



CURRICULUM DESIGN

DIPLOMA IN ANAESTHESIOLOGY

DEPARTMENT OF ANAESTHESIOLOGY, SICU
& PAIN CENTER PUMHSW - SBA

CURRICULUM DESIGN AND ORGANIZATION

ADMISSION CRITERIA

- MBBS or equivalent qualification registered with PMDC
- One year house Job in an institution recognized by PMDC
- Valid PMDC Registration.
- After selection registration by Post graduate department of PUMHS SBA.

LENGTH OF COURSE

The course will be held for Two (02) academic years, starting from January & July every year.

NUMBER OF CANDIDATES

Six (06) students per supervisor.

ELIGIBILITY

- MBBS or equivalent qualification recognized by PMDC

CRITERIA FOR SELECTION

- Written Entry test.
- Interview to see Eligibility

REGISTRATION IN THE PROGRAM

The candidate should enroll as a postgraduate scholar within one month of admission by submitting the prescribed application form recommended and signed by the supervisor to the Director postgraduate studies.

MONITORING OF STUDENTS' ACADEMIC PROGRESS

Monitoring of students' academic progress is done by periodic assessment through Quarterly evaluation test by theory consisting of SAQs, SBA and practical examinations in the form of TOACS.

DA Part-I examination will be taken after completing one (01) years training to assess the level of competency and acquired knowledge.

Diploma Part-I

S.NO.	CONTENTS	SAQ	SBA
1.	ANATOMY	01	05
2.	PHYSIOLOGY	01	10
3.	PHARMACOLOGY	02	15
4.	EQUIPMENTS AND DEVICES	01	15
5.	MONITORING	02	15
6.	MISCELLANEOUS	03	15
TOTAL		10	75

Diploma Part-II

S.NO.	CONTENTS	SAQ	SBA
1.	ANATOMY	01	05
2.	PHYSIOLOGY	01	10
3.	PHARMACOLOGY	01	10
4.	EQUIPMENTS, MONITORING AND DEVICES	02	15
5.	SPECIALTIES	03	20
6.	MISCELLANEOUS	02	15
TOTAL		10	75

Curriculum Design

ANATOMY

1. Airway
2. Cardiovascular system
3. Respiratory tract
4. Nervous system
5. Renal system
6. The liver

PHYSIOLOGY

1. Cardiovascular system
2. Respiratory tract
3. Nervous system
4. Neuromuscular junction
5. Hepatic & hematology
6. Renal system
7. Fluid electrolytes & acid base balance
8. Physiology of pain
9. Physiology of pregnancy
10. endocrinology

PHARMACOLOGY

1. Pharmacological principles
2. Drugs acting on the cardiovascular and autonomic nervous systems
3. Drugs acting on the respiratory system
4. Inhalation anaesthetic agents
5. Intravenous anaesthetic agents
6. Local anaesthetic agents
7. Anticonvulsant drugs
8. Neuromuscular blocking agents
9. Cholinesterase inhibitors & other pharmacologic antagonists to neuromuscular blocking agents
10. Anticholinergic drugs
11. Adrenergic agonists & antagonists
12. Hypotensive agents
13. Adjuncts to anesthesia
14. Premedication
15. Analgesics opioids. Nsaids & other analgesics

EQUIPMENTS AND DEVICES

1. Medical gas systems
2. Surgical diathermy
3. Fire prevention & preparation
4. Laser safety
5. Breathing systems
6. Modern anesthesia machine
7. Gas supply
8. Flow control circuits
9. Vaporizers
10. The breathing circuit
11. Oxygen analyzers
12. Adjustable pressure-limiting valve
13. Humidifiers
14. Ventilators
15. Wastegas scavengers

MONITORING

CARDIOVASCULAR MONITORING

1. Arterial blood pressure
2. Electrocardiography
3. Central venous catheterization
4. Pulmonary artery catheterization
5. Cardiac output

NONCARDIOVASCULAR MONITORING

1. Precordial & esophageal stethoscopes
2. Pulse oximetry
3. Capnography
4. Anesthetic gas analysis
5. Electroencephalography
6. Evoked potentials
7. Temperature
8. Urinary output
9. Peripheral nerve stimulation

MISCELLANEOUS

1. Basic physics for the anaesthetist
2. Preoperative assessment of diseases
3. Anaesthesia & co-existing diseases
4. The practical conduct of anaesthesia
5. Complications during anaesthesia
6. Postoperative care & pain management
7. Local anaesthetic techniques
 - a. Spinal, epidural, & caudal blocks
 - b. Peripheral nerve blocks
8. Cardiopulmonary resuscitation
9. Critical care

