CURRICULUM

FOR

M.S (ANAESTHESIA)

POST GRADUATE MEDICAL INSTITUTE

QUETTA

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Section -1

INTRODUCTION

University of Balochistan was established in 1970. The University awarded its first medical undergraduate Bachelor of Medicine and Bachelor of Surgery in 1977. The University of Balochistan is oldest and the most prestigious seat of learning in Balochistan.

The University runs courses of Undergraduate Education, Postgraduate Diploma Courses, Postgraduate diploma Courses in Faculty of Medicine.

The Postgraduate Medical Institute possesses all the relevant learning facilities like qualified and well trained faculty, teaching hospitals, libraries, lecture halls, Clinicopathological conference halls, laboratories, audiovisual aids, internet access, etc.

In this document Statutes and Regulations regarding the Scheme of the Course, eligibility criteria for admission to the course, details of training program, Syllabus, Specific Objectives of the training program, Research Thesis /Dissertation and format of examination of the Postgraduate degree course of M.S. (Anaesthesia) of the Post Graduate Medical Institute Quetta is presented.

Section -2

ADMISSION CRITERIA

REGULATIONS REGARDING ADMISSION FOR ANAESTHESIA COURSE

The requirements for Admission in Post Graduate Degree Programme in MS Anaesthesia are laid down by PGMIQ are as under:

ELIGIBILITY CRITERIA FOR ADMISSION.

1. MBBS from the University of Balochistan or equivalent recognized by PM&DC.
2. One year House job after graduation with six months compulsory in Surgery and allied.
3. Only those doctors are eligible who are in the active service of Government of Balochistan for a minimum period of two years.
4. Selection through entry test and selection committee approval.

Section -3

AIMS AND OBJECTIVES OF THE COURSE.

AIM

The aim of four years MS Programme in Anaesthesia is to train residents to acquire the competency of a specialist in the field so that they can become good teachers, researchers and clinicians in their specialty after completion of their training.

GENERAL OBJECTIVES

1. That the student accepts Anaesthesia in its full sense as a life long activity and that he/she is prepared to invest time and effort to acquire, maintain and further improve his/her own knowledge and skills.

2. A critical appreciation of techniques, procedures carried out in Anaesthesia an understanding of scientific methods, reliability and validity of observations and the testing of hypothesis.

3. The ability and willingness to adopt a problem solving approach to mange clinical situations included in the definition of Anaesthesia.

4. The ability to plan and interpret a management program with due regards to the patients Comfort and economic factors.

5. His/ her awareness of the role of specialists of Anaesthesia in health / rehabilitation / welfare teams and his/ her willingness to work cooperatively within such teams.

6. The awareness that he/ she have to create his/ her own professional impact as a capable Specialist/ Teacher/ Scholar of Anaesthesia in the world.

7. To pursue and develop the basic scientific pursuits and guideline for scientific discoveries to strengthen knowledge further about human body requirements.

Section -4

TRAINING PROGRAM

As a policy, active participation of students at all levels will be encouraged.

Following teaching modalities will be employed:

1. Lectures
2. Seminar Presentation and Journal Club Presentations
3. Group Discussions
4. Grand Rounds
5. Clinico-pathological Conferences
6. SEQ as assignments on the content areas
7. Skill teaching in ICU, Operation Theatres, emergency and ward settings
8. Attend genetic clinics and rounds for at least one month.
9. Attend sessions of genetic counseling
10. Self study, assignments and use of internet
11. Bedside teaching rounds in ward
12. OPD & Follow up clinics
13. Long and short case presentations

In addition to the conventional teaching methodologies interactive strategies like conferences will also be introduced to improve both communication and clinical skills in the upcoming consultants. Conferences must be conducted regularly as scheduled and attended by all available faculty and residents. Residents must actively request autopsies and participate in formal review of gross and microscopic pathological material from patients who have been under their care. It is essential that residents participate in planning and in conducting conferences.

