

*PGMC*



**LIAQUAT UNIVERSITY**  
of Medical & Health Sciences  
Jamshoro

# **CURRICULUM**

**POSTGRADUATE COURSES / TRAINING  
PROGRAMMES**

**MD**

**Gastroenterology**



**Postgraduate Medical Centre, LUMHS,  
Jamshoro**



# **CURRICULUM**

## **MD Gastroenterology**

**DEPARTMENT OF GASTROENTEROLOGY  
LIAQUAT UNIVERSITY OF MEDICAL & HEALTH  
SCIENCES, JAMSHORO**



## **INTRODUCTION**

Department of Gastroenterology Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro caters for the Gastroenterology services to the patients of entire Sindh, although its main intake comes from city of Hyderabad and its surrounding rural town. Most of the district hospitals do not have the trained Gastroenterologists to meet the demand of patients suffering from various Gastroenterology ailments, though most of these hospitals don't have facilities of acute Gastro emergency care units, hence it would be timely to train doctors with general medical background in the specialty of clinical Gastroenterology.

Apart from undergraduate teaching, currently department of Gastroenterology is also involved in Post Graduate teaching. The department of Gastroenterology provides training to post graduate courses of FCPS (Gastroenterology) offered by the College of Physician Surgeons Pakistan. Whereas, the aim of the postgraduate course leading of the master's degree of MD Gastroenterology is to introduce the medical graduate to more advance areas of Clinical and investigative Gastroenterology and medical Research. The course aims to illustrate the students, principles of medical research in the theoretical and practical manners through an structured program and the completion of a research project. Finally we aim to foster an interest in the conduct of research throughout a medical career and the ability to critically evaluate research work in general.

The clinical services have a distinguished history of providing care to acute and seriously ill Gastroenterology patient populations as well as tertiary level care. The goals of the department's educational programs are to attract the most outstanding trainees, enforce rigorous standard of



achievement to develop a learning environment and individualized program of study that help trainees reach their full potential, and to create an exemplary mixture of professionalism, service and integrity.

**VISION OF LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, JAMSHORO:**

Liaquat University of Medical & Health Sciences seeks to be a top-tier healthcare institution, producing ingenious academic leaders, medical researchers, and healthcare advocates to serve global community.

**MISSION OF LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, JAMSHORO:**

To establish a benchmark in healthcare education, enriching skilled professionals with ethical integrity while fostering social responsibility. Through collaborative efforts and lifelong learning, we strive to elevate standards in healthcare education and practice, ensuring our graduates positively impact on global communities with compassion and excellence.

**MISSION STATEMENT OF MD GASTROENTEROLOGY PROGRAM**

The MD Gastroenterology Program at Liaquat University of Medical & Health Sciences aims to set the standard in gastroenterology education, cultivating highly skilled and ethically grounded professionals. Committed to social accountability and lifelong learning, we endeavor to enhance healthcare quality through innovative education and research. Our graduates are prepared to serve their communities with compassion and excellence, positively impacting global health outcomes.





## **FACULTY OF GASTROENTEROLOGY**

### **Dr. Muhammad Akram Bajwa**

MBBS,MD (Gastroenterology)  
PHD (Gastroenterology)  
Associate Professor  
& Incharge Department of Gastroenterology

### **Dr. Riaz Hussain Awan**

MBBS, FCPS (Gastroenterology)  
Associate Professor

### **Dr. Nand Lal Seerani**

MBBS,FCPS (Gastroenterology)  
Assistant Professor

### **Dr Khadim Hussain Samejo**

MBBS, FCPS (Gastro)  
Senior Registrar



## **1. OBJECTIVES**

At the end of MD Gastroenterology course the student should be able to:

- 1.1 Recognize the key importance of Gastrointestinal problems in the context of the health priority of the country.
- 1.2 Practice the specialty of Gastroenterology in keeping with the principles of professional ethics.
- 1.3 Identify social, economic, environment, biological and emotional determinants of adult Gastrointestinal medicine and know the preventive, therapeutic and rehabilitative measure to provide holistic care to all patients.
- 1.4 Take a detailed history, perform full physical examination and make a clinical diagnosis.
- 1.5 Plan & deliver comprehensive treatment of illness in adults using principles of rational drug therapy.
- 1.6 Plan & advice measures for the prevention of Gastrointestinal disease.
- 1.7 Plan rehabilitation of Gastrointestinal patients after they recovered from Acute emergency and chronic illness.
- 1.8 Manage Gastrointestinal emergencies efficiently.
- 1.9 Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation.
- 1.10 Demonstrate communication skill of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities.
- 1.11 Develop skills as a self-directed learner, recognize continuing educational needs: use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence- based Gastroenterology.
- 1.12 Demonstrate competence in basic concepts of research



methodology and epidemiology.