SPECIALTIES

1. Anaesthesia for patients with cardiovascular disease
2. Anaesthesia for patients with respiratory disease
3. Anaesthesia for neurosurgery
4. Anaesthesia for genitourinary surgery
5. Anaesthesia for patients with liver disease
6. Anaesthesia for patients with endocrine disease
7. Anaesthesia for patients with neuromuscular disease
8. Anaesthesia for ophthalmic surgery
9. Anaesthesia for otorhinolaryngologic surgery
10. Anaesthesia for orthopedic surgery
11. Anaesthesia for trauma & emergency surgery
12. Obstetric anaesthesia
13. Paediatric anaesthesia
14. Ambulatory & nonoperating room anaesthesia
15. Chronic pain management
16. Perioperative pain management

DA PART I

EXAMINER 1:

SUBJECT/ TOPIC	NUMBER OF QUESTIONS	
	SAQ	MCQ
<u>ANATOMY</u>		
Related to Anaesthesia	01	10
<u>PHYSIOLOGY & BIOCHEMISTRY</u>	02	20
Nervous System		02
Cardiovascular System		04
Respiratory System		04
Renal System (including fluid & electrolyte balance and acid base balance)		04
Liver & metabolism		01
Hematology		02
Endocrinology		01
Neuromuscular Junction		01
Pregnancy		01

EXAMINER 2:

SUBJECT/ TOPIC	NUMBER OF QUESTIONS	
	SAQ	MCQ
<u>PHYSICS</u>	01	08
<u>CLINICAL MEASUREMENT & MONITORING</u>	01	04
<u>ANAESTHETIC EQUIPMENTS</u>	01	04
<u>ANAESTHESIA BASICS</u>	01	04
Pre-anaesthetic Patient Evaluation		
Principal & practice of peri-operative anaesthetic management		
Principal & practice of post-operative anaesthetic management		
Posture & Positioning		
Patient Monitoring		

EXAMINER 3:

SUBJECT/ TOPIC	NUMBER OF QUESTIONS	
	SAQ	MCQ
<u>PHARMACOLOGY</u>	02	20
General Pharmacology		01
General Anaesthetics (inhalational & intravenous)		03
Local Anaesthetics		02
Hypnotics, Sedatives, Opioids, NSAIDs & Other analgesics		02
Neuromuscular Blocking Agents (including antagonists)		02
Drugs acting on ANS		03
Drugs acting on Cardiovascular system (antihypertensives, antiarrhythmics, ionotropes & chronotropes)		03
Diuretics		01
Anticoagulants		01
Antihistamine		01
Antacids, Gastrokinetics & Antiemetics		01

EXAMINER 4:

SUBJECT/ TOPIC	NUMBER OF QUESTIONS	
	SAQ	MCQ
<u>ANATOMY</u>		
Related to Anaesthesia	01	10
<u>ANAESTHESIA BASICS</u>	01	04
Pre-anaesthetic Patient Evaluation		
Principal & practice of peri-operative anaesthetic management		
Principal & practice of post-operative anaesthetic management		
Posture & Positioning		
Patient Monitoring		
<u>RESUSCITATIONS</u>	01	05
BLS, ACLS, ATLS		
Neonatal Resuscitation		
Accident Emergency		
Airway Management		
Management of Shock (including Fluid Resuscitation & Blood Transfusion)		

DA PART II

EXAMINER 1:

SUBJECT/ TOPIC	NUMBER OF QUESTIONS	
	SAQ	MCQ
<u>CLINICAL ANAESTHETIA</u>		
Basic Anaesthesia Techniques	02	15
Special Techniques	01	07

EXAMINER 2:

SUBJECT/ TOPIC	NUMBER OF QUESTIONS	
	SAQ	MCQ
<u>CLINICAL ANAESTHETIA</u>		
Specialty Management	02	15
Management of Coexisting Medical Conditions	01	08

EXAMINER 3:

SUBJECT/ TOPIC	NUMBER OF QUESTIONS	
	SAQ	MCQ
<u>CLINICAL ANAESTHETIA</u>		
Management of Coexisting Medical Conditions	01	08
<u>RELATED ASPECT OF INTERNAL MEDICINE</u>	01	08
<u>PAIN MANAGEMENT</u>	01	06

EXAMINER 4:

SUBJECT/ TOPIC

NUMBER OF QUESTIONS

SAQ

MCQ

CRITICAL CARE MEDICINE

01

10

(INCLUDING BLS & ACLS)

ACCIDENT & EMERGENCY

01

06

(INCLUDING BLS & ATLS)

CLINICAL ANAESTHETIA

Special Techniques

01

07