بسم الله الرحمن الرحيم

CURRICULUM / STATUTES/ REGULATIONS

FOR 4 YEARS MD PAEDIATRICS

Faisalabad Medical University

Faisalabad

Contents

Section A

VISION STATEMENT:

Faisalabad Medical University has been established since 05-05-2017 for purpose of imparting better medical education and encouraging and arranging extensive research and publication in the field of medical science. The vision of university is:

"Striving to achieve national and international stature in undergraduate and postgraduate medical education with strong emphasis on professionalism, leadership, community health services, research and bioethics"

MISSION STATEMENT

The mission of the University is:

"Educate Healthcare professionals to prevent, diagnose and treat human illnesses to practice evidence-based medicine with focus on lifelong healthcare in order to meet the challenges of community needs and competitive medical profession at the same time"

STATUTES

Nomenclature

The name of degree programmer shall be MD Paediatrics.

Course Title:

MD Paediatrics

Training Centers

Department of Paediatrics in Affiliated hospitals of Faisalabad Medical University, Faisalabad.

Duration of Course

The duration of course shall be four (4) years with structured training in a recognized department under the guidance of an approved supervisor.

Course structure:

1. **Core knowledge:** Competency based learning for trainees. (2 exams to be conducted by university. Continuous internal assessment to be included throughout the Programme which is conducted by the department and will carry weightage in final assessment)
2. **Clinical Training** in Paediatrics
3. **Research and Thesis writing.**
4. **Mandatory Workshops** throughout the course of Programme will be conducted. The basic workshops will be attended by all trainees from all specialties and will be evenly distributed throughout the course:
    1. **Communication skills**
    2. **Research synopsis and thesis writing skills**

3. **Basic Biostatistics and Research Methodology**
4. **Information Technology Skills**
5. **Initial Life Support (ILS)**

At the end of each workshop, assessment will be done regarding the workshop and certificates will be issued to passing trainees only. The workshops will be conducted by the University and will be paid as in all post-graduate programmes and supervised by the department of Medical Education, FMU, Faisalabad. The trained certified coaches/teachers will be invited and they will get incentive from the university. All the interested trainers will contact the department for inclusion in trainers list.

Feedback of the facilitators will be recorded for the continuation of the process. Medical education department will issue yearly planner for these workshops in the light of curriculum document. University will certify it.

Section B:

Admission Criteria

Central induction Policy as per Government rules

Registration and Enrollment

The number of PG Trainees/ Students and Beds to trainee ratio at the approved teaching site will be as per policy of Pakistan Medical & Dental Council

The University will approve supervisors for MD Paediatrics courses.

Candidates selected for the courses after their selection and enrollment shall be registered with FMU as per prescribed Registration Regulation.

Accreditation Related Issues Of The Institution

A. Faculty

Properly qualified teaching staff in accordance with the requirements of Pakistan Medical and Dental Council (PMDC). Supervisors will be decided by the university according to the set standards and rules.

B. Adequate resources

The university will provide adequate resources Including class-rooms (with audiovisual aids), demonstration rooms, computer lab, clinical pathology lab, theaters, instruments and other equipment etc. for proper Training of the residents as per their course outcomes and objectives.

C. Library

Departmental library should have latest editions of recommended books, reference books and latest journals (National and International).

Freezing of Program & leave Rules:

Freezing of training, Maternity leave, Ex Pakistan Leave and Extra Ordinary Leave etc. would be allocated through the Office of Dean Postgraduate to the competent authority. It should be based on **Policy and Procedure Manual (PPM) of Post Graduate Residency (PGR) of Level III Program.**

8.1

Maximum of four weeks of leave (28 days) shall be allowed during one calendar year. No leave over and above 28 days shall be permissible in one calendar

year. All types of casuals, medical, ex-Pakistan leaves are included in these 28 days permissible leave account. Haj leave (45 days), maternity leave (89 days) and leave upon death of husband (40 days) is excluded from these 28 days leave. However, only one paid Hajj leave up to 40 days shall be given in entire PG training. Moreover, these leaves are not a right and may be regretted on administrative grounds. Leaves up to 5 consecutive days shall be granted at the Institutional Level and shall be updated in calendar on the PRP Leave Portal. Leave beyond 5 days shall be submitted to the department for approval well before time and PG shall not proceed on leave unless leave granted. Proceeding on leave without approval may call for disciplinary action.

8.2

In case of female PG Trainees, maternity leave of 90 days with stipend / salary will be given only once during the course of training. All those female PGRS who were undergoing training on 13-05-2023 or completing their extended training duration in lieu of first maternity leave, after the cut-off date 12-05-2023, shall be allowed payment of stipend during the extension period of three months over and above the prescribed training duration in lieu of first maternity leave only. However, the said provision shall not have a retrospective effect (The extended period of training in lieu of first maternity leave before 13-05-2023 shall not be paid and only the period left over w.e.f.13-05-2023 shall be paid).

8.3

Any maternity leave, other than the first, shall be allowed on unpaid basis, for which

PGR must work to complete the prescribed duration of training, which shall also be unpaid.

8.4 All PGRS must ensure to have approval of the maternity leave from the SHC&ME Department through proper channel. The Department shall only issue extension orders in lieu of first maternity leave if the leave is approved by the department. There shall be no ex-post facto approval of the maternity leave at the time of seeking extension in lieu of first maternity leave. All such cases shall be considered as unauthorized absence where leave had not been sanctioned by the department well in time and no extension orders in lieu of first maternity leave shall be approved by the SHC&MED for receipt of stipend. Merely sending the leave and proceeding on leave without approval is misconduct and may call for disciplinary action. PGR shall ensure to initiate the case well in time to have leave sanctioned prior to proceeding on leave.

8.5

Leave will be granted to PGR upon death of her husband for a

maximum period of forty days.

8.6

All PG Residents who will avail freezing and Hajj, Maternity and leave upon death of husband and shall have to work to complete the prescribed duration of training. For this period, they will not get stipend / salary.

8.7

All cases of leave shall be forwarded through proper channel i.e. from VC / Principal / HOI to the SHC&ME Department well in time for approval and final

orders.

8.8 EX-Pakistan Leave for Hajj & Umrah will be recommended by Degree Awarding Institutions and forwarded to the SHC&ME Department for issuance of NOC and approval of leave. Hajj leave will be only once during the whole training and for a

period of not more than 45 days with stipend / salary during the entire residency tenure.

8.9

All Postgraduate Trainee who will avail leave for Hajj must undergo additional training to complete training requirements. For this period, they will not get stipend / salary.

8.10

The Ex-Pakistan leave might be allowed for purposes other than for Hajj & Umrah, to a Level-III PG Trainee provided he submits proper written application with reasons for going ex-Pakistan, Surety bond stating that he would return to Pakistan upon completion of leave period or earlier falling which his surety would pay back all stipend already paid to the PG Trainee and he shall be permanently debarred from future PG Trainings under the CIP and PPM of Punjab, leave title account and recommendation by the Institutional Committee duly consented to by the VC/ Principal/ HOI. The Degree Awarding Institutions (CPSP/ Medical Universities) may suggest any other necessary documentation, if they feel so. All ex-Pakistan leave other than Haj leave as mentioned above shall be within the 28 days permissible leave period in one calendar year. No leave beyond 28 days shall be allowed in one calendar year.