- 1.13 Facilitate learning of medical/ nursing students, practicing physicians, para- medical health workers and other providers as teacher- training.
- 1.14 Play the assigned role in the implementation of national health programs, effectively and responsibly.
- 1.15 Organize and supervisors the desired managerial and leadership skills:
- 1.16 Function as a productive member of a team engaged in health care, research and education.

## **2. OUTCOME**

- 1.1 To develop competence in the management of Gastrointestinal diseases, problems in indoor and outdoor patients, those referred by family physicians and other doctors and in selecting patients for referral to advance Gastrointestinal disease and liver transplant center

## **3. LENGTH OF COURSE**

The course will be of five years duration, starting from January every year.

## **4. NUMBER OF CANDIDATES**

Two candidates will be admitted every year per supervisor.

## **5. ELIGIBILITY**

- 5.1 MBBS or equivalent qualification recognized by PMC.
- 5.2 One year house job in a recognized institute of which 6 month will be in Medicine and / or Gastroenterology.

## **6. CRITERIA FOR SELECTION**

- 6.1 Candidate will be admitted in MD Gastroenterology course after passing Part I examination conducted by Post Graduate Medical Centre, LUHMS, Jamshoro.
- 6.2 Candidates who have passed MD Medicine, FCPS Medicine





or an equivalent degree recognized by PMC are exempted from Part I conducted by Post Graduate Medical Center, LUMHS, Jamshoro.

- 6.3 Candidates who have passed FCPS, IMM in Medicine and Allied, Mid- term MD Medicine shall be exempted from Part I conducted by Post Graduate Medical Center, LUMHS, Jamshoro.

## **7. COURSE AND TRAINING**

### **7.1 Clinical Training:**

7.1.1 The period of training shall be for Five years.

7.1.2 Candidate shall attend 75% of all clinical and or class room activity prescribed for him, else s/ he will not be eligible for final examination.

7.1.3 Enrollment with university after admission within 03 months.

7.1.4 Registration as a research scholar. The postgraduate student is required to choose a topic of research and write a synopsis on the topic within 06 months of admission.

### **7.2 Rotations:**

|       |                                 |           |
|-------|---------------------------------|-----------|
| 7.2.1 | Gastroenterology WARD           | 26 MONTHS |
| 7.2.2 | Endoscopy Suite                 | 10 MONTHS |
| 7.2.3 | ER (Gastroenterology EMERGENCY) | 5 MONTHS  |
| 7.2.4 | OPD                             | 8 MONTHS  |
| 7.2.5 | GI Radiology                    | 1 MONTHS  |
| 7.2.6 | GI Histopathology               | 1 MONTHS  |
| 7.2.7 | Liver transplant                | 1 MONTHS  |
| 9.2.8 | PEDIATRICS GASTROENTEROLOGY     | 1 MONTHS  |
| 7.2.9 | General Medicines               | 3 MONTHS  |



|         |             |          |
|---------|-------------|----------|
| 7.2.10  | ICU         | 1 MONTH  |
| 7.2. 11 | Cardiology  | 1 MONTHS |
| 7.2. 12 | PULMONOLOGY | 1 MONTH  |
| 7.2.13  | NEPHROLOGY  | 1 MONTH  |
|         |             |          |

### 7.3 Mandatory Workshops:

The candidate has to attend the following mandatory Workshops:

7.3.1 Computer and internet

7.3.2 Research methodology and thesis writing

7.3.3 Communication Skills

7.3.4 Basic Life Support (BLS)

7.3.5 Advanced Cardiac Life Support (ACLS)

### 7.4 Thesis:

The Candidate has to submit and get approved thesis six months before appearing in the MD Part-II Examination.

### 7.5 Log Book:

The candidates are required to maintain a prescribed log book with entries of academic session, procedures carried out and seminars/symposia attended during the five years tenure duly signed by Supervisor & In-charge. The log book is to be submitted to the examination Department along with MD Part-II examination form.