Section -5

DURATION AND SCHEME OF THE COURSE

A summary of Four (04) Years Course in MS Anaesthesia is presented as under:

4 YEARS COURSE

PHASE-I (1st Year)	PHASE-II (3 Years)
• **Basic Training in Specialty of admission (10 Weeks)**	• **Advanced Professional Education in Anaesthesia**
• **Biostatistics & Research Methodology** • **Submission of Synopsis** **(04 Weeks)**	• **Compulsory/Optional Rotation Rotation in allied Surgical disciplines.**
• **Basic Training in Anaesthesia** • **Basic Sciences Theory Classes** (Anatomy, Physiology, Biochemistry, Pharmacology & Pathology relevant to the specialty) • **Approval of Synopsis** (**34 Weeks)**	• **Log Book, Research / Thesis (assignments, assessments)** Submission and approval of research Thesis / dissertation at least 06 Months before Part-II examination. • **Eligibility to appear in final** Examination is subject to approval of research thesis and completion of Log Book.
INTERMEDIATE EVALUATION (PART-I EXAM) ❖ **Written** **Two Papers For Part-1** The Part-I Examination will be held at the end of 1st Calendar Year. • **Principles of Anaesthesia** (100 MCQ Single Best Type) • **Basic Science Education** (100 MCQ Single Best Type)	**FINAL EVALUATION (PART-II EXAM)** ❖ **Written** **Four Papers For Part-II** Part-II Examination will be held at the end of 4th Calendar Year • **Anaesthesia Paper-A** (100 MCQ Single Best Type) • **Anaesthesia Paper-B** (100 MCQ Single Best Type) • **Anaesthesia Paper-A** (10 Short Essay Questions) • **Anaesthesia Paper-B** (10 Short Essay Questions) ❖ **Oral & Practical / Clinical Examination** • **Long Case 01** • **Short Cases 04** • **TOCS 10 Stations**

Section-6

SYLLABUS FOR M.S ANAESTHESIA.

Physics & Equipment

- Basic definitions
- For example: types of flow, vapour pressure, critical pressure, critical temperature, boiling point, thermal conductivity
- Basic laws of physics applicable to anaesthesia
- Operation theatre environment and recovery area
- For instance, humidity, temperature, light, electrical safety, pollution, infection, post-anaesthesia care unit (PACU)
- Medical gas supply system vie (vacuum insulated evaporator)), manifolds, cylinders, regulation
- Anaesthesia machines, machine check, safety feature, flow meters, vaporizers, pressure relief valves
- Delivery system / breathing systems
- Mapelsons circuits, circle absorber
- Ventilation
- Basic principles of minutes' volume dividers,
- (pressure generator, flow generation)
- Scavenging system
- Anaesthesia sundries
- Largyngoscopes, guedel airways, face masks, laryngeal mask airways, endotracheal tubes, bougies, stilettos, connectors monitoring
- Standards / principles of monitoring
- Record keeping
- Critical incident monitoring
- Principles of oximetry
- Principles of capnography
- Electrocardiography
- Temperature monitoring
- Neuromuscular monitoring

- Blood pressure monitoring, non-invasive and invasive Central venous pressure monitoring
- Airways pressures / spirometry

General Anaesthesia

- Principals and Practice of Anaesthesia.
- Practice of Anaesthesia in special condition.
- Anaesthesia for Gynaecology & Obstetric & Genitourinary tract.
- Anaesthesia for ENT Surgery.
- Anaesthesia for Opthomological Surgery.
- Anaesthesia for Orthopedic Surgery.
- Anaesthesia for Card iatric Surgery.
- Anaesthesia for Paediatric Surgery.
- Anaesthesia for Neuro Surgery
- Anaesthesia for Plastic Surgery
- Anaesthesia for Geraitic Surgery.
- Anaesthesia for Fasio Maxillary surgery
- Anaesthesia for Electro convulsing therapy.
- Anaesthesia for out –side operating room
- Anaesthesia for Radiology Endoscopies
- Anaesthesia for Cardiac Lab
- Anaesthesia for Laparoscopy
- Anaesthesia for Cardio Pulmonary Resuscitation
- Anaesthesia for Emergency Anaesthesia
- Anaesthesia for Malignant hypothermia
- Anaesthesia for I.C.U

Preoperative assessment and preparation

- Preoperative assessment
- Disease and drug therapy
- Assessment of risk
- Preparation of patients
- Preoperative information of patients

- Preoperative medication

General anaesthesia: methods and techniques

- Components of general anaesthesia
- Narcosis
- Neuromuscular blockade and muscle relaxation
- Analgesia
- Inhalational anaesthesia
- Intravenous anaesthesia
- Major complications: prevention and treatment
- (malignant hyperthermia, shortness of breath)