9. Freezing:

9.1

Freezing of training shall be allowed after completion of two years of initial training and mid-term evaluation. However, freezing of the training could be allowed before completion of two years of initial training on medical grounds only duly

verified by the Special Medical Board constituted by the department on recommendations of Institutional Post Graduate Committee of the respective Training Institution.

9.2

Freezing can only be allowed once during the entire PG training and it must not exceed 6 months except in case of any untoward circumstances which include natural calamity, disasters and life threating medical grounds. Moreover, freezing may also be availed in episodes, however, total duration shall not exceed 6 months during entire course of training. If a Postgraduate Trainee applies for freezing, his/her original documents will be submitted to the institution to ensure his/her continuation of training. After obtaining a No Objection Certificate from DAI, freezing of the program shall be notified by Specialized Healthcare & Medical Education Department.

9.3

All cases of leave shall be forwarded through proper channel i.e. from VC / Principal / HOI to the SHC&ME Department well in time for approval and final

orders.

Section C:

AIMS AND OBJECTIVES OF THE COURSE

AIM

The aim of four years MD Programme in Paediatrics is to train residents to acquire the competency of a specialist in the relevant field so that they can become good clinicians, teachers, researchers and community health provider in their specialty after completion of their training according to the global standards.

LEARNING OBJECTIVES:

Knowledge:

At the end of the programme, the Trainee should be able to:

1. Understand and explain core Medical/Surgical concepts.

2. Discuss Etiology, clinical manifestation, disease course and prognosis, investigation and management of common diseases.
3. Analyze Scientific basis and recent advances in pathophysiology, diagnosis and management of diseases.
4. Describe Spectrum of clinical manifestations and interaction of multiple diseasesin the same patient.
5. Explain Psychological and social aspects of medical/surgical illnesses.
6. Demonstrate the Effective use and interpretation of investigation and special diagnostic procedures.
7. Critically analyze the efficacy, cost-effectiveness and cost-utility of treatment modalities including various advanced treatment modalities.

8. Explain and Evaluate Medical audit and quality assurance
9. Practice Ethical principles and solve medico legal issues related to medical/surgical illnesses.
10. Updated knowledge on evidenced-based medicine and its implications for diagnosis and treatment of medical/surgical patients.
11. Evaluate and differentiate different care approaches and types of health care facilities towards the patients care with medical illnesses, including convalescence, rehabilitation, palliation, long term care, and medical ethics.
12. Practice taking care of patient safety and clinical risk management.
13. Understand the concepts of administration and management and overall forward planning for respective units.

Skills:

At the end of the programme, the Trainee should be able to:

1. Take a detailed history, gathers relevant data from patients, and assimilates the information to develop diagnostic and management plan.
2. Record an initial history and physical examination and follow-up notes as well as deliver comprehensive oral presentations to their team members based on these written documents.
3. Elicit abnormal physical signs and interpreting their significance. correlate clinical abnormalities with pathophysiologic states and diagnosis of diseases. select appropriate investigation and diagnostic procedures for confirmation of diagnosis and patient management.
4. Interpret basic as well as advanced laboratory data as related to the disorder/disease. interpret routine laboratory and ancillary tests including complete blood count, chemistry panels, ECG, chest x-rays, pulmonary function tests, and body fluid cell counts. In addition, students will properly understand the necessity of incorporating sensitivity, specificity, pre-test probability and Bayes laws/theorem in the ordering of individual tests in the context of evaluating patients' signs and symptoms. form differential diagnosiswith up-to-date scientific evidence and clinical judgment using history and

physical examination data and the development of a prioritized problem list to select tests and make effective therapeutic decisions.

5. Asses the risks, benefits, and costs of varying, effective treatment options; involving the patient in via open discussion; selecting drugs from within classes; and the design of basic treatment programs and using critical pathways when appropriate. Ability to recognize and appreciate the importance of cost-effectiveness of treatment modalities perform competently noninvasive and invasive procedures essential for the practice of general internal medicine. This includes technical proficiency in taking informed consent, performing by using appropriate indications, contraindications, interpretations of findings and evaluating the results and handing the complications of the related procedures mentioned in the syllabus.

6. Perform important bedside diagnostic and therapeutic procedures and understanding of their indications, present clinical problems and literature review in grand rounds and seminars.

7. Practice good communication skills and interpersonal relationship with patients, families, colleagues, nursing and allied health professionals.

8. Mobilize appropriate resources for management of patients at different stages of illnesses, including critical care, consultation of specialties and other disciplines, ambulatory and rehabilitative services, and community resources.

9. Diagnose and manage Medical/Surgical emergency problems.

10. Diagnosis and management of acute and chronic medical/surgical problems as secondary care in a regional/district hospital.

11. Practice Diagnostic skills to effectively manage complex cases with unusual presentations.

12. Implement strategies for preventive care and early detection of diseases in collaboration with primary and community care doctors.

13. Interpret medical statistics and critically appraise published work and clinical research on disease presentations and treatment outcomes. Experience in basic and/or clinical research within the training programme should lead to publications and/or presentation in seminars or conferences.

14. Practice evidence-based learning with reference to research and scientific knowledge pertaining to their discipline through comprehensive training in Research Methodology utilize the medical literature to expand one's knowledge base and to search for answer to medical problems. They will keep abreast of the current literature and be ableto integrate it to clinical practice.

Attitude:

At the end of the programme, the Trainee should be able to:

1. Understand that well-being and restoration of health of patients must be of paramount consideration.
2. Show Empathy and good rapport with patient and relatives are essential attributes.
3. Be an aspiration to be the team-leader in total patient care involving nursing and allied health professionals should be developed.
4. Evaluate the cost-effectiveness of various investigations and treatments in patient care should be recognized.
5. Ensure the privacy and confidentiality of patients and the sanctity of life must be respected.
6. Understand the importance of informed consent, advanced directives and the physician-patient relationship.
7. Appreciate the importance of the effect of disease on the psychological and socio-economic aspects of individual patients and to understand patients' psycho-social needs and rights, as well as the medical ethics involved in patient management.
8. Show Willingness to keep up with advances in respective Specialties.
9. show Willingness to refer patients to the appropriate specialty in a timely manner.
9. Promote of health via adult immunizations, periodic health screening, and risk factor assessment and modification.

10. Recognize that teaching and research are important activities for the advancement of the profession.

GENERAL OBJECTIVES

Patient Care:

- Residents are expected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment ofdisease and at the end of life.
- Gather accurate, essential information from all sources, including medical/surgical interviews, physical examinations, medical records and diagnostic/therapeutic procedures.
- Make informed recommendations about preventive, diagnostic and therapeutic options and interventions based on clinical judgment, scientific evidence, and patient preference.
- Develop, negotiate and implement effective patient management plans and integration of patient care.
- Perform competently the diagnostic and therapeutic procedures considered essential to their respective specialty.

Interpersonal And Communication Skills:

- Residents are expected to demonstrate interpersonal communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.
- Provide effective and professional consultation to other Doctors and health care professionals.
- Interact with consultants in a respectful, appropriate manner.
- Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families.
- Maintain comprehensive, timely, and legible medical records.