## **8. ROLE OF THE SUPERVISOR**

The supervisor has to play a pivotal role in training of the candidates by imparting theoretical and practical knowledge to them. The supervisor is a person with post-graduation recognized PMC, HEC and by the LUHMS having a vast experience of teaching and administration.

8.1 The prime role of supervisor is to impart knowledge to the



trainee in order to train him to diagnose and manage the acute and chronic Gastrointestinal problems with responsibility.

- 8.2 He is responsible to provide a conducive atmosphere for trainee learning.
- 8.3 He should help out the trainee at any time of difficulty with open heart.
- 8.4 He should make the trainee capable of interpreting the findings or laboratory investigations and act accordingly.
- 8.5 The supervisor is required to maintain a liaison with Director PG and examination department for uninterrupted training of the candidate.
- 8.6 He is required to inform the authorities regarding any misconduct or irregularity of the candidates in due time.
- 8.7 He is required to ensure that the trainee has completed the training in stipulated time as per requirement of the syllabus.

## **9. RESPONSIBILITIES OF TRAINEE**

Having provided the conducive atmosphere by the university, trainee is required to engage himself in acquiring knowledge and enhance his capabilities in dealing with the patients in the stipulated period.

- 9.1 The trainee should acquire a complete knowledge of the course he is entering in, in order to prepare himself / herself for the future.
- 9.2 The trainee should select his/ her supervisor at his/ her own will.
- 9.3 The trainee should undergo his/ her training with due sense of responsibility and dedication.
- 9.4 The trainee should select a reasonable and applicable topic for thesis in consultation with his supervisor and plan for the research on the approved topic within the time allocated.
- 9.5 The trainee is required to submit his/ her thesis duly signed by the supervisor six months ahead of the examination.



- 9.6 The trainee is required to fulfill all the requirements for appearing in the examination.
- 9.7 He is required to Enroll with university within first two weeks after admission.
- 9.8 Registration as research scholar.

The post graduate student is required to choose a topic of research and write a synopsis on the topic within six months of admission, to be evaluated by the Scrutiny Committee of and then by Advanced Studies & five search Board for final registration.

## **10. SPECIFIC LEARNING OBJECTIVES**

Residents completing MD Gastroenterology training will have firm instruction, clinical experience, and will be able to demonstrate competence in the evaluation and management of adult patients and apply scientific principles for the identification, prevention, treatment rehabilitation of following acute and chronic disorders in Gastroenterology:

- 10.1 Inpatient care

Trainees should be directly involved in the routine care of patients admitted for assessment and treatment.

- 10.2 Gastroenterology consultation

A trainee should provide gastroenterology consultation service for the whole hospital under the supervision of the supervisors to whom they are attached.

- 10.3 Gastroenterology Emergency care.

Trainees should be directly involved in assessment, investigation and management of all type of gastroenterology emergencies referred both from a general hospital or a specialist center (depending on the phase of the program)

The trainee should take part in an on call emergency Rota for General surgery when appropriate .

- 10.4 Gastroenterology Outpatient Clinics.

The trainee will have a regular commitment to Gastro





out-patient. The trainee should participate in Gastroenterology outpatient clinics throughout their training.

- 10.5 Endoscopy

A trainee must have a basic knowledge and principles of all diagnostic and therapeutic endoscopic procedures. At the end of training he/she will be able to perform all diagnostics and most of basic therapeutics endoscopic procedures.

- 10.6 Endoscopic Retrograde Cholangiopancreatography(ERCP)

- The trainee must have basic knowledge and principles of ERCP and at last year hand on will be given on intubation, duodenal positioning, cannulation and Stent removal

- 10.7 Teaching

All trainees will be actively involved in teaching undergraduate nurses, and technicians as appropriate.

- 10.8 GI imaging

All trainees need to be experts in a wide range of GI imaging including interpretation of Ultrasound Abdomen, MRCP, CT scan abdomen and pelvis, MRI scan of abdomen and pelvis, EUS and PET scan.

- 11. DIDACTIC TRAINING

Over the five years of postgraduate training, different didactic include includes:

11.1 Weekly grand rounds.

11.2 Practice guideline and research presentation.

11.3 Core Curriculum Seminar.



11.4 Morbidity and Mortality (M & M) meetings.

11.5 Journal Club.

11.6 Morning Report (Inpatient and Outpatient).

A comprehensive-yearive year didactic core curriculum addresses both inpatient and outpatient Gastrointestinal Patients.

## **11. GENERAL SKILLS**

During ,traipostgraduatest graduate require skills that are irrespective of the specific training post and 'generic' to the doctor. This is an exciting opportunity to build upon skills already established as an undergraduate.

### **12.1 Generic Skills**

#### **12.1.1 History clinical care**

History taking, physical examination and medical clerking skills

Time management, risk, management and decision making skills Basic life support

#### **12.1.2 A Maintaining good medical practice**

Learning new Evidence and guideline

Communication skills

Within a consultation

Breaking bad news

With colleagues

Complaints

#### **12.1.3 Working with Colleagues (team working)**

#### **12.1.4 Maintaining trust.**

Professional behavior

Ethics and legal issues

Patient partnership and health promotion



### 12.1.5 Teaching & training

These objectives should not restrict learning, they do however, outline the minimum requirements for satisfactory completion of postgraduate clinical training.

## 12. PRINCIPLE AREAS OF COMPETENCE

### 13.1 Clinical Expertise and Judgment

#### 13.1.1.1 Basic Clinical Skills

13.1.1.2 The ability to obtain a reliable history and elicit abnormal physical signs.

13.1.1.3 The ability to interpret findings and the the result of investigation.

13.1.1.4 The ability to perform the defined practical procedure needed for the management of medical emergencies.

#### 13.1.1.5 Clinical Reasoassess

The ability to asses and diagnose complex medical problems, particularly those involving multiple systems and determine their relative priority.

#### 13.1.1.6 Expert Management

13.1.3.1 The ability to investigate clinical problems in well-informed, systcost-effectiveormed and cost effective way.

13.1.3.2 The ability to recognize and manage all major medical emergencies and other acute presentations of illness affecting concurrently one or more organ systems.

13.1.3.3 This should include the administration of the nsary immediate care and in an appropriate evidence-based way.

13.1.3.4 Expertise in the ongoing care and management of chronic community aspects of the disease.



- 13.1.3.5 The ability to determine the indication for transfer to a specialist unit.
- 13.1.3.6 The ability to manage patieholistically way, considering all psychosocial as well as medical factors improving quality of life.
- 13.1.3.7 The ability to plan and achieve, successful patient discharge from hospital, including knowledge of the various discharge options.
- 13.1.3.8 The ability to determine when the emphasis of treatment should change from the curative to the patients whose prognosis is limited.
- 13.2 Establishing Effective Doctor / Patient Relationship
  - 13.2.1 Communication Skills
    - 13.2.1.1 The ability to promote and ccooperate and to help patients cope with distressing or other emotions, and the following skills:
    - 13.2.1.2 Active listening
    - 13.2.1.3 Understanding the need for and enabling the venventilation ings.
    - 13.2.1.4 Warmth, support and em,patthy.
    - 13.2.1.3 Respect, guidance, partnership.
    - 13.2.1.4 The ability to educate and motivate patients towards co-operating with advice and to demonstrate the following skills: elicitation of existing views/ knowledge.
    - 13.2.1.5 Offering clear explanatioexplanationsuctions checking understanto understanding.
    - 13.2.1.6 Problem using positive attribution and praise.





13.2.1.7 The ability to deal with special situations e.g. breaking bad news to patients and related other sensitive issues; preparation for life threatening situations.

13.2.1.8 Obtaining informed consent; conducting family conferences with complaint, etc.

### 13.2.2 Ethical Principles

The observation of clear ethical principles such as dignity of patients, their right to privacy and confidentiality, their right to the best possible care, their right of giving autonomy and informed consent, their right to decline treatment or to take part in teaching or research.

## 13.3 Leadership and Personal Management Skills

### 13.3.1 Personal Achievement

13.3.1.1 The ability to exercise independent judgment and clinical self-confidence. The ability to be self-directed and to achieve objectives. The ability to have high internal standards and a desire to improve. The ability to maintain effective work performance under pressure when appropriate and to cope with one's own emotions.

13.3.1.2 The ability to accept and act on constructive criticism.

### 13.3.1.3 Interpersonal Skills

13.3.1.4 The ability to initiate, build and maintain good relationships, both one to one and in groups.

13.3.1.5 The ability to lead by example.

13.3.1.6 The ability to put oneself in the place of another and correctly interpret their concerns and feelings.



- 13.3.2.4 The ability to calculate in advance the likely effect of one's words or actions on an individual or group in order to bring about a desired effect.
- 13.3.2.5 The ability to time one's actions or interventions in order to maximize their effectiveness.
- 13.3.2 Managing Others
  - 15.3.3.1 The ability to get others to work effectively by planning and delegating work.
  - 15.3.3.2 The ability to coach and supervise others and give clear feedback about performance, good or bad.
- 13.4 Organization, Planning and Service Management Skills
  - 13.4.1 The ability to conduct and administer a general medical service, including seeing patient referrals, dictating letters, summaries and reports etc.
  - 13.4.2 The ability to liaise and work effectively with professional colleagues' particularly general practitioners and members of the multidisciplinary team.
  - 13.4.3 The ability to participate in committee work concerned with planning and organizing services.
  - 13.4.4 The ability to supervise and work with medical & allied staff.
  - 13.4.5 The ability to develop a strategic view & health service management system.
- 13.5 Education and Mentoring Skills
  - 13.5.1 Being a Role Model

The ability to set an example of good practice and be respected as a Physician.
  - 13.5.2 Educational Supervision



- 13.5.2.1 The ability to motivate, demonstrate and explain particularly the reason for clinical decisions.
- 13.5.2.2 The ability to build relationships with trainees.
- 13.5.2.3 The ability to use appropriate teaching methods and styles.
- 13.5.2.4 The ability to assess the performance of trainees.

### 13.6 Quality Standard, Effectiveness, Research and Development Skills

- 13.6.1 The ability to plan and conduct clinical audit studies of aspects of the G(I) M service in order to improve service quality.
- 13.6.2 The ability to present the results of audit or research to both small and large audience.
- 13.6.3 The ability to evaluate research publications to assess their importance.
- 13.6.4 The ability to reflect on clinical practice and plan future educational needs.
- 13.6.5 To maintain an expert knowledge of the diagnosis and treatment of a broad range of common acute disorders through systematic continuing professional development.



## **14. COMPETENCE AT THE END OF TRAINING**

At the completion of training the post graduate will have to demonstrate his/ her competence in all the above listed abilities to the satisfaction of their supervisor. In particular he should be able to demonstrate,

- 14.1 The ability to diagnose, investigate and manage the patients independently and care for patients irrespective of the nature of the patients problems.
- 14.2 The ability to select the patients who require care of other specialists.
- 14.3 The breadth of clinical experience and competence in the management of the full spectrum to acute emergencies especially Gastrointestinal emergencies.
- 14.4 The ability to demonstrate the knowledge, skills and attitudes contained in the syllabus.
- 14.5 The ability to perform the specified list of practical procedures.

## **15. PARTIAL LIST OF SUGGESTED READING**

### 15.1 Books

- 15.1.1 Sleisenger and Fordtran's Gastrointestinal and liver diseases
- 15.1.2 CURRENT Diagnosis & Treatment Gastroenterology, Hepatology, & Endoscopy
- 15.1.3 Sherlock's Diseases of the Liver and Biliary System

### 15.2 Journals

- 15.2.1 The American journal of Gastroenterology
- 15.2.2 Journal of Hepatology
- 15.2.3 The European Association for the Study of the Liver Diseases (EASL)





15.2.4      The American Association for the Study of the  
Liver Diseases (AASLD)

15.2.5      The British Society of Gastroenterology (BSG)

## **16. THESIS AND PUBLICATION**

- 16.1 Candidate shall present thesis for MD Gastroenterology. Every candidate shall get his subject of thesis as well as supervisor approved by the advance board of studies six months before the date of final examination and shall forward the thesis to the registrar of university at least 04 months before the final date of the commencement of examination accompanied by the prescribed fees and certificate from the supervisor that the work is being undertaken under his supervision.
- 16.2 The thesis shall embody the result of candidate's own research or experience and be accompanied by precise reference to publication quoted. In the thesis the candidate shall indicate on what respect his contribution appears to him to advance the knowledge or practice of medicine. The thesis must attain to high standard and be satisfactory as regards, literacy, presentation, as well as in other respects. The thesis must be typed on a paper 11 by 8.5" with a margin of 1 1/2" each side. Only one side paper is to be typed. It shall be bound in cloth with the name and title on cover and should end with a summary embodying conclusion arrived at by the author.
- 16.3 The thesis if accepted shall be the property of Liaquat University of Medical and Health Sciences Jamshoro with all copyright. It shall not be published by author without permission from the university and the Professor of Gastroenterology. The thesis will be kept in library of Liaquat University of Medical and Health Sciences Jamshoro.