Local and regional anaesthesia

- Epidural anaesthesia
- Spinal anaesthesia
- Local intravenous anaesthesia
- Nerve blocks and plexus blocks
- Major complications: prevention and treatment

Anaesthesia for special situations

- Day stay surgery
- Urology
- Gynaecology
- Obstetric anaesthesia and analgesia
- Immediate care of the newborn
- Paediatric surgery
- Ear, nose and throat surgery
- Ophthalmic surgery
- Endocrine surgery
- Neurosurgery
- Thoracic surgery
- Cardiac surgery
- Vascular surgery

- Transplantation
- Orthopaedic surgery
- Anaesthesia for nonsurgical procedures
- Positioning of the patient

Postoperative care

- Postoperative recovery
- Later postoperative management including transfusion and fluid therapy
- Postoperative pain
- Control of nausea and vomiting
- Communication with patients, relatives, nurses, and other health care ersonnel

Technical equipment and monitoring

- Central gas supplies
- Anaesthetic machines and systems
- Ventilators
- Ventilation systems
- Equipment for haemodilution and blood sparing
- Monitoring of pacemakers and defibrillators
- Measuring pressure, flow and volume of gases with respect to anaesthetic apparatus
- Analysis and monitoring of breathing including capnography
- Gas and vapour concentrations
- Pulse oximetry
- Electrocardiogram
- Arterial pressure and haemodynamics
- Cardiac function
- Neuromuscular transmission
- Temperature
- Level of sedation
- Electrical safety

Intensive care medicine

Diagnostic and therapeutic problems of the respiratory system

- Monitoring of the respiratory system
- Diagnostic investigations
- Oxygen therapy
- Artificial ventilation
- Artificial airway
- Management of postoperative pulmonary complications
- Management of respiratory failure

Intensive care medicine

Diagnostic and therapeutic problems of the cardiovascular system

- Monitoring of the cardiovascular system
- Diagnostic investigations
- Myocardial infarction
- Cardiac failure
- Cardiogenic shock and other types of shock
- Management of haemorrhage
- Haemostasis, thrombosis

Head injury and other CNS affections

- Head injury
- Multitrauma
- Sepsis
- Fluid, electrolyte, nutrition, and acid-base disorders
- Care of the unconscious patient regardless of aetiology
- Sedation

Care of the patient with multiple organ system failure, injury or disease

- Care of the patient requiring life support techniques
- Renal failure
- Hepatic failure
- Understanding and treatment of underlying disease
- Principles of hyperbaric oxygen therapy

Communication skills

- Communication with patients and relatives
- Communication with other health care personnel
- Management of organ transplant coordination

Pain management

Pharmacology

- Opioids
- Non-steroidal anti-inflammatory drugs
- Other systemic analgesics including adjuvants
- Neurolytics
- Local anaesthetic agents

Anatomy and physiology of pain

- Peripheral mechanisms of pain
- Central mechanisms for pain transmission

Pain modulation

- Factors which perpetuate pain
- Psychological aspects of pain

General principles of pain evaluation and management

Pain assessment

- History taking and physical examination in patients suffering from postoperative, cancer, and neuropathic pain
- Pain measurement in man, basic concepts and bias,
- Scoring systems (VAS, VRS, NRS, etc.)
- Psychological aspects of pain (individual differences, sociocultural influence, situational and environmental factors, the family and pain).

Techniques

- Transcutaneous nerve stimulation
- Perispinal opioid administration systems
- Frequently used analgesic nerve blocks (diagnostic purposes and pain control)

Surgical and non-surgical methods

- Neurosurgical pain relieving procedures (basic knowledge, indications, contraindications, and complications)
- Psychological, psychiatric, and behavioural interventions
- Multidisciplinary pain management

Acute pain

- Postoperative pain (mechanisms, physiological
- effects, treatment modalities, acute pain service)
- Pain following trauma
- Acute pain in children

Chronic pain

Diagnostic characteristics and treatment modalities of:

- Headaches (migraine, tension headache, headache of cervical origin,cluster headache, atypical facial pain, trigeminal neuralgia)Low back pain (anterior and posterior compartment syndrome, radicular and pseudoradicular syndrome);
- Neuropathic pain and pain syndromes (deafferentiation pain, phantom pain, sympathetic reflex dystrophia, causalgia, neuromata, postherpetic neuralgia, central thalamic pain)
- Cancer pain
- Pharmacological treatment with opioids, NSAIDS,
- Acetaminophen, antidepressant drugs, anticonvulsive
- Drugs and other mixed agents (co-analgesics)
- Indications and treatment possibilities using
- Perispinal opioid administration systems
- Transcutaneous nerve stimulation: indications and procedures
- Indications and treatment modalities using specific radiofrequency and neurolytic blockade techniques.
- Case management and communication skills

Pre-hospital and emergency medicine

General principles of emergency medicine

- Principles of triage
- Airway management

- Prehospital care
- Cardiopulmonary resuscitation including advanced life support
  Transport of gravely ill patients
- Injured patients
- Multiple injuries
- Management of shock
- Head injury
- Injuries to the neck and face
- Chest injury
- Burns
- Spinal injury
- Intoxications and poisoning

Section -7

SPECIFIC OBJECTIVES.

The objective of M.S postgraduate programme is as follows:-

- Block-1. First one year of training.
- Block-2. Four years of training.

Block-1.

A postgraduate student of M.S Anaesthesia programme at the end of the one year training is able to:-

- After attending research methodology works synopsis develop the skill to
  - Write synopsis
  - Write Research work
- The goals are to develop knowledge of surgical diseases and complications, develop surgical judgment, learn basic pre- and post-operative care, and develop elementary skills in surgical technique.
- Perform and document comprehensive surgery history and physical examination [H&P] abilities
- Understand and interpret indications for laboratory studies and imaging
- Develop skills necessary to establish and implement an effective patient management plan
- Perform service examination
- Demonstrate a solid foundation of knowledge
- Develop accuracy in clinical evaluation skills
- Provide compassionate ward and outpatient care as determined by patients, families, colleagues and ancillary health
- Develop and nurture sound and appropriate interpersonal and communication skills

Block-2.

A postgraduate student of M.S Anaesthesia programme at the end of 04 years training is able to:-

- Teach medical students the fundamentals of the surgical H&P
- Accurately interpret complex laboratory and imaging tests and other

fundamental skills

- Develop complex patient diagnostic and managerial skills
- Perform selected surgical procedures under direct supervision.
- Assist in major surgical procedures and perform those portions of the operation that are appropriate to the resident's level of training under direct supervision
- Demonstrates competency regarding performance of inpatient and surgical procedures
- Demonstrate clear and concise patient care plans
- Demonstrate the ability to implement the aforementioned patient care plans.
- Acquire trauma and commensurate critical care skills
- Demonstrate the ability to evaluate medical literature in journal clubs and on rounds
- Demonstrate an ongoing and improving ability to learn from errors
- Develop critical care and trauma care and technical skills
- Perform a clinical or basic research project that is appropriate
- Develop fundamental research skills
- Begin to direct ward and clinic patient care
- Instruct residents and medical students regarding their performance of selected non-complex surgical procedures appropriate to their level of training
- Demonstrate competency regarding performance of inpatient and surgical procedures
- Demonstrate clear and concise patient care plans
- Demonstrate the ability to implement the aforementioned patient care plans
- Provide high level non-operative care
- Manage and administrate the complexities of a large clinical and academic service
- Demonstrate ability to perform all major surgical procedures.
- Demonstrate the highest level of patient care skills, problem solving

skills and technical skills

- Have a working knowledge of the necessary pre-operative work-up and post-operative management of the complex surgical patient.
- Perform a focused surgical evaluation in context with the patient's complaint.
- Demonstrate an ability to prescribe appropriate parenteral and enteral feeding.
- Recognize and treat the complications of parenteral and enteral feeding.
- Demonstrate an ability to manage the fluid and electrolyte requirements, including acid- base issues of pediatric and adult surgical patients.
- Demonstrate an ability to perform an initial evaluation and management of critically ill surgical patients.

Section -8

RESEARCH THESIS / DISSERTATION

(a) CHARACTERISTICS OF THE RESEARCH TOPIC.

The Research Topic in clinical subjects should address 20% to the Related Applied Basic Sciences and in Basic Sciences should address 20% to the Related Applied Clinical Sciences. The research topic must consist of a reasonable sample size and sufficient no. Of variables to give training to the candidate to conduct research to acquire data, analyze data and reach results, discuss results and draw conclusions and thus test the hypothesis.

During course on Research Methodology and Biostatistics held during Phase-I of the Course, the Candidate is expected to develop synopsis of Research.

(b) GUIDELINES FOR PREPARATION OF SYNOPSIS

The applicants should organize the synopsis to address the following points:-

a) Title :

b) Introduction	:	Should clearly manifest why the present work is undertaken.
c) Literature review	:	Place the project in academic context by referring to the major work by others on the topic.
d) Objectives	:	Define clearly the aims of the research proposal.
e) Significance	:	Explain the significance of the proposal for the field and the country.
f) Plan	:	Give year wise tentative plan of the work.
g) Methodology	:	Explain the approach and methods he will follow.
h) Bibliography	:	Upto dated references.

(c) SUBMISSION / EVALUATION OF SYNOPSIS.

Synopsis of research project will be submitted during the year-1 of the course. The synopsis will be submitted through the supervisor to the Dean / Director PGMI, Quetta. The synopsis will be evaluated by the following committee.

1. Dean / Director or his representative. Chairman
2. Supervisor of the student Member/ Secretary
3. One Prof. appointed by the Dean / Director Member
4. Co-opted member whenever required

After the approval, by the Committee the synopsis will be submitted to the Board of Higher Studies in the University of Balochistan for further approval by the Vice Chancellor University of Balochistan.

(d) GUIDELINES FOR THESIS / DISSERTATION FORMAT

The thesis must be bound in accordance with the following specification:

a) Four hard copies and one soft copy (CD) of thesis / dissertation to be submitted.

b) A4 paper size to be used, except for drawings and maps on which no restriction in placed.
A margin 1.5 inches to be left on left hand side. Thesis copy should be properly hard bounded.

c) The front should bear the title, name of the candidate and the insignia of the University.

(e) SUBMISSION OF THESIS / DISSERTATION.

1) The Thesis / Dissertation must be bound in accordance with specifications.
2) Four (4) copies of the Thesis must be submitted at least 6- months before the commencement of the written and oral Examination.

3) The minimum duration between approval of synopsis of research and submission of thesis should by 2 years, the maximum duration will be 5 years.
4) The Thesis will be submitted along with Bank Challan Form of amount as fixed by University of Balochistan paid in the account of University of Balochistan.
5) Application for Thesis Evaluation recommended by the Supervisor.

Section -9

LOG BOOK.

The residents must maintain a log book and get it signed regularly by the supervisor. A complete and duly certified log book should be part of the requirement to sit for MS examination. Log book should include adequate number of diagnostic and therapeutic procedures observed and performed the indications for the procedure, any complications and the interpretation of the results, routine and emergency management of patients, case presentations in CPCs, journal club meetings and literature review.

Proposed Format of Log Book is as follows:

Candidate's Name: _____

Roll No. _____

The above mentioned procedures shall be entered in the log book as per format

PROCEDURES PERFORMED

S #	Date	Name of Patient, Age, Sex & Admission No	Diagnosis	Procedure Performed	Supervisor's Signature

EMERGENCIES HANDLED

S #	Date	Name of Patient, Age, Sex & Admission No	Diagnosis	Procedure / Management	Supervisor's Signature

CASE PRESENTED

S #	Date	Name of Patient, Age, Sex & Admission No	Case Presented	Supervisor's Signature

SEMINAR / JOURNAL CLUB PRESENTATION

S #	Date	Topic	Supervisor's Signature

Evaluation Record
(Excellent, Good, Adequate, Inadequate, Poor)

At the end of the rotation, each faculty member will provide an evaluation of the clinical performance of the fellow.

S #	Date	Method of Evaluation (Oral, Practical, Theory)	Rating	Signature

- Log Book will be signed by the supervisor / Co- Supervisor regularly.
- Log Book completion is must before the candidate examination forms are signed.
- Log Book should be used in Practical / Clinical Examination at viva voice table or at TOCS cabin.

Section -10

EVALUATION / EXAMINATION

INTERMEDIATE EVALUATION PART-I EXAMINATION.

1. Eligibility to appear in Part – I Examination

(a) Application by the candidate recommended by the Supervisor.

(b) Certificate by the Supervisor , counter signed by Dean PGMI that candidate has regularly attended at least 75% of the basic sciences classes, Lectures, Seminars, Practical, demonstrations of Phase–I education.

(c) Bank Challan Form of Payment of examination fee as fixed by the university of Balochistan.

2. REGULATIONS.

a) All candidates admitted in MS Anaesthesia course will appear in Part – I examination at the end of 1st Calendar Year.

b) The candidate who fails to pass the examination in 3 consecutive attempts availed or un-availed, shall be dropped from the course.

c) The candidates who will not pass this examination within two years after their admission, their name will be removed from the course.

d) The Part-I Examination will Consist of Paper-I on Basic Sciences Education (relevant to the specialty) and Paper-II on Principles of Anaesthesia.

e) For Part-1 Examination the Paper-I and Paper-II will be set from the MCQ bank. The question for MCQ bank will be provided by all the subject specialist involved in teaching the curriculum of the course

f) Paper Weight age; each paper will carry 100 Marks. Time allowed for each Paper will be three hours.

g) The Pass Marks will be 60 % in each paper.

h) Papers will have 100 MCQ Single Best in each paper.

3. CONTENTS OF THEORY PAPER PART-I EXAMINATION.

SUBJECT	COMPONENTS	NO OF QUESTIONS	MARKS
Basic Science Education Paper-I	MCQ's Single Best Type	100	100
Principles of Anaesthesia Paper-II	MCQ's Single Best Type	100	100

FINAL EVALUATION: (PART-2 EXAMINATION)

(a) ELIGIBILITY TO APPEAR IN PART-2 EXAMINATION.

1. The candidate has completed the prescribed period of training of the course.
2. The candidate has passed the Intermediate Evaluation.(Part-1 Examination).
3. The thesis / dissertation must be dully approved by University of Balochistan.
4. Certificate by the Supervisor that the Log Book of candidate is complete in all aspects and is signed by the Co-Supervisor and the Supervisor. The original Log Book will be presented by the candidate during Practical / Oral examination.
5. A certificate by the Supervisor /Counter signed by Dean PGMI, that the candidate has attended at least 75% of the lectures, seminars, practical/clinical demonstrations;
6. The application form for Part-II examination with recommendation of the Supervisor.
7. The Bank Challan Form for the payment of the Examination Fee of amount as fixed by University of Balochistan.

(b) COMPONENTS OF THE PART-2 EXAMINATION.

1- Theory (300 Marks)
2. Clinical / Practical (300 Marks)

Total = (600 Marks)

(i) CONTENTS OF THEORY PAPERS.

SUBJECT	CONTENTS	NO OF QUESTIONS	WEIGHTAGE	MARKS
Anaesthesia	MCQ Paper-A Single Best Type	100	0.75/Per	75
Anaesthesia	MCQ Paper-B Single Best Type	100	0.75 /Per	75
Anaesthesia	Short Essay Paper-A	10	0.75/Per	75
Anaesthesia	Short Essay Paper-B	10	0.75 /Per	75

Total 300 Marks

- **Candidate must secure 60% in each paper to pass theory examination**.

(ii) CLINICAL / PRACTICAL EXAMINATION FOR M.S ANAESTHESIA

SUBJECT	COMPONENTS	ASSESSMENT TECHNIQUES	MARKS
Anaesthesia	Long Cases	1	100
	Short Cases	4	100
	TOCS	Specimens, Instruments, Investigation for interpretation including X-ray, MRI, ICT, Nuclear scans, Table Viva on Log book, Table Viva on Thesis / Dissertation, Slides etc.	100 (10 Stations 10 Marks Each station).

- **Candidate must obtain 60% in total clinical component and 50% in each component to pass clinical examination.**

(d) NUMBER OF EXAMINERS.

The Final Evaluation (Part-2 Examination) will be conducted by a board of four examiners of Anaesthesia. All examiners have equal functions except the chairman who will be responsible to conduct the examination process and send result to the controller university.

(e) RESULT.

The candidates who will Pass their Theory and Clinical / Practical examination separately will be declared pass The Candidates who will Pass in Theory but fail in Clinical / Practical examination will re-appear only in Clinical / Practical examination again for another two times. After total of three attempts in Clinical / Practical examination the candidate will have to appear in all the parts of Theory and Clinical / Practical Part-II examination.

- To pass as ordinary, the candidate must obtain 60% marks in each of 2 components.
- To pass with distinction, the candidate must obtain overall marks should be 80% or above.

Section -11

SUPERVISION OF POST GRADUATE STUDENT (TRAINEE MEDICAL OFFICER)

Purpose:

To ensure that Trainee Medical Officers / residents are provided adequate and appropriate levels of supervision during the course of the educational training experience and to ensure that patient care continues to be delivered in a safe manner.

Policy and Procedure:

The Supervisor is responsible for all care delivered by trainees. Trainees shall always be appropriately supervised and the supervision of trainees is ultimately the responsibility of the supervisor, who is accountable to the PGMIQ. PGMIQ shall have a mechanism in place that communicates to the trainees the identity of the Supervisor and back-up coverage by another faculty member in the event that the Supervisor is not immediately available.
All program faculty members supervising Trainee Medical Officers / residents must have a faculty or clinical faculty appointment in the Bolan Medical College Department of surgery or be specifically approved as supervisor by the PGMIQ. Faculty schedules will be structured to provide Trainee Medical Officers / residents with continuous supervision and consultation.

Trainee Medical Officers / Residents must be supervised by faculty members in a manner promoting progressively increasing responsibility for each Trainee Medical Officer / resident according to their level of education, ability and experience be provided information addressing the method(s) to access a in a timely and efficient manner at all times while on duty.

The program provides additional information addressing the type and level of supervision for each post-graduate year in the program that is consistent with the PGMI Quetta program requirements and, specifically, for supervision of Trainee Medical Officers / Residents engaged in performing invasive procedures.

1. To provide patients with quality care and Trainee Medical officers/Resident trainee with a meaningful learning experience, a

supervising attending physician shall be clearly identified for each patient admitted to, or consulted by, the surgical service. It is the responsibility of the Trainee Medical Officers / Residents trainee to notify an attending physician that a consultation or admission has been initiated on his/her service, based on the call schedule and back-up mechanisms established in the department.

2. The supervising attending physician is ultimately responsible for all recommendations rendered and care delivered by Trainee Medical Officers / Residents trainee, paramedical personnel and other trainees on the surgical service.
3. Supervision shall be readily available to all Trainee Medical Officers / Residents on duty. Each program or service in the department shall maintain a clear call list of attending physicians; with appropriate back up in the event the supervising physician is not immediately available (this typically represents another attending faculty on call that same day). A comprehensive call list of Trainee Medical Officers / Residents and attending physicians is disseminated to all switchboard operators, patient affair coordinators, clinical care areas and all covering Trainee Medical Officers / Residents on a monthly basis.
4. Supervision shall be conducted to ensure that patients receive quality care and Trainee Medical Officers / Residents assume progressively increased responsibility in accordance with their ability and experience, based on curriculum objectives for the respective level of training.
5. Levels of supervision include an attending physician demonstrating a procedure, assisting with the procedure, present physically in the area where intervention is performed, attending available by telephone, senior Trainee Medical Officer / Resident or other supervisor present physically or available by telephone. The attending physician in charge of a respective procedure shall determine the level of supervision for a particular resident and the specific invasive procedure.
6. The responsible attending physician may delegate supervision of more junior residents to a more senior resident as appropriate. These determinations shall be consistent with the individual resident

knowledge base and skills, the complexity of the case and procedure, and the residents prior evaluations regarding levels of performance per the residency program core curriculum objectives for each level of training.

7. The Trainee Medical Officers / Residents must request help when the need for assistance is perceived, and responsible attending physicians must respond personally when such help is requested. When a patient's attending physician is not available, a previously designated physician or the attending on call shall assume all coverage responsibilities for the patients.
8. The Senior Trainee Medical Officer / Resident shall relay to the Department Chair or the Supervisor any incident where another Resident did not notify a responsible faculty member, a responsible faculty member was not responsive, or any other breach of supervision as outlined in this policy.

Section -12

GRIEVANCES

The entire faculty is dedicated to Trainee Medical Officer / Resident education and to providing the best possible environment in which to learn. If there are any problems that arise; personal problems, communication issues with team members, complaints about working conditions, the perception or allegation of harassment or abuse etc, the faculty encourages the residents to ask for help. The residents are welcome to contact the Registrar and Dean / Director of PGMIQ.

GRIEVANCE POLICY AND PROCEDURE

Grievances are limited to allegations of wrongful suspension during the training year. The decision to suspend, recommendation to dismiss or termination is an academic responsibility of the Supervisor If a Trainee Medical Officer / Resident believes he/she has been wrongfully suspended or recommended for dismissal or termination, the grievance process described below can be invoked. The process is intended to protect the rights of the Trainee Medical Officer / Resident and the training program and to ensure fair treatment for both parties.

In all cases of suspension, termination, or non-renewal of contract, it is expected that the appropriate probationary and remedial periods will have been performed.

All "written notification" associated with the formal grievance process shall be by certified mail.

Grievance Procedure

1. Notification of intent to appeal: After receiving the written notification of suspension dismissal or termination, the Trainee Medical Officer / Resident will have 10 calendar days to file, in writing, a formal appeal to the dean PGMIQ. The Trainee Medical Officer / Resident may be represented by an attorney in an advisory capacity, but the attorney may not function as a spokesperson for the Trainee Medical Officer / Resident during this grievance process.

2. Assembly of Disciplinary committee: Upon receipt of an appeal, the Dean will refer to disciplinary committee to review the Trainee Medical Officer / Resident case. The committee shall seek advice from PGMI Council who shall be present for the hearing to advise the committee. The disciplinary committee may also seek advice from outside experts in the field of Trainee Medical Officer / Resident specialty if deemed necessary.

The disciplinary committee will include the deputy dean for clinical affairs (or designee), two regular faculty member from a different training program. The deputy dean for clinical affairs will chair the disciplinary committee. The Resident may object to a member of the disciplinary committee for cause. The Dean has sole discretion to replace a member if deemed warranted.

3. Hearing: The disciplinary committee will assess the merits of the case and hear evidence and arguments by the Trainee Medical Officer / Resident and the supervisor, or department chair, or division head.

The supervisor, department chair, or division head is obligated to present to the disciplinary committee the reasons for and substantiating evidence of the resident suspended / dismissed or termination. The Trainee Medical Officer / Resident may question witnesses who testify on behalf of the program director, department chair, or division head. The Trainee Medical Officer / Resident may present documents, letters of support and call the testimony of witnesses. These witnesses may be questioned by the supervisor, department chair, or division head.

The disciplinary committee shall tape / record the hearing proceedings, but not its deliberations. Either party may, at its own expense, have a verbatim transcript made of the proceedings. Both parties may request a copy of the tape / recording made by the committee.

4. Final Determination: The disciplinary committee will make its determination within 30 days from the close of the hearing. The disciplinary committee will notify the supervisor PGMI, division head, or program director;

and the dean in writing of its decision. The decision of the committee to uphold the termination or to reinstate the resident is final. Should the Trainee Medical Officer / Resident be reinstated, the disciplinary committee may impose an additional period of probation and/or remediation as a condition of continuation.

Notification Required:

1. Reporting required for Resident dismissed, suspended, or required Notice will be according to the PGMI Policy, any Trainee Medical Officer / Resident "who has not progressed satisfactorily in the program or who has been dismissed from the program for inadequate performance or ethical reasons". The phrase, "not progressed satisfactorily in the program," means those residents who have been dismissed, suspended or required to repeat a year of the program.

2. Probation: Probation is a remedial mechanism utilized by the PGMI in a variety of circumstances. It is designed to improve the academic performance of a Trainee Medical Officer / Resident. In most instances, Trainee Medical Officers / Residents by supervisor placed on probation continue to progress satisfactorily in a program. Regular reporting of Trainee Medical Officers / Residents placed on probation to the PGMIQ is required.

3. Referral to Health Department Government of Balochistan.

If a Trainee Medical Officer / Resident is government employee and is on deputation for his postgraduate studies to PGMIQ. The PGMIQ Directorate will report the final recommendation of disciplinary committee to his parent department e.g. Health Department Government of Balochistan.

Section -13

TRAINING SITE

ATTACHED TEACHING HOSPITALS.

(i) Bolan Medical Complex Hospital Quetta

(ii) Sandeman Provincial Hospital Quetta.

Section -14

RECOMMENDED BOOKS & JOURNALS

Section-15

FACULTY MEMBERS

ASSOCIATE PROFESSOR.

Dr. Amjad Ali MBBS, MCPS, FCPS

ASSISTANT PROFESSOR.

Dr. Muhammad Arif MBBS, FCPS

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