Professionalism

Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional developmental, ethical practice, an understanding and

sensitivity to diversity and a responsible attitude toward their patients, their profession,and society.

Demonstrate respect, compassion, integrity, and altruism in relationships with patients,families, and colleagues.

Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, socioeconomic status, beliefs, behavior and disabilities of patients and professional colleagues.

Adhere to principles of confidentiality, scientific/academic integrity, and informed consent.

Recognize and identify deficiencies in peer performance Understand and demonstrate the skill and art of end of life care.

Practice-Based Learning:

Residents are expected to be able to

- use scientific evidence and methods to investigate, evaluate, and improvepatient care practices.
- Identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care.
- Analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient care practice.
- Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.
- Use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education.

E. Systems-Based Practice

Residents are expected to

- demonstrate both an understanding of the contexts and systems in which health care is provided, and the ability to apply this knowledge to improve and optimize health care.

- Understands accesses and utilizes the resources, providers and systems necessary to provide optimal care.
- Understand the limitations and opportunities inherent in various practice types and delivery systems, and develop strategies to optimize care for the individualpatient.
- Apply evidence-based, cost-conscious strategies to prevention, diagnosis, and disease management.
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processesof care.

SPECIFIC LEARNING OUTCOMES

1. To enhance sensitivity and responsiveness to community needs and the economics of health care delivery.
2. To cultivate the practice of evidence-based medicine and critical appraisal skills.
3. To cultivate the correct professional attitude and enhance communication skill towards patients, their families and other healthcare professionals.
4. To inculcate a commitment to continuous medical education and professional development.
5. To achieve the professional requirements to prepare for Higher Physician Training in one or more specialty.
6. To provide a broad experience in specialty, including its interrelationship with other disciplines and to enhance medical knowledge, clinical skills, and attitude inbedside diagnostic and therapeutic procedures.
7. To provide a broad training and in-depth experience for trainees to acquire competence and professionalism in their specialty in the diagnosis, investigation and treatment of medical problems towards the delivery of holistic patient care.

8. To acquire competence in managing acute emergencies and identifying medical/surgical problems in patients referred by primary care and other doctors, and in selecting patients for timely referral to appropriate tertiary care or the expertise of another specialty.
9. To encourage contributions aiming at advancement of knowledge and innovationin medicine through basic and/or clinical research and teaching of junior traineesand other health related professionals.

To acquire professional competence in training future trainees in their specialty to serve at any Medical Institute all around the world.

CONTENT LIST

Teaching & Learning Program details Core Faculty Lectures (CFL}:

- Lectures are yet a good way of teaching. Residents will have core faculty lectures in the given fields of internal medicine as well as its sub-specialties like cardiology, pulmonology, gastroenterology etc. there would be monthly lecture on a given theme.

Introductory Lecture Series (/LS}:

Various topics will be discussed as introductory lectures from various sub-specialties to the residents of internal medicine.

Long case and short case presentation:

Given schedule of long case and short case presentation will be mandatory for the residents. It includes,

- Long cases
- short cases
- mini Cex
- DOPS.

Details of each is given under portfolio and log-book section.

Seminar Presentation:

Seminars should be held in a noon conference format. Year three and four residents should present an in-depth review of a given topic along with recent advances from the literature gathering various sources. Residents should formally face the critique by both the associate program director and their resident colleagues.

Journal Club Meeting (JC}:

one JC meeting fortnightly should be held to discussion of any current articles or topic in interest. Faculty or even outside researchers can be invited to present international outlines or results of current research activities. The article should be critically discussed, and its applicable results should be highlighted, which may be incorporated in clinical practice. Record of this activity will be kept in portfolio/logbook.

Small Group Discussions/ Problem based learning/ Case based learning:

Traditionally small groups consist of 8-1 2 participants. Small groups can take on a variety of different tasks, including problem solving, role play, discussion, meaningful debate, workshops, and presentations.

From the study of a problem students develop principles and rules and generalize their applicability to a variety of situations PBL is said to develop problem solving skills and to gain an integrated body of knowledge. It is a student-centered approach of learning, in which students determine what and how they learn.

Case studies help learners identify problems and solutions, compare options, and decide how to handle a real situation.

Discussion/Debate:

There are several types of discussion tasks which would be used as learning method for residents including: guided discussion, in which the facilitator poses a discussion question to the group and learners offer responses or questions to each other's contributions as a means of broadening the discussion and its scope.

Inquiry-based discussion

in which learners are guided through a series of questions to discover some relationship or principle; exploratory discussion, in which learners examine their personal opinions, suppositions or assumptions and then visualize alternatives to these assumptions; and debate in which students argue opposing sides of a controversial topic. With thoughtful and well-designed discussion tasks, learners can practice critical inquiry and reflection, developing their individual thinking, considering alternatives and negotiating meaning with other discussants to arrive at a shared understanding of the issues at hand.

Case Conference (CC}:

These sessions are held three days each week; the focus of the discussion is selected by the presenting resident. For example, some cases may be presented to discuss a differential diagnosis, while others are presented to discuss specific management issues.

Noon Conference (NC):

The noon conferences focus on monthly themes of the various specialty medicine topics for eleven months of the year, i.e., cardiology, Gastroenterology, Hematology, etc.

Grand Rounds (GR):

The Department of Medicine hosts Grand Rounds on weekly basis. Speakers from local, regional, and national medicine training programs are invited to present topics from the broad spectrum of internal medicine. All residents on inpatient floor teams, as well as those on ambulatory block rotations and electives are expected to attend

Professionalism Curriculum (PC):

This is an organized series of recurring large and small group discussions focusing upon current issues and dilemmas in medical professionalism and ethics presented. Primarily by an associate program director. Lectures are usually presented in a noon conference format.

Evening Teaching Rounds:

During these sign-out rounds, the inpatient Chief Resident makes a brief educational presentation on a topic related to a patient currently on service, often related to the discussion from morning report. Serious cases are mainly focused during evening rounds.

Clinico-pathological Conferences:

The clinicopathological conference, popularly known as CPC primarily relies on case presentation method of teaching medicine. It is a teaching tool that illustrates the logical, measured consideration of a differential diagnosis used to evaluate patients. The process involves case presentation, diagnostic data, discussion of differential diagnosis, logically narrowing the list to few selected probable diagnoses and eventually reaching a final diagnosis and its brief discussion. The idea was first practiced in Boston, back in 1900 by a Harvard internist, Dr. Richard C. Cabot who practiced this as an informal discussion session in his private office. Dr. Cabot incepted this from a resident, who in turn had received the idea from a roommate, primarily a law student.

Evidence Based Medicine (EBM}:

Residents are presented a series of noon monthly lectures presented to allow residents to learn how to critically appraise journal articles, stay current on statistics, etc. The lectures are presented by the program director.

Clinical Audit based learning:

Clinical audit is a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria...Where indicated, changes are implemented...and further monitoring is used to confirm improvement in healthcare delivery." Principles for Best Practice in Clinical Audit {2002, NICE/CHI)

Peer Assisted Learning:

Any situation where people learn from, or with, others of a similar level of training, background or other shared characteristic. Provides opportunities to reinforce and revise their learning.