16.4 The thesis shall be examined by three examiners, one internal (not the supervisor) two external recommended by the board of studies, who shall report whether the thesis is accepted or rejected. If the thesis is approved at least by two examiners, the candidate shall be allowed to appear in the part II examination provided other eligibility criteria are full filled.

## **17. EXAMINATION**

Candidate has to pass Intermediate Assessment Examination (IAE) after completion of two years training before appearing in part-II examination of MD Gastroenterology.

### **17.1 Method of Intermediate Assessment Examination (IAE)**

|        | <b>S.#</b> | <b>TYPE OF QUESTIONS</b>               | <b>TOTAL NUMBER OF QUESTIONS</b>                        | <b>TOTAL MARKS</b> |
|--------|------------|--|---|--------------------|
| 17.1.1 | I          | SINGLE BEST QUESTION (SBQ)             | 50  | 50                 |
| 17.1.2 | II         | SHORT ESSAY QUESTION (SEQ)             | 10  | 100                |
| 17.1.3 | III        | BED SIDE ASSESSMENT OF CLINICAL SKILLS | LONG CASE 1   | 50                 |
| 17.1.4 |            |  | SHORT CASE 2  | 50                 |
| 17.1.5 |            |  | OSPE (OBJECTIVE STRUCTURED PRACTICAL EXAMINATION) / CVS | 50                 |

### **17.2 Part II Examination**

The candidate is eligible to appear in the final examination after fulfilling the following criteria:

17.2.1 Completion of full tenure of course with at least 75% attendance.



- 17.2.2 Submission and approval of thesis.
- 17.2.3 Satisfactory report from the supervisor.
- 17.2.4 Evidence of mandatory workshops attended.
- 17.2.5 Completed log book duly signed by supervisor.
- 17.2.6 Must have passed intermediate Assessment Examination (IAE).

### 17.3 Part-II Theory Examination

|        | <b>PAPER #</b> | <b>CONTENT</b>              | <b>NO: OF QUESTIONS</b> | <b>MARKS</b> |
|--------|----------------|-----------------------------|-------------------------|--------------|
| 17.3.1 | PAPER I        | MCQs                        | 75                      | 100          |
| 17.3.2 | PAPER II       | SHORT ESSAY QUESTIONS (SEQ) | 10                      | 100          |
| 17.3.3 | PAPER III      | LONG ESSAY QUESTIONS (LEQ)  | 04                      | 100          |

### 17.4 Table of Specifications (TOS)

|        | <b>Topics</b>  | <b>MCQs</b> | <b>Short Essay</b>  | <b>Long Essay</b>   |
|--------|--|-------------|---|---|
| 17.4.1 | Esophagus  | 07          | 10 questions allowed for entire course as per examiner's choice | 04 questions allowed for entire course as per examiner's choice |
| 17.4.2 | Acid peptic disorders of the gastrointestinal tract  | 04          |   |   |
| 17.4.3 | Motor disorders of the gastrointestinal tract        | 03          |   |   |
| 17.4.4 | Other Stomach Conditions                             | 02          |   |   |
| 17.4.5 | Irritable bowel syndrome and Functional GI disorders | 01          |   |   |
| 17.4.6 | Inflammatory bowel                                   | 03          |   |   |



|         |   |    |  |  |
|---------|---|----|--|--|
|         | diseases (I BD)                                     |    |  |  |
| 17.4.7  | Other Colonic Disease                               | 05 |  |  |
| 17.4.8  | Other small bowel and colonic diseases              | 01 |  |  |
| 17.4.9  | Solitary Rectal Ulcer Syndrome                      | 01 |  |  |
| 17.4.10 | Vascular disorders of the gastrointestinal tract    | 01 |  |  |
| 17.4.11 | Gastrointestinal infections                         | 01 |  |  |
| 17.4.12 | Gastrointestinal neoplastic disease<br>Tumorbiology | 01 |  |  |
| 17.4.13 | Hepatology  | 12 |  |  |
| 17.4.14 | Pancreatic Diseases                                 | 04 |  |  |
| 17.4.15 | Biliary Diseases                                    | 04 |  |  |
| 17.4.16 | Pediatric Gastroenterology                          | 02 |  |  |
| 17.4.17 | Geriatric gastroenterology                          | 01 |  |  |
| 17.4.18 | Gastrointestinal bleeding                           | 01 |  |  |
| 17.4.19 | Genetic/ inherited disorders                        | 01 |  |  |
| 17.4.20 | Advance Endoscopic Technique                        | 01 |  |  |
| 17.4.21 | Anal canal diseases/ disorder                       | 01 |  |  |





|         |   |    |  |  |
|---------|---|----|--|--|
| 17.4.22 | Other Topics  | 01 |  |  |
| 17.4.23 | Advanced Imaging Techniques in GI / Liver                           | 02 |  |  |
| 17.4.24 | Nutrition   | 02 |  |  |
| 17.4.25 | Techniques used in the basic investigation of gas trointestineancer | 01 |  |  |
| 17.4.26 | Professional Skills   | 01 |  |  |
| 17.4.27 | Procedural and Technical Skills                                     | 01 |  |  |
| 17.4.28 | Endoscopic procedures   | 03 |  |  |
| 17.4.29 | Liver transplant  | 02 |  |  |

### 17.5 Objective Structured Practical/Clinical Examination (OSPE/OSCE) & Bedside Assessment of Clinical Skills:

#### **Eligibility**

The candidate will be eligible if he qualifies the theory of Part-II with at least 60% marks in each paper.

The Clinical examination will consist of the following:

17.5.1 One long case (Gastroenterology) 100 marks

17.5.2 Four Short cases (Gastroenterology) 100 marks (25 marks each)

17.5.3 OSCE



## Outcomes

| DOMAIN    | LEARNING OUTCOME  | WEIGHTAGE | ASSESSMENT |
|-----------|---|-----------|------------|
| Knowledge | Identify common sign and symptoms of GI diseases                                      | 20%       | MCQ        |
|           | Explain pathophysiology of CA esophagus based on histopathology                       | 20%       | SEQs       |
|           | Describe various diagnostic method for peptic ulcer disease                           | 10%       | SEQs       |
| Skills    | Presenting examination technique on patient pleurisy with distension of abdomen       | 20%       | OSCE       |
|           | Perform accurate steps diagnostic endoscopy on a mannequin                            | 15%       | OSCE       |
| Affective | Demonstrate empathy and effective communication with IBD patients                     | 15%       | Role Pray  |
|           | Effectively counsel patient with CA pancreas about prognosis professionalism & Ethics | 10%       | Role Pray  |

### Step 2: Determine the Weightage for Each Domain

| Domain    | Weightage % |
|-----------|-------------|
| Knowledge | 40%         |
| Skills    | 40%         |
| Affective | 20%         |



**50 Stations:**

**100 Marks**

|             | <b>STATIONS</b>              | <b>QUANTITY</b> |
|-------------|------------------------------|-----------------|
| 19.5.1 .3.1 | Endoscopic Images            | 09              |
| 19.5.1.3.2  | ERCP Cholangiogram/EUS       | 08              |
| 19.5.1.3.3  | MRCP                         | 04              |
| 19.5.1.3.4  | Barium X rays                | 06              |
| 19.5.1 .3.5 | CT scan image                | 02              |
| 19.5.1.3.6  | MRI Image                    | 02              |
| 19.5.1 .3.7 | Endoscopy instrument         | 12              |
| 19.5.1.3.8  | PET scan's                   | 01              |
| 19.5.1.3.9  | Acute gastro Emergency       | 02              |
| 19.5.1.3.10 | Chronic disease              | 02              |
| 19.5.1.3.11 | Recent gastroenterology dugs | 01              |
| 19.5.1.3.12 | GI Disease and pregnancy     | 01              |

#### 17.6 Subsequent Examination:

The candidate who has passed theory of MD Gastroenterology Part-II Examination.

If the candidate fails three consecutive attempts he shall have to repeat theory examination of Part-II.

He shall be eligible to take two further attempts of OSCE consecutively.