patient indication	MCQ/Oral	
	AO4: Interpret Laboratory findings & Imaging relevant to anesthesia	MCQ	
	AO5: Select routine medications and anesthetic agents	MCQ/ OSCE	
Task 1.1.2. Determine the clinical status of a patient			
Assessment Objectives (AO)	AO1:-Score and stratify patient clinical status	MCQ/Oral	
	AO2: Decide patient fitness for anesthesia	MCQ	
	AO3: Formulate components of anesthesia management plan based on pre-anesthetic assessment findings	MCQ/Oral	
Task 1.1.3. Obtain informed consent			
Assessment Objectives (AO)	AO1: Revise components of informed consent	MCQ/Oral	
	AO2: Provide appropriate and adequate information on anesthetic management plan	OSCE	
	AO3: Check comprehension of patients, patient families, and other legal body	OSCE	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO4: Respect patients, patient families, and other legal body decisions and choices	OSCE	
Task 1.1.4. Prepare patients for anesthesia and surgery			
Assessment Objectives (AO)	AO1: Calculate intravenous fluid requirement based on patient conditions	MCQ	
	AO2: differentiate intravenous fluids with their compositions	MCQ	
	AO3: Perform basic nursing procedures (e.g. catheterization, NGT insertion, IV)	OSCE	
	AO4: Prepare emergency drugs required for the provision of safe anesthesia	OSCE/Oral	
	AO5: Decide patient specific fasting guidelines	MCQ	
Task 1.1.5. Optimize patients for surgery and anesthesia			
Assessment Objectives (AO)	AO1: Select appropriate premedication drugs as per the health status of the surgical patient.	Oral/MCQ	
	AO2: Demonstrate patient and family counseling and education	Oral	
	AO3: Justify on preoperative cessation of smoking guidelines for Surgical patient,	Oral/MCQ	
	AO4: Decide preoperative drug discontinuation/continuation that is relevant to anesthesia and surgery.	Oral/MCQ	
<b>Competency 2: Prepare and utilize anesthesia machines, equipment, supply, and monitoring devices properly</b>			
Task 1.2.1. Apply standard safety measures to manage perioperative hazards			
Assessment Objectives (AO)	AO1: Recognize the possible hazards that happen in Anesthesia practice	Oral/MCQ	
	AO2: Design strategies to minimize professional hazards of anesthesia including operating room pollution	MCQ	
	AO3: Apply the principle of infection prevention	OSCE/SOE	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO4: Apply measures to reduce position and procedure-related injuries	OSCE/	
	AO5: Apply measures to reduce surgical error and patient harm	OSCE/ SOE	
Task 1.2.2. Prepare & utilize medical gas sources/ supplies according to acceptable practice standards and protocols			
Assessment Objectives (AO)	AO1: Check the availability, functionality and connection of medical gas sources	OSCE	
	AO2: Differentiate medical gas sources	MCQ/SOE	
	AO3: Identify types of medical gases	MCQ/SOE	
	AO4: Perform troubleshooting on pipeline, cylinders and anesthesia machine	OSCE	
Task 1.2.3. Prepare and utilize anesthesia machines safely			
Assessment Objectives (AO)	AO1: Recognize different parts of anesthesia machine	MCQ/SOE	
	AO2: Perform routine anesthesia machine functionality test	OSCE	
	AO3: Operate Anesthesia machine to administer medical gases and volatile anesthetic agents	OSCE	
	AO4: Solve routine anesthesia machine malfunction	OSCE	
Task 1.2.4. Apply and utilize standard patient monitoring			
Assessment Objectives (AO)	AO1: Justify standards of patient monitoring	Oral/Written	
	AO2: Apply standards of patient monitoring devices	OSCE	
	AO3: Interpret common findings from standards patient monitoring (Pulseoximetry & ETCO <sub>2</sub> )	OSCE/Written	
	AO4: Interpret 12 lead ECG	OSCE/Written	
Task 1.2.5. Check & prepare airway equipment			
Assessment Objectives (AO)	AO1: Assemble standard airway equipment	OSCE	
	AO2: Select airway equipment for different age groups and procedure	OSCE	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO3: Select airway & ancillary equipment used in the management of difficult airway	MCQ/OSCE	
	AO4:		
	AO5:		
Task 1.2.6. Utilize ancillary anesthetic equipment & materials			
Assessment	AO1: Select appropriate anesthetic breathing systems	MCQ/SOE	
Objectives (AO)	AO2: Utilize defibrillator for shockable cardiac arrest rhythms	OSCE	
<b>Competency 3: Manage patients' airways using different modalities</b>			
Task 1.3.1. Assess patients' airways			
Assessment	AO1: perform airway examination using different parameters	OSCE	
Objectives (AO)	AO2: Identify patients with difficult airway using relevant history	MCQ/SOE	
	AO3: Develop airway management plan	SOE/OSCE	
Task 1.3.2. Manage patients' airways using basic airway management techniques			
Assessment	AO1: Apply simple airway maneuvers	OSCE	
Objectives (AO)	AO2: Perform bag-mask ventilation	OSCE	
	AO3: Utilize airways (oral & naso-pharyngeal)	OSCE	
Task 1.3.3. Manage patients' airways using advanced airway management modalities			
Assessment	AO1: Utilize supraglottic devices (SGDs) LMAs,	OSCE	
Objectives (AO)	AO2: Perform endotracheal intubation (nasal and oral)	OSCE	
	AO3: Apply other alternative measure between airway management attempts	MCQ/OSCE	
	AO4: Manage patients with difficult airways according to acceptable guidelines (DAS/ASA)	OSCE/SOE	
	AO5: Recognize the need for consultation for further airway management	MCQ/SOE	
	AO6: Perform extubation based on extubation criteria	OSCE	
	AO7: Manage common airway management complications		

Competencies, tasks, and Objectives		Format + Methods	Emphasis
<b>Competency 4: Manage safe anesthesia</b>			
Task 1.4.1. Manage anesthesia for obstetrics and gynecologic surgeries			
Assessment Objectives (AO)	AO1: Justify effect of different anatomic changes of pregnancy on the intraoperative anesthetic management	MCQ/Oral	
	AO2: Justify effect of different physiologic changes of pregnancy on the intraoperative anesthetic management	MCQ/Oral	
	AO3: Manage anesthesia for clients undergoing obstetrics surgery	MCQ/Oral	
	AO4: Manage anesthesia for patients undergoing gynecologic surgery	MCQ/Oral	
	AO5: Manage intraoperative complications during obstetrics and gynecologic surgery	MCQ/Oral	
	AO6: Perform neonatal resuscitation	OSCE	
	AO7: Manage anesthesia for high-risk pregnancy	MCQ	
	AO8: Manage anesthesia for pregnant woman coming for non-obstetric surgery	MCQ/Oral	
Task 1.4.2. Manage anesthesia for pediatric and neonatal surgeries			
Assessment Objectives (AO)	AO1: Explain anesthetic implication of the anatomic differences between children and adults	MCQ/Oral	
	AO2: Explain anesthetic implication of physiological and psychological differences between children and adults	MCQ/Oral	
	AO3: Explain anesthetic implication of the pharmacological differences between children and adults	MCQ/Oral	
	AO4: Manage intraoperative anesthesia for <b>common</b> pediatrics and neonatal emergency surgeries <sup>1</sup>	MCQ/Oral	
	AO5: Manage common intraoperative complications during pediatrics and neonatal emergency surgeries	MCQ/Oral	

<sup>1</sup> Common surgeries include: IHPS, Intussusception, MMC, Abdominal wall defects

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO6: Manage anesthesia for pediatrics and neonate with common 2 comorbidities	MCQ/Oral	
Task 1.4.3. Manage anesthesia for geriatric patients undergoing surgeries			
Assessment Objectives (AO)	AO1: Apprise the implications of aging on anesthesia management	Oral	
	AO2: Select appropriate anesthetic drugs and techniques for geriatrics patients undergoing surgery	MCQ/Oral	
	AO3: Provide intraoperative anesthesia care for geriatrics patients	MCQ/Oral	
	AO5: Manage common intra-operative complication for geriatrics	Oral	
Task 1.4.4. Manage anesthesia for different general and urologic surgical procedures			
Assessment Objectives (AO)	AO1: Apply different components of ERAS for anesthesia management	MCQ/Oral	
	AO2: Predict effects of different anesthetic drugs on body systems	MCQ	
	AO3: Select appropriate anesthetic drugs and techniques for common general and urology surgery	MCQ/Oral	
	AO4: Manage common intra-operative complication during general and urology surgery	MCQ/Oral	
Task 1.4.5. Manage anesthesia for trauma, orthopedic surgeries and burn			
Assessment Objectives (AO)	AO1: Manage different types of shock	MCQ/Oral	
	AO2: Provide intra-operative anesthesia for trauma and orthopedic surgery	MCQ/Oral	
	AO3: Manage intraoperative complications during orthopedic and trauma patients	Oral	
	AO4: Apply principles of damage control resuscitative surgery	MCQ/Oral	
	AO5: Manage anesthesia for a patient with burn	MCQ	

2 common comorbidities include: URTI, OSA and congenital anomalies

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO6: Administer fluid, electrolyte and blood products	MCQ/Oral	
Task 1.4.6. Manage anesthesia for neurosurgeries			
Assessment Objectives (AO)	AO1: Administer fluids for neurosurgeries	MCQ	
	AO2: Justify effect of different neurosurgical positioning in anesthetic management	MCQ	
	AO3: Manage raised ICP	MCQ/Oral	
	AO4: Provide anesthesia care for neurosurgeries	MCQ/Oral	
	AO5: Manage intraoperative complications during neurosurgeries	MCQ/Oral	
	AO6: Provide anesthesia for head injury patients		
Task 1.4.7. Manage anesthesia for emergency thoracic surgeries			
Assessment Objectives (AO)	AO1: Select the appropriate anesthetic drugs and techniques for patients undergoing emergency thoracic surgery	MCQ/Oral	
	AO2: Differentiate common intraoperative complications during thoracic surgery	MCQ/Oral	
	AO3: Recognize the effects of positioning and anesthesia on respiratory mechanics	MCQ/Oral	
	AO4: Perform lung isolation using DLT & classic ETT	OSCE	
	AO5: Manage anesthesia for one lung ventilation	MCQ/Oral	
	AO6: Manage intraoperative complications during thoracic surgery	MCQ/Oral	
	AO4: Extubate after thoracic emergency surgeries	MCQ/Oral/ OSCE	
Task 1.4.8. Manage anesthesia for maxillofacial and ENT surgeries			
Assessment Objectives (AO)	AO1: Provide intra-operative anesthetic care for maxillofacial and ENT surgery	MCQ	
	AO2: Manage challenges specific to maxillofacial and ENT surgeries	MCQ/Oral	
	AO3: Manage complication specific to maxillofacial and ENT surgeries	MCQ/Oral	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
Task 1.4.9. Manage anesthesia for ophthalmic surgeries			
Assessment Objectives (AO)	AO1: Analyze interaction between ophthalmic medications and anesthetic agents and adjuvants	MCQ/Oral	
	AO2: Manage raised IOP	MCQ/Oral	
	AO3: Provide intra-operative anesthesia care for ophthalmic surgery	MCQ	
	AO4: Manage intraoperative anesthesia of patients undergoing emergency ophthalmic surgery	MCQ/Oral	
	AO5: Manage intraoperative complications of patients undergoing ophthalmic surgery	MCQ/Oral	
Task 1.4.10. Manage anesthesia for day-case surgeries and remote anesthesia			
Assessment Objectives (AO)	AO1: Justify day case patient selection protocols	Oral	
	AO2: Select appropriate anesthetic drugs and techniques for day case patient management	MCQ/Oral	
	AO3: Outline discharge criteria for day-case surgical patients	MCQ/Oral	
	AO4: Manage peculiar challenges and safety risks associated with remote anesthesia	MCQ/Oral	
	AO5: Manage complications during remote anesthesia	MCQ/Oral	
Task 1.4.11. Manage regional anesthesia			
Assessment Objectives (AO)	AO1: Identify relevant anatomical landmarks for regional anesthesia	MCQ/Oral	
	AO2: Decide patient fitness for regional anesthesia (Indication/contraindication)	MCQ/Oral	
	AO3: Prepare relevant equipment and material for regional nerve blocks	OSCE	
	AO4: Perform spinal anesthesia technique	OSCE	
	AO5: Perform peripheral nerve blocks other than spinal anesthesia	OSCE	



Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO6: Examine effectiveness of block	MCQ/OSCE	
	AO7: Manage intraoperative complication during regional anesthesia	MCQ/Oral	
Task 1.4.12. Manage anesthesia for patients with common co-existing disorders			
Assessment Objectives (AO)	AO1: Justify impact of comorbidities on anesthesia management and patient outcome	MCQ/Oral	
	AO2: Diagnose patients with common co morbid condition before anesthesia and surgery	MCQ/Oral	
	AO3: Optimize patients with common co morbid condition before anesthesia and surgery	MCQ/Oral	
	AO4: Select appropriate drugs and technique for patients with common co-morbidity	MCQ/Oral	
	AO5: Manage intra-operative anesthesia care technique for patients with common co morbid condition	MCQ/Oral	
	AO6: Manage common complications of patients with common co morbid condition during anesthesia and surgery	MCQ/Oral	
<b>Competency 5: Provide postoperative anesthetic care</b>			
Task 1.5.1. Check and prepare the post-anesthesia care units and standards (PACU)			
Assessment Objectives (AO)	AO1: Prepare Post Anesthesia care unit for surgical patients.	MCQ/Oral Exam	
	AO2: Recognize components of postoperative care.	MCQ/Oral	
	AO3: Develop a postoperative management plan.	MCQ	
	AO4: Critique the design and staffing of the PACU.	MCQ	
Task 1.5.2. Handover patient to respective unit postoperatively			
Assessment Objectives (AO)	AO1: Determine patient admission criteria for PACU	MCQ/Oral	
	AO2: Demonstrate appropriate transfer of care and responsibility during handover of patients	OSCE	
	AO3: Assess the patient's status on arrival in the PACU.	MCQ/Oral	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO4: Provide postoperative care for a special group of patients	.MCQ/Oral	
	AO5: Monitor compliance of handover practice for quality improvement	MCQ/Oral	
Task 1.5.3. Monitor the clinical status of a postoperative patient			
Assessment Objectives (AO)	AO1: Apply the required monitoring devices to patients admitted to PACU.	OSCE	
	AO2: Diagnose the postoperative complications of the surgical patient admitted to PACU	MCQ/Oral	
	AO3: Assess the patient's condition using different risk scoring and stratification methods	MCQ	
Task 1.5.4. Manage common postoperative complications			
Assessment Objectives (AO)	AO1: Arrange medical supervision and coordination of patient care in the PACU.	Oral	
	AO2: Manage common postoperative complications	MCQ/SOE	
	AO3: Demonstrate the ability to recognize consultation	MCQ/SOE	
	AO4:		
	AO5:		
Task 1.5.5. Engage in the patient discharge process from PACU			
Assessment Objectives (AO)	AO1: Formulate patient discharge criteria from PACU.	OSCE	
	AO2: Assess readiness for discharge from the PACU.	MCQ/oral	
	AO3: Organize the team in the transfer of care at discharge.	MCQ/Oral	
<b>Competency 6: Manage pain for different patient groups</b>			
Task 1.6.1. Assess acute and chronic pain			
	AO1: Evaluate patients with acute pain.	MCQ/SOE	
	AO2: : Apply appropriate assessment methods of pain for different age groups using pain rating scales	MCQ/OSCE	
	AO3: Recognize the impact of pain on different body system	MSQ/SOE	
Task 1.6.2. Manage acute pain			

Competencies, tasks, and Objectives		Format + Methods	Emphasis
Assessment Objectives (AO)	AO1: Recognize pain pathway	MCQ	
	AO2: Manage pain using WHO analgesia ladder	MCQ/SOE	
	AO3: Consult with other team members regarding pain management	MCQ/SOE	
	AO4: Demonstrate CRC while managing pain	OSCE/SOE	
	AO5: Measure effectiveness of pain management regularly	MCQ/SOE	
	AO6: Recognize complications related to pain management modalities and drugs	MCQ/SOE	
	AO7: Manage complications related to pain management modalities and drugs	SOE/MCQ	
Task 1.6.3. Participate in the management of chronic and cancer pain			
Assessment Objectives (AO)	AO1: Recognize the role of social, rehabilitation, and other support services	MCQ/SOE	
	AO2: Diagnose common types of chronic pain syndromes	MCQ/SOE	
	AO3: Demonstrate compassionate, respectful, and caring behavior during pain management	OSCE	
Task 1.6.4. Perform different regional blocks for pain management			
Assessment Objectives (AO)	AO1: Select appropriate regional block for pain management	MCQ/SOE	
	AO2: Prepare the required volume, dosage, and concentrations of local anesthetics and adjuvants for pain management	OSCE	
	AO3: Apply appropriate infection prevention techniques during regional blocks for pain management	OSCE	
	AO4: Perform regional blocks as a component of multimodal analgesia	OSCE	
	AO5: : Examine the effectiveness of the regional block	OSCE	
	AO6: Distinguish sign of complication of different regional block		
	AO7: Manage complication of different regional block		

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO8: Documentation of the performed block		
<b>Competency 7: Engage in pre-hospital, emergency, and critical care services</b>			
Task 1.7.1. Engage in the initial assessment and stabilization of critically ill patients during out-of-hospital care and transport			
Assessment Objectives (AO)	AO1: Recognize critically ill patients	MCQ/SOE/OSCE	
	AO2: Recognize risks associated with \ patient transfer (physical, psychological, and organizational)	MCQ/SOE	
	AO3: Apply different stabilization technique during transport of a critically ill patient	OSCE	
	AO4: Monitor condition of patients during transportation	MCQ/SOE	
	AO5: Apply special precautions during transfer and intubation of trauma patients	OSCE/SOE	
Task 1.7.2. Engage in the clinical management of patients during intra-/ inter-hospital transfer			
Assessment Objectives (AO)	AO1: Recognize risk involved with critical care interventions in isolated environments	MCQ/SOE	
	AO2: Recognize problems encountered during retrieval of victims from the scene	MCQ/SOE	
Task 1.7.3. Assess emergency and critically ill patients who need immediate attention			
Assessment Objectives (AO)	AO1: Perform triage to receive patients	MCQ/SOE	
	AO2: Estimate Early Warning score per patient's condition	MCQ	
	AO3: Recognize the goals of initial assessment and monitoring of critically ill patients	MCQ	
	AO4: Identify danger (warning) signs in critically ill patients	MCQ	
	AO5: Identify indications for endotracheal intubation of critically ill patients	MCQ/SOE	
Task 1.7.4. Engage in the management of emergency patients who need immediate attention			
	AO1: Decide patients admission and discharge from ICU	MCQ	
	AO2: Apply principles of the primary survey	SOE/OSCE	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
Assessment Objectives (AO)	AO3: Apply principles of a secondary survey during patient assessments	SOE/OSCE	
	AO4: Recognize special considerations during the assessment of pediatric and obstetric critically ill patients	SOE/OSCE	
	AO5: Recognize collaboration with multi-disciplinary teams during assessment of emergency and critically ill patients	SOE	
Task 1.7.5. Engage in the management of critically ill patients (who are admitted to the ICU)			T
Assessment Objectives (AO)	AO1: Identify common causes of respiratory failure	MCQ	
	AO2: Recognize indication and principles of mechanical ventilation in ICU	SOE/OSCE	
	AO3: Manage immediate life-threatening conditions (ABCDE) according to priority	SOE/OSCE	
	AO4: Apply different settings of ventilation according to indication	SOE/OSCE	
	AO5: Demonstrate compassion to patient and family while caring for critically ill patients	SOE/OSCE	
<b>Competency 8: Perform cardiopulmonary resuscitation (CPR)</b>			
Task 1.8.1. Recognize critically ill patients early before cardiac arrest happens			
Assessment Objectives (AO)	AO1: Assess critically ill patients regularly using ABCDE	OSCE/SOE	
	AO2: Prepare the setting to manage critically ill patients	OSCE/SOE	
	AO3: Differentiate patients who need urgent responses	MCQ/SOE	
	AO4: Identify possible causes of cardiac arrest (the 4H and 4T)		
Task 1.8.2. Perform effective Basic Life Support			
Assessment Objectives (AO)	AO1: Recognize importance of high-quality CPR and its impact on survival	MCQ	
	AO2: Manage Airway Obstruction	OSCE	
	AO3: Provide effective ventilation by using a barrier device	OSCE	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO4: Demonstrate effective chest compression	OSCE	
	AO5: Perform defibrillation using AED	OSCE	
Task 1.8.3. Perform effective Advanced Life Support			
Assessment Objectives (AO)	AO1: Apply advanced airway management modalities during life-threatening airway obstructions	OSCE	
	AO2: Manage patients with respiratory arrest using artificial ventilation	OSCE	
	AO3: Identify cardiac arrest rhythms	MCQ/SOE	
	AO4: Manage cardiac arrest using pharmacological and electrical interventions	OSCE	
	AO5:		
Task 1.8.4. Provide post-resuscitation care for patients who achieve the return of spontaneous circulation (ROSC)			
Assessment Objectives (AO)	AO1: Manage complication of cardiac arrest	MCQ/SOE	
	AO2: Recognize the role of multi-disciplinary team during post resuscitation care	MCQ/SOE	
	AO3: Maintain appropriate documentation throughout the peri-arrest period	OSCE	

Domain 2: Professionalism [X%]

Competencies, tasks, and Objectives		Format + Methods	Emphasis
<b>Competency 1: Uphold the anesthesia practice standard and ethics and be accountable to the public and the profession</b>			
Task 2.1.1. Apply ethical and legal principles to anesthesia practice			
Assessment Objectives (AO)	AO1: Solve ethical dilemma and uncertainties	OSCE/SOE	
	AO2: Demonstrate ethical anesthesia practice during interactions with patients and their families/ attendants and colleagues.	OSCE	
	AO3: Implement strategies to resolve ethical issue	MCQ/SOE	
	AO4:		
	AO5:		
Task 2.1.2. Support the rights, interests, and needs of patients and their family			
Assessment Objectives (AO)	AO1: Encourage patients to exercise their right to make informed decisions about planned anesthetic care	SOE	
Task 2.1.3. Practice within the standard and scope of anesthesia practice			
Assessment Objectives (AO)	AO1: Apply codes of ethics in the practice of anesthesia per the national guideline	MCQ/SOE	
	AO2: Practice within the defined scope of professional requirements	OSCE/SOE	
Task 2.1.4. Communicate effectively in a multidisciplinary team			
Assessment Objectives (AO)	AO1: Demonstrate ability to communicate acute events and complications to the appropriate anesthesia and surgical teams	SOE/OSCE	
	AO2: Apply principles of effective communication	SOE/OSCE	
	AO3: Recognize communication model and process	MCQ/SOE	
Task 2.1.5. Implement safe, effective, and consistent communication with a patient			
	AO1: Demonstrate clear, sensitive and effective communication skills in interacting with a simulated patient	SOE/OSCE	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
Assessment Objectives (AO)	AO2: Demonstrate utilization of information and communication technology to assist in health promotion and disease prevention measures for individuals, families, and communities at large	MCQ/SOE	
	AO3: Identify communication /counseling techniques to enhance health/disease prevention	SOE/OSCE	
Task 2.1.6. Produce and maintain complete and accurate anesthesia documentation			
Assessment Objectives (AO)	AO1: Recognize the need for appropriate anesthesia documentation	MCQ/SOE	
	AO2: Maintain proper perioperative anesthesia documentation	OSCE	



Domain 3: Education, research and evidence-based practice [X%]

Competencies, tasks, and Objectives		Format + Methods	Emphasis
<b>Competency 1: Demonstrate commitment to excellence in anesthesia practice through the application of evidence to practice and research activities</b>			
Task 3.1.1. Conduct research relevant to peri-operative medicine and critical care			
Assessment Objectives (AO)	AO1: Justify application of research in anesthesia practice	Oral	
	AO2: Compare the differences between books and journals as sources of information	Oral	
	AO3: Distinguish the commonly used research designs	MCQ/Oral	
	AO4: Appraise sampling methods	Oral	
	AO5: Design research objectives	MCQ/Oral	
	AO6: Justify Ethical principle in research	MCQ/Oral	
Task 3.1.2. Apply the principles of evidence-based practice			
Assessment Objectives (AO)	AO1: Recommend credible online resources for anesthesia practice	MCQ/Oral	
	AO2: Appraise published articles critically	Oral	
	AO3: Utilize critically appraised literature	Oral	
Task 3.1.3. Conduct a clinical audit and need assessment			
Assessment Objectives (AO)	AO1: Justify application of clinical audit in anesthesia practice	MCQ/Oral	
	AO2: Outline audit cycle	MCQ/Oral	
	AO3: Outline the best practice principles of clinical audit	MCQ/Oral	
	AO4: Choose appropriate Audit methodologies	MCQ/Oral	

Domain 4: Leadership and management [X%]

Competencies, tasks, and Objectives		Format + Methods	Emphasis
<b>Competency 1: Manage anesthesia service in a health facility</b>			
Task 4.1.1. Plan anesthesia service activities			
Assessment Objectives (AO)	AO1: Assess workplace, health and safety for patients and staff	SOE	
	AO2: Develop anesthesia service work plan	OSCE/SOE	
	AO3: Prioritize short- and long-term plans for the service in consultation with multidisciplinary team members	SOE	
Task 4.1.2. Implement anesthesia service activities			
Assessment Objectives (AO)	AO1: Demonstrate effective communication with other stakeholders	OSCE	
	AO2: Utilize appropriate technology and standardized practices that support safe practice	OSCE	
	AO3: Conduct appropriate and corrective measures to solve problems encountered	OSCE	
	AO4: Apply principles of effective leadership and management	MCQ/SOE	
Task 4.1.3. Monitor the overall anesthesia service plan in a facility			
Assessment Objectives (AO)	AO1: Evaluate resource utilization as per the plan and organizational policy	MCQ	
	AO2: Examine quality of service using a range of appropriate frameworks	SOE	
Task 4.1.4. Report anesthesia service deliveries (including risks and incidents)			
Assessment Objectives (AO)	AO1: Justify how to reach a reasonable decision with coworkers during difficult circumstances	SOE	
	AO2: Construct feedback mechanism process by involving all perioperative team members and other relevant stakeholders	OSCE	

Competencies, tasks, and Objectives		Format + Methods	Emphasis
	AO3: Show appropriate and corrective measures to solve problems encountered	OSCE	
Task 4.1.5. Adapt and implement a quality improvement and assurance framework for quality anesthesia service delivery			
Assessment	AO1: Identify anesthesia service standards	MCQ	
Objectives (AO)	AO2: Apply principles of effective leadership and management	MCQ	
	AO3: Construct strategies for the delivery of high-quality anesthesia service.	OSCE	
	AO4: Illustrate quality service standards through collaboration with surgical team members	SOE	
	AO5: Conduct regular discussions with surgical team members to incorporate necessary changes into strategies for continuous improvement.	SOE	

Domain 5: Health promotion and disease prevention [X%]

Competencies, tasks, and Objectives		Format + Methods	Emphasis
<b>Competency 1: Asses and diagnose community health problems</b>			
Task 5.1.1. Conduct community health assessment			
Assessment Objectives (AO)	AO1: Assess community health problems	MCQ	
	AO2: Prioritize community health problems in relevance to anesthesia	MCQ	
Task 5.1.2. Diagnose community health problems			
Assessment Objectives (AO)	AO1: Recognize national priority diseases and control program	MCQ/SOE	
	AO2: Conduct community need assessment to provide surgical, anesthesia and critical care	MCQ/SOE	
<b>Competency 2: Plan and implement health promotion and disease prevention interventions</b>			
Task 5.2.1. Create community awareness on topics relevant to anesthesia practice (including community education)			
Assessment Objectives (AO)	AO1: Provide health education in various contexts/settings	MCQ/SOE	
	AO2: Create awareness on anesthesia profession	SOE	
	AO3: Promote healthy lifestyles (diet, exercise) and behaviors for risk reduction	MCQ/SOE	
	AO4: Acquire and provide appropriate written resources for clients and their care-givers when needed	MCQ/SOE	
Task 5.2.2. Implement infection prevention and control protocols			
Assessment Objectives (AO)	AO1: Apply infection prevention strategies	MCQ/SOE	
	AO2: Create awareness on infection prevention and control (IPC) measures	MCQ/SOE	

**OSCE Summary**

year of study	Sessions per semester	
1 <sup>st</sup>	semester I	Semester II
		❖ Communication/professionalism
2 <sup>nd</sup>	<ul style="list-style-type: none"> <li>❖ Preoperative patient evaluation</li> <li>❖ Machine checking</li> <li>❖ preoperative airway evaluation</li> <li>❖ Patient positioning</li> <li>❖ Nasogastric tube insertion</li> <li>❖ IV cannulation</li> <li>❖ urinary catheterization</li> </ul>	<ul style="list-style-type: none"> <li>❖ IV cannulation</li> <li>❖ Fluid calculation</li> <li>❖ Blood transfusion</li> <li>❖ electrolyte calculation</li> <li>❖ Machine check</li> <li>❖ ECG interpretation</li> <li>❖ Capnography interpretation</li> <li>❖ SPO2 interpretation</li> <li>❖ Tracheal intubation</li> <li>❖ Gloving</li> <li>❖ Gowning</li> <li>❖ Informed consent</li> <li>❖ Anesthetic record sheet</li> </ul>
3 <sup>rd</sup>	<ul style="list-style-type: none"> <li>❖ Physical examination</li> <li>❖ pre-anesthetic history taking</li> <li>❖ Informed consent</li> <li>❖ Patient handovering</li> <li>❖ Airway assessment</li> <li>❖ Bag mask ventilation</li> <li>❖ LMA</li> <li>❖ Endotracheal intubation</li> <li>❖ Cricothyrotomy</li> <li>❖ Drug preparation</li> <li>❖ IV cannulation</li> </ul>	<ul style="list-style-type: none"> <li>❖ preoperative anesthetic evaluation</li> <li>❖ Spinal anesthesia</li> <li>❖ DLT insertion</li> <li>❖ Pain assessment</li> <li>❖ Spinal block</li> <li>❖ Caudal block</li> <li>❖ Wrist block</li> <li>❖ Axillary block</li> <li>❖ Abdominal field block</li> <li>❖ Ankle and digital blocks</li> <li>❖ Spinal anesthesia</li> <li>❖ Airway assessment</li> <li>❖ Endotracheal intubation</li> <li>❖ CPR</li> </ul>

		❖ Neonatal resuscitation
4 <sup>th</sup>	<ul style="list-style-type: none"> <li>❖ Drug preparation</li> <li>❖ Endotracheal intubation</li> <li>❖ Fluid calculation</li> <li>❖ IV cannulation</li> <li>❖ Pediatrics basic cardiac life support</li> <li>❖ Pediatrics advanced cardiac life support</li> <li>❖ Preanesthetic evaluation</li> <li>❖ regional anesthesia (spinal and others)</li> <li>❖ LMAI</li> <li>❖ BTLS</li> <li>❖ ATLS</li> <li>❖ BMV</li> <li>❖ Patient handovering</li> <li>❖ Nasal intubation</li> <li>❖ Regional anesthesia (retro bulbar, per bulbar/ Fisher nerve blocks)</li> </ul>	<ul style="list-style-type: none"> <li>❖ Preoperative Evaluation</li> <li>❖ Patient handovering</li> <li>❖ BMV,</li> <li>❖ LMAI,</li> <li>❖ RSI</li> <li>❖ physical examination (CVS,Resp system )</li> <li>❖ Needle cricothyrotomy</li> <li>❖ BLS</li> <li>❖ ACLS</li> <li>❖ CXER interpretation</li> <li>❖ ECG interpretation</li> <li>❖ Mechanical ventilator checking</li> </ul>
5 <sup>th</sup>	Qualification skills	