Encourages responsibility and increased self-confidence. Develops teaching and verbalization skills. Enhances communication skills, and empathy. Develops appraisal skills (of self and others) including the ability to give and receive appropriate feedback. Enhance organizational and team-working skills.

Morbidity and Mortality Conference (MM):

The M&M Conference is held in morning as first activity of the. A case, with an adverse outcome, though not necessarily resulting in death, is discussed, and thoroughly reviewed. Faculty members are invited to attend, along with the resident involved in management of the patient. The discussion focuses on how care could have been improved.

Clinical Case Conference:

Each resident, except when on vacation, will be responsible for at least one clinical case conference each month. The cases discussed may be those seen on either the consultation or clinic service or during rotations in specialty areas. The resident, with

the advice of the Attending Physician on the Consultation Service, will prepare and present the case(s) and review the relevant literature.

SEQ as assignments on the content areas:

SEQs assignments are given to the residents on regular basis to enhance their performance during written examinations.

Bedside teaching rounds in ward:

"To study the phenomenon of disease without books is to sail an uncharted sea whilst to study books without patients is not to go to sea at all" Sir William Osler 1849-1919. Bedside teaching is regularly included in the ward rounds. Learning activities include the physical exam, a discussion of particular medical diseases, psychosocial and ethical themes, and management issues.

Directly Supervised Procedures - {DSP}:

Residents learn procedures under the direct supervis ion of an attending or fellow during some rotations. For example, in the Medical Intensive Care Unit the Pulmonary /Critical Care attending or fellow, or the MICU attending, observe the placement of central venous and arterial lines. Specific procedures used in patient care vary by rotation.

Self-directed learning: self-directed learning residents have primary responsibility for planning, implementing, and evaluating their effort. It is an adult learning technique that assumes that the learner knows best what their educational needs are. The facilitator's role in self-directed learning is to support learners in identifying their needs and goals for the program, to contribute to clarifying the learners' directions af'. ld objectives and to provide timely feedback. Self-directed learning can be highly motivating, especially if the learner is focusing on problems of the immediate present, a potential positive outcome is anticipated and obtained, and they are not threatened by taking responsibility for their own learning.

Core curriculum meeting:

All the core topics of Medicine should be thoroughly discussed during these sessions. The duration of each session should be at least two hours once a month.

It should be chaired by the chief resident (elected by the residents of the relevant discipline). Each resident should be given an opportunity to brainstorm all topics included in the course and to generate new ideas regarding the improvement of the course structure

Annual Grand Meeting Once a year all residents enrolled for MD Internal Medicine should be invited to the annual meeting at FMU. One full day will be allocated to this event. All the chief residents from affiliated

institutes will present their annual reports. Issues and concerns related to their relevant courses will be discussed. Feedback should be collected and suggestions should be sought in order to involve residents in • decision making. The research work done by residents and their literary work may be displayed. In the evening an informal gathering and dinner can be arranged. This will help in creating a sense of belonging and ownership among students and the faculty.

Learning through maintaining log book: it is used to list the core clinical problems to be seen during the attachment and to document the student activity and learning achieved with each patient contact.

Learning through maintaining portfolio: Personal Reflection is one of the most important adult educational tools available. Many theorists have argued that without reflection, knowledge translation and thus genuine "deep" learning cannot occur. One of the Individual reflection tools maintaining portfolios, Personal Reflection allows students to take inventory of their current knowledge skills ana attitudes, to integrate concepts from various experiences, to transform current ideas and experiences into new knowledge and actions and to complete the experiential learning cycle.

Task-based-learning: A list of tasks is given to the students·: participate in consultation with the attending staff, interview and examine patients, review several new radiographs with the radiologist.

Teaching in the ambulatory care setting: A wide range of clinical conditions may be seen. There are large numbers of new and return patients. Students can experience

a multi-professional approach to patient care. Unlike ward teaching, increased numbers of students can be accommodated without exhausting the limited No. of suitable patients.

Community y Based Medical Education: CBME refers to medical education that is based outside a tertiary or large secondary level hospital. Learning in the fields of epidemiology, preventive health, public health principles, community development, and the social impact of illness and understanding how patients interact with the health care system. Also used for learning basic clinical skills, especially communication skills.

Audio visual laboratory: audio visual material for teaching skills to the residents is used specifically in teaching gastroenterology procedure details.

E-learning/ web-based medical education/com puter-assisted instruction: Computer technologies, including the Internet, can support a wide range of learning activities from dissem ination of lectures and materials, access to live or recorded presentations, real-time discussions, self-instruction modules and virtual patient simulations. distance-independence, flexible scheduling,the creation of reusable learning materials that are easily shared and updated, the ability to individualize instruction through adaptive instruction technologies and automated record keeping for assessment purposes.

Research based learning: All residents in the categorical program are required to complete an academic

outcomes-based research project during their training. This project can consist of original bench top laboratory.

research, clinical research or a combination of both. The research work shall be compiled in the form of a thesis which is to be submitted for evaluation by each resident before end of the training. The designated Faculty will organize and mentor the residents through the process, as well as journal clubs to teach critical appraisal of the literature.

Some of their teaching strategies specific for different specialties as mentioned in the relevant parts of the curriculum

Some of the other teaching strategies which are specific for certain domains of internal medicine are given along with relevant modules.

Methods of Teaching & Learning during course conduction inpatient

Services:

All residents will have rotations in intensive care, emergency medicine, general paediatric wards, ambulatory experiences etc. The required knowledge and skills pertaining to the ambulatory based training in following areas shall be demonstrated.

Paediatric intensive care

Neonatal intensive care

High dependency unit

General paediatric ward

Pulmonology

Gastroenterology and Metabolic diseases

Infectious and communicable diseases

Cardiology

Allergic disorders/ Immunology

CNS disorders

Paediatric History and clinical examination

Exit Learning Outcomes	Enabling Outcomes	Contents	T/L Method	Assessment	Learning Resources
Take proper Paediatric history and examination	Proper history taking and examination.	• Describe the various components of history taking in Paediatrics • Describe various components of Paediatric clinical examination • Inquire about important Paediatrics symptoms to reach a particular organ system dysfunction • Ask specific questions related to particular organ system to make diagnosis and differential diagnosis • Take vital signs: ○ Pulse Rate ○ Respiratory Rate ○ Temperature ○ Blood Pressure • Measure anthropometric parameters: ○ Height/Length ○ Head Circumference ○ Weight • Identify important clinical signs of general physical examination • Identify clinical signs on systemic examination	• Bedside Teaching • Small Group Discussion OPD • Emergency • Paediatric ICU and Ward	• Viva • OSPE	• Nelson Textbook of Paediatrics2 1st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Immunization

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the appropriate paediatric immunization.	History taking and examination	• Define immunization • Describe the types of different vaccines • Describe the EPI schedule including doses and route of administration • Enlist newer vaccines • Describe the contraindications and complications of vaccines • Observe the administration of different vaccines	• Self-Directed Learning • Small Group Discussion • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Text book of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Social and Preventive Paediatrics

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of social issues and common problems of children in Pakistan	History taking, examination, labs, radiological investigations and treatment plan.	• Describe the Pakistan statistical data regarding: ○ Demographic Indicators ○ Health Indicators ○ Nutritional Indicators ○ Educational Indicators • Enlist the common causes of death in children under 5 years of age • Enlist the utilization of health services in Pakistan • Describe the child rights • Describe the definition, recognition, classification, causes and management of child abuse • Assess, classify and describe the treatment of a sickchildfrom2months to 5yearsofageaccordingto IMCI • Identify the danger signs in a sick child according to IMCI	• Lectures • Small Group Discussion • Bedside teaching • OPD • Self-Directed Learning • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Nutrition

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common nutritional disorders in children.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe breast feeding, its advantages, initiation, adequacy, methods and contraindications • Define weaning and describe the time of weaning and types of weaning foods • Describe the sources, functions, clinical effects of deficiency, its diagnosis, prevention and management of the following: ○ Vitamin A ○ Vitamin D(Rickets) ○ Iodine Vitamin and mineral deficiencies Trace elements of nutritional importance Obesity Adolescent nutrition Nutritional management in diarrhea Nutritional management of systemic illnesses (celiac disease, hepatobiliary disorders, nephrotic syndrome) Parenteral and enteral nutrition in neonates and children. Approach to Common Clinical Presentations: • Protein energy malnutrition • Describe the etiology, classification, clinical manifestations, investigations and management of Severe Acute Malnutrition(SAM) • Demonstrate the use of: ○ Growth Charts ○ Z-Score Charts ○ Quac Strip	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Respiratory Disorders

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common respiratory diseases.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the definition, etiology, clinical features, investigations, complications and management of the following: ○ Upper Respiratory Tract Infections and diseases • Congenital and acquired disorders of nose • Infections of upper respiratory tract, tonsils and adenoids • Obstructive sleep apnea • Acute Pharyngitis • Acute Tonsillitis ○ Lower Respiratory Tract Diseases • Congenital anomalies of lower respiratory tract • Acute inflammatory upper airway obstruction • Foreign body in larynx, trachea and bronchi • Subglottic stenosis (acute and chronic) • Trauma to larynx • Neoplasm of larynx and trachea • Bronchitis • Bronchiolitis • Aspiration pneumonia • GER • Acute pneumonia • Recurrent and interstitial pneumonia • Suppurative lung disease • Atelectasis • Lung cysts • Emphysema and hyper-inflation	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Text book of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

		• Bronchial asthma
		• Pulmonary edema
		• Bronchiectasis
		• Pleural effusion
		• Pulmonary leaks
		• Mediastinal mass.
		• Describe the definition and causes of croup with their management:
		  ○ Acute Laryngotracheobronchitis
		  ○ Acute Epiglottitis
		• Interpret the x-ray findings of common respiratory diseases
		• Observe the management of respiratory emergencies:
		  ○ Respiratory Failure
		  ○ Status Asthmaticus
		• Observe the procedures:
		  ○ Needle Thoracotomy
		  ○ Endotracheal Intubation
		• Approach to Common Clinical Presentations:
		  ○ Cough/chronic cough
		  ○ Noisy breathing"
		  ○ Wheezy child
		  ○ Stridor, hoarseness
		  ○ Respiratory distress
		  ○ Pneumothorax
		  ○ Hemoptysis
		  ○ Chest pain
		  ○ Dyspnea
		  ○ Excessive daytime sleepiness
		  ○ Febrile patient with infiltrate
		  ○ Bronchiolitis
		  ○ Pleural effusion, pleurisy			

Cardiovascular Disorders

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common congenital and acquired Heart diseases.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Classify the congenital heart diseases • Describe the patho-physiology, clinical features, investigations and management of the following: • Congenital heart diseases (cyanotic and acyanotic) • Rheumatic fever • Rheumatic heart disease • Infective endocarditis • Arrhythmia • Diseases of myocardium (cardio-myopathy, myocarditis) • Diseases of pericardium • Systemic hypertension • Hyperlipidemia in children. • Demonstrate the ECG and chest x-ray findings of common cardiovascular diseases • Observe the management of cardiovascular emergencies: ○ Tet-Spells ○ Heart Failure ○ Cardiac Arrest Approach to Common Clinical Presentations: □ Murmur □ Cyanosis and cyanotic spells □ Edema and Congestive heart failure □ Tachycardia □ Palpitations □ Systemic hypertension □ Arrhythmia □ Shock □ Syncope □ Pulmonary hypertension □ Chest pain	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Gastrointestinal and Liver Disorders

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common gastrointestinal and liver diseases.	Proper history taking, examination, labs and radiological investigations and treatment plan.	• Describe the definition, pathophysiology, clinical features, investigations, complications and management of the following: • Diseases of mouth, oral cavity and tongue • Disorders of deglutition and esophagus • Peptic ulcer disease • H. Pylori infection • Foreign body • Congenital pyloric stenosis • Intestinal obstruction • Malabsorption syndrome • Acute and chronic diarrhea • Irritable bowel syndrome • Ulcerative colitis • Hirschprung's disease • Anorectal malformations • Liver disorders • Hepatitis • Hepatic failure • Chronic liver disease • Wilson's disease • Budd-Chiari syndrome • Metabolic diseases of liver • Cirrhosis and portal hypertension • Describe the common wormin festations • Describe the clinical features, diagnosis, treatment and prevention of common protozoal infections: ○ Amebiasis ○ Giardiasis • Describe the causes and management of abdominal pain • Interpret the investigations	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

		of common gastrointestinal and liver diseases • Observe abdominal paracentesis Approach to Common Clinical Presentations: ○ Anorexia, weight loss ○ ○ Excess intestinal gas ○ Fecal incontinence ○ Constipation ○ Anorectal discomfort, bleeding, or pruritus ○ Food intolerance Gastrointestinal bleeding ○ Iron-deficiency anemia ○ Malnutrition ○ Jaundice ○ Hepato-splenomegaly and chronic liver disease ○ Hepatic failure and encephalopathy Abdominal distention ○ Abnormal liver function test ○ Ascites ○ Noncardiac chest pain ○ Swallowing dysfunction • Acute, persistent and chronic diarrhea • Abdominal pain and distension • Nausea, vomiting			

Neurologic and Neuromuscular Disorders

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common neurological and neuromuscular disorders.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the etiology, clinical features, diagnosis and management of: ○ Meningitis ○ Encephalitis ○ Cerebral Malaria ○ Febrile Convulsions • Describe the definition, etiology, different types, clinical features, diagnosis and management of the following: • deformational plagiocephaly • seizures in childhood • conditions that mimic seizures • headaches neurocutaneous syndromes • movement disorders encephalopathies • neurodegenerative disorders of childhood • demyelinating disorders of the central nervous system • pediatric stroke • central nervous system vasculitis • central nervous system infections • brain abscess • idiopathic intracranial hypertension (pseudotumorcerebri) • neuromuscular disorders • evaluation and investigation of neuromuscular disorders • developmental disorders of muscle	• Lecture • Small group discussion • Bed side teaching • OPD • Emergency • Paediatric ICU and Ward	Class Test MCQ SEQ Ward Test Viva OSPE	• Nelson Textbook of Paediatrics2 1st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

		• muscular dystrophies
		• endocrine and toxic myopathies
		• metabolic myopathies and channelopathies
		• disorders of neuromuscular transmission and of motor neurons
		• hereditary motor-sensory neuropathies
		• toxic neuropathies
		• autonomic neuropathies
		• guillain-barré syndrome
		• bell palsy
		• Define Acute Flaccid Paralysis (AFP) and differentiate among its different causes
		• Assist the procedure of lumbarpuncture
		• Observe the management of Status Epilepticus
		• Interpret the CT-Scan of:
		  ○ Intra Cranial Bleed
		  ○ Hydrocephalous
		  ○ Infarction			

Haematologic Disorders

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common haematological disorders.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the etiology, pathophysiology, clinical features, investigations and treatment of the following: • congenital hypoplastic anemia (diamond-black fan anemia) • pearson syndrome • acquired pure red blood cell anemia • anemia of chronic disease and renal disease • congenital dyserythropoietic anemias • physiologic anemia of infancy megaloblastic anemias iron-deficiency anemia other microcytic anemias • hereditary spherocytosis hereditary elliptocytosis, hereditary pyropoikilocytosis, and related disorders • hereditary stomatocytosis • paroxysmal nocturnal hemoglobinuria and acanthocytosis • Hemoglobinopathies • enzymatic defects hemolytic anemias resulting from extracellular factors—immune hemolytic anemias hemolytic	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	Class Test MCQ SEQ Ward Test Viva OSPE	• Nelson Textbook of Paediatrics21 stEdition • Online Journals and Reading Materials through HEC Digital Library Facility

		anemias secondary to other extracellular factors • Polycythemia nonclonal polycythemia • inherited bone marrow failure syndromes with pancytopenia • the acquired pancytopenias • hemorrhagic and thrombotic diseases • Hemostasis hereditary clotting factor deficiencies (bleeding disorders) • von willebrand disease hereditary predisposition to thrombosis thrombotic disorders in children • postneonatal vitamin k deficiency • disseminated intravascular coagulation • platelet and blood vessel disorders the spleen • splenomegaly hyposplenism, splenic trauma, and splenectomy the lymphatic system lymphadenopathy • Demonstratetheproce dure of Bone Marrow Biopsy • Interpret the lab investigations of common haematological diseases		

Neonatology

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common neonatal diseases.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the care of a newborn • Describe the definition, etiology, pathophysiology, clinical manifestations, investigations and treatment of the following: ○ Birth Asphyxia ○ Respiratory Distress Syndrome ○ Neonatal Sepsis ○ Neonatal Seizures ○ Prematurity and Low Birth Weight (LBW) babies ○ Neonatal Jaundice ○ Infant of Diabetic Mother(IDM) ○ Anemia and bleeding disorders ○ Neurologic disorders ○ Gastrointestinal disorders ○ Renal disorders ○ Malformations • Describe the following: ○ Common Skin Problems ○ Birth Trauma ○ Common Congenital Anomalies • Observe and demonstrate neonatal resuscitation • Observe the following procedures: ○ Nasogastric Intubation ○ I/V Line ○ Arterial Tap ○ Umbilical Vein Catheterization ○ Exchange Transfusion ○ Urinary Catheterization • Use of: ○ Phototherapy ○ Incubator	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	Class Test MCQ SEQ Ward Test Viva OSPE	• Nelson Textbook of Paediatrics2 1st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Endocrine Disorders

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common endocrine disorders.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the definition, etiology, clinical features, investigations and treatment of the following: ○ Short Stature ○ Diabetes Mellitus ○ Diabetic Keto Acidosis(DKA) ○ Pubertal disorders ○ Hypo- and hyperthyroidism ○ Hypo- and hyperparathyroidism ○ Adrenal insufficiency ○ Cushing's syndrome ○ Adrenogenital syndromes ○ Diabetes mellitus ○ Hypoglycemia ○ Short stature ○ Failure to thrive ○ Gonadal dysfunction and intersexuality ○ Pubertal changes and gynecological disorders • Approach to Common Clinical Presentations: ○ Thyroid swelling ○ Goiter (diffuse, nodular) ○ Ambiguous genitalia ○ Asthenia ○ Diarrhea ○ Disorders of pigmentation ○ Hirsutism ○ Hypertension refractory to primary therapy ○ Hypotension ○ Incidentally discovered	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	Class Test MCQ SEQ Ward Test Viva OSPE	• Nelson Textbook of Paediatrics2 1st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

		abnormalities in serum electrolytes, calcium, phosphate, or glucose ○ Mental status changes ○ Osteopenia ○ Polyuria, polydipsia ○ Signs and symptoms of osteopenia ○ Symptoms of hyper- and hypoglycemia ○ Symptoms of hypermetabolism and hypometabolism ○ Urinary tract stone ○ Weight gain, obesity ○ Short stature • Interpret the investigations of common endocrine disorders • Take the upper segment and lower body segment ratios • Observe and demonstrate the use of: ○ Glucometer ○ Insulin Syringe			

Infectious Diseases

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common infectious diseases.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the etiology, pathophysiology, clinical features, diagnosis, differential diagnosis, complications, treatment and prevention of the following: o Tetanus o Diphtheria o Whooping Cough o Enteric Fever o Malaria o Measles o Chicken Pox o Poliomyelitis o AIDS o Common Skin Infections a. Nosocomial infections, in intensive care and general care settings o Respiratory tract infections o Central nervous system infections o Cardiovascular infections a. Fungal disease b. Mycobacterial infections c. Approach to the Patientwith a Parasitic Infection d. Soft tissue, bone, and joint infections e. Fevers of unknown origin f. Infections in immune-compromised hosts g. Gastrointestinal tract infections h. Genitourinary tract infections including sexually transmitted diseases. i. Infections of indwelling venous and arterial catheters and	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	Class Test MCQ SEQ Ward Test Viva OSPE	• Nelson Textbook of Paediatrics2 1st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

		prosthetic devices j. Animal and human bite wounds. k. HIV infection and its associated complications l. Travel-related infections, diagnosis,treatment, and prevention m. Bioterrorism: identifying infections;understanding publichealth aspects. i. Bacillus anthracis (Anthrax) ii. Yersinia pestis (Plague) iii. Variola Major (Smallpox) iv. Francisellatularensis (Tularemia) v. Clostridium botulinum (Botulism) vi. Flavi viruses (Ebola, Marburg) vii. Arenaviruses (Lassa) ➢ Active Immunization against infectious diseases ➢ Recommended immunization of infants, children and adolescents. ➢ Recommended immunizations for travelers in paediatric age groups. ➢ Hypersensitivity tests and desensitization ➢ Basic principles of anti-infective therapy, including the use of antibacterial, antiviral, antifungal, anti-mycobacterial, and anti-parasitic agents with regard to mechanisms of action, spectra of activity, doses and regimens, drug interactions, mechanisms of resistance, appropriate clinical applications, and adverse effects/toxicities. • Identify different types of rash with their differential diagnosis • Interpret the lab investigations of common paediatricinfections			

Nephrology

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common kidney diseases.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Evaluate the child with hematuria • Describe definition, etiology, pathophysiology, clinical features, complications and management of the following: ○ Acute Kidney Injury ○ Chronic Kidney Disease ○ Nephrotic Syndrome ○ Hypertension ○ Urinary Tract Infections ○ Acute and chronic glomerulonephritis ○ Hemolytic uremic syndrome ○ Urinary tract infection ○ VUR and renal scarring ○ Renal involvement in systemic diseases ○ Renal tubular disorders ○ Con-genital and hereditary renal disorders ○ Renal and bladder stones ○ Posterior urethral valves ○ Hydronephrosis ○ Voiding dysfunction ○ Enuresis ○ Undescended testis	• Lecture • Small group discussion • Bedside teaching • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Text book of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

		○ Wilm's tumor ○ Fluid-electrolyte disturbances. ➢ Approach to Common Clinical Presentations: ○ Hematuria/dysuria ○ Complaints referable to bladder outlet (urgency, hesitancy) ○ Dysuria ○ Edema ○ Flank or suprapubic pain or tenderness ○ Hematuria (gross) ○ Hypertension ○ Incontinence ○ Presenting features of uremia ○ Renal colic ○ Renal mass or bruit ○ Inguinoscrotal swelling ○ Renal failure (acute and chronic). • Interpret the investigations of common kidney diseases • Observe the procedures: ○ Urinary Catheterization ○ Suprapubic Puncture ○ Renal Biopsy			

Genetics

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common genetic disorders.	Proper history taking, examination, labs and radiological investigations and treatment plan.	• Describe the characteristics of different patterns of inheritance • Describe the types of defect, clinical findings, diagnosis, screening and management of a child with: ○ Down Syndrome ○ Turner Syndrome ▯ Principles of inheritance ▯ Pedigree drawing ▯ Chromosomal disorders ▯ Single gene disorders ▯ Multifactorial/polygenic disorders • Genetic diagnosis and prenatal diagnosis	• Self- Directed Learning • Small group discussion • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Behavioral and Psychiatric Disorders

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of common behavioral and psychiatric disorders.	Proper history taking, examination, investigations and treatment plan.	• Describe the definition, etiology, clinical assessment, diagnosis, differential diagnosis and management of the following: ○ Nocturnal Enuresis ○ Encopresis ○ Attention Deficit Hyperactivity Disorder ○ Autism Spectrum Disorder ○ Dyslexia	• Self- Directed Learning • Small group discussion • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics 21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Poisoning and Toxicology

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources

Demonstrate the management of a child with poisoning	Proper history taking, examination, labs and radiological investigations and treatment plan.	• Describe the general management of a child with poisoning
		• Describe the clinical findings, investigation and management of the following poisonings:
		  • Amphetamine
		  • Antiarrhythmics
		  • Anticholinergics
		  • Antihistamines
		  • Arsenic
		  • Barbiturates
		  • Carbon monoxide
		  • Chloral hydrate
		  • Cocaine
		  • Cyanide
		  • Cyclic antidepressants
		  • Digitalis
		  • Iron
		  • Lead
		  • Lithium
		  • Methemoglobinemia
		  • Narcotics
		  • Phenothiazines
		  • Physostigmine
		  • Propranolol
		  • Quinine, quinidine
		  • Salicylates
		  • Theophylline
			• Self- Directed Learning
			• Small group discussion
			• OPD
			• Emergency
			• Paediatric ICU and Ward
				• Class Test
				  ○ MCQ
				  ○ SEQ
				• Ward Test
				  ○ Viva
				  ○ OSPE
					• Nelson Textbook of Paediatrics 21st Edition
					
					• Online Journals and Reading Materials through HEC Digital Library Facility

Metabolic Diseases

Exit Outcomes	Enabling Outcomes	Contents	Teachingand Learning Method	Assessment Method	Learning Resources

Demonstrate the management of metabolic diseases.	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the causes, types, clinical features, diagnosis, differential diagnosis and management of the following:
		  • carbohydrate disorders
		  • amino acid disorders
		  • organic acid disorders
		  • fat metabolic disorders
		  • lysosomal and peroxisomal
		  • disorders
		  • mitochondrial disorders
			• Self- Directed Learning
			• Small group discussion
			• OPD
			• Emergency
			• Paediatric ICU and Ward
				• Class Test
				  ○ MCQ
				  ○ SEQ
				• Ward Test
				  ○ Viva
				  ○ OSPE
					• Nelson Textbook of Paediatrics21 stEdition
					• Online Journals and Reading Materials through HEC Digital Library Facility

Emergency and Critical Care

Exit Learning Outcomes	Enabling Outcomes	Contents	T/L Method	Assessment	Learning Resources
Demonstrate the management of a child with critical conditions.	Proper history taking and examination.	• Be able to recognize the patient at risk for an obstructed airway the patient in respiratoryfailur or arrest a patient with acut life threatening respirator difficulty and prioritiz management the life threatening nature of thes problems and know when toca for help of more experience colleagues to lead resuscitation team the child i shock and formulate differential diagnosis betwee compensated and uncompensated shock • Understand the indications, pharmacology contra indications, dos calculation and routes o administration of drug used in resuscitation an in the stabilization o children in cardiac arresto failure • Be able to obtain venou and arterial acces including IV & central lines • Be able to ensur appropriate non-invasiv and invasive monitorin including arterial and en tidal-C02 Common Clinical Disorders: Shock Cardio-respiratoryarrest Respiratory failure Congestive cardiac failure Acute UTI Acute renal failureFebrile child Status epilepticus Head injury Spinal injury Sepsis Poisoning Drowning Accidents and major trauma Scorpion and snakebites	• Bedside Teaching • Small Group Discussion • OPD • Emergency • Paediatric ICU and Ward	• Viva • OSPE	• Nelson Textbook of Paediatrics21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Immunology and Rheumatology:

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of allergic ,autoimmune disorders and rheumatological disorders	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the causes, types, clinical features, diagnosis, differential diagnosis and management of the following: • Arthritis (acute and chronic) • Major congenital orthopedic deformities • Bone and joint infections; Pyogenic, tubercular • Common bone tumors. • Connective tissue disorders • Disorders of immunoglobulins • T and B cell disorders • Immunodeficiency syndromes. • Approach to Common Clinical Presentations: • Arthritis • Joint pain and/or swelling (acute or chronic, monoarticular or polyarticular) • Non-traumatic backpain in children • Muscle aches (localized or diffuse) • Musculoskeletal weakness • Nonarticular signs and symptoms of rheumatologic disease, Raynaud'sphenomenon and skin rash Regional pain of the neck, shoulder, lowerback, hip, knee, wrists hands, or • Traumatic joint • Multiple congenita anomalies	• Self- Directed Learning • Small group discussion • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics21st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Dermatology

Exit Outcomes	Enabling Outcomes	Contents	Teaching and Learning Method	Assessment Method	Learning Resources
Demonstrate the management of dermatological disorders	Proper history taking, examination, labs and radiological investigation and treatment plan.	• Describe the causes, types, clinical features, diagnosis, differential diagnosis and management of the following: • Exanthematous illnesses • Vascular lesions • Pigment disorders • Vesicobullous disorders • Pyogenic, fungal and parasitic infections • Steven-Johnson syndrome • Eczema • Seborrheic dermatitis • Drug rash • Urticaria • Alopecia • Icthyosis	• Self-Directed Learning • Small group discussion • OPD • Emergency • Paediatric ICU and Ward	• Class Test ○ MCQ ○ SEQ • Ward Test ○ Viva ○ OSPE	• Nelson Textbook of Paediatrics2 1st Edition • Online Journals and Reading Materials through HEC Digital Library Facility

Section D:

PROGRAMME FORMAT

SCHEME OF THE COURSE OF MD/MS PROGRAMME

Each Department will give accordingly their 4 year plan as in their respective curriculums

Programme duration	Course content
At the end of 1st year of programme	Revision of core MBBS component including basic and clinical components. Basic knowledge and acquiring skill related to the specialty according to the objectives made. Workshops as described in the course outline.
At the end of the 2nd year	Advanced training of the clinical knowledge and skill in specialty according to the objectives made. Clinical training with compulsory/optional rotation in different specialties. Workshops as described in course outline. Synopsis submission.

At the end of 3rd year of programme	Advanced level of training within specialty with emphasis on acquiring high level skills and competence in complex procedure as decided by the objectives. Thesis submission and evaluation OR 2 papers published or in line of publication a standard medical journal. Advanced clinical training with compulsory/optional rotations in different department as required by the programme. Workshops as described in course outline.
At the end of 4th year	Training to act as an individual while managing patient or performing any task as defined by the objectives. Training to act as a teacher, researcher, leader and a player in a team. Overall development of a health care professional with all the set competencies of the programme.

Rotations:

Sr. No.	Program Title	Duration	Placement
1	Neonatology	3 Months	Paediatric Department
2	Paediatric Emergency	3 Months	Paediatric Department
3	Paediatric ICU	3 Months	Paediatric Department
4	Community & Preventive Medicine	3 Months	Community & Preventive Medicine Department
5	Paediatric Infectious Diseases / Isolation	3 Months	Paediatric Department
6	Additionally, 2 Month each in any 3 of the following: ○ Obstetrics / Prenatal Care ○ Paediatric Surgery ○ Paediatric Cardiology ○ Paediatric Nephrology ○ Paediatric Neurology ○ Paediatric Dermatology ○ Paediatric Hematology / Oncology ○ Paediatric Gastroenterology ○ Paediatric Rehabilitation Medicine	6 Months	Respective Departments

Section E:

Assessment Plan:

Program duration	Course contents	Assessment method
At the end of 2nd year of program	1. Revision of core MBBS component including basic and clinical components. 2. Basic knowledge and Acquiring skill related to the specialty according to the objectives made. 1. First 2 mandatory Workshops as described in course outline. 3. Submission of synopsis	**Intermediate Examination:** to be taken by university. It will include: a) Written=300 b) TOACS/ OSCE /LONG CASE/ SHORT CASE=300 **Total Marks =600**
At the end of 4th year	1. Training to act as an individual while managing patient or performing any task as defined by the objectives. 2. Training to act as a teacher, researcher, leader and a player in a team. 3. Overall development of a health	**Final Examination** to be conducted by university. It will include: a) Written=300 b) TOACS/OSCE/LONG

	care professional with all the set competencies of the Program. 4. All the mandatory and specialty-oriented workshops to be completed as mentioned in the curriculum 5. Rotations as described in the curriculum completed 6. Thesis completion and submission	CASE/SHORT CASE=300 c)Continuous internal assessment=100 Thesis evaluation =300 **Total marks=600+100+300=** **1000**

Components of Intermediate Examination

- Written: Total Marks =300
- Clinical: TOACS/OSCE = 300

Total = 600

Components of Final Examination:

- Written: 300 Marks
- Clinical, TOACS/OSCE = 300 Marks
- Continuous internal assessment =100
- Thesis Evaluation = 300 Marks

Total = 1000 Marks

Intermediate Examinations:

Intermediate examination would be conducted for the candidate getting training, at the end of 2nd calendar year of the program.

Eligibility Criteria:

1. Candidate remained on institution roll during the period approved for appearing in examination.
2. Certificate of completion of mandatory workshops.
3. Completion of Log book signed by supervisor/concerned Head of Department.
4. Certificate of submission of Ethical Review Committee approved synopsis to the university if required as per rules of synopsis submission.
5. Evidence of payment of examination fee as prescribed by the University from time to time.
6. Certificates submitted through Principal/Dean/Head of academic institution shall be accepted as valid towards the candidature of an applicant.
7. submission of application for the examination and the conduct of examination.

Intermediate Examination Schedule and Fee:

a) Intermediate Examination at completion of two years training, will be held twice a year.

b) There will be a minimum period of 30 days between submission of application for the examination and the conduction of examination.

c) Examination fee will be determined periodically by the University.

d) The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.

e) The Controller of Examinations will issue Roll Number Slips on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee.

Written Examination:

The written examination will consist of 100 single best answer type Multiple Choice Questions. Each correct answer in the multiple-choice question paper will carry 02 marks. The short essay question will be clinical scenario or practice based, and each question will carry 10 marks.

The marks of written exam will be divided as follows:

- MCQs (single best type) = 200 Marks
- SEQ (10 marks) =100

Declaration of Results

The candidates scoring 60% marks in the written examination will be considered pass and will then be eligible to appear in the clinical and oral examination.

Clinical, TOACS/OSCE:

The clinical and TOAC/OSCE & Oral examination will evaluate patient care competencies in detail,

The examination will be of 300 total marks consisting of the following components

Clinical, TOACS/OSCE = Total Marks 300

a) 2 short Cases (100 each) = 200 marks

b) TOACS/OSCE & ORAL =100 marks (10 stations with 10 marks each)

- Each short case will be of 10 minutes duration, 05 minutes will be for examining the patient and 05 minutes for discussion.
- The long case and oral examination will each be of 30 minutes duration.

Declaration of Results

- A student scoring 60% in long case, 60% in short cases ad 60% in TOACS/OSCE will be considered pass in the examination.
- A maximum total of four consecutive attempts (availed or un availed) will be allowed in the Intermediate Examination during which the candidate will be allowed to continue his training program. If the candidate fails to pass his Intermediate Examination within the above-mentioned limit of four attempts**,** candidate shall have to take entire Intermediate examination including written examination again

Final Examination

(at the end of 4th Calendar year of the program)

Eligibility Criteria:

To appear in the Final Examination the candidate shall be required:

1. Result card showing that the candidate has passed intermediate Examination.
2. Certificate of completion of 4/5 Years training duly signed by Supervisor, Head of parent Department and that of the Head of Department where rotations were done (if prescribed in the curriculum).
3. Evidence of thesis submission to Department of Examination of the University.
4. Evidence of payment of examination fee as prescribed by the university from time to time.
5. The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.
6. Candidate remained on institution roll during the period required for appearing in examination.
7. Only those certificates, submitted through Principal/Dean/Head of academic institution shall be accepted.

Final Examination Schedule and Fee:

a) Final examination will be held twice a year i.e. at least six months apart.

b) Examination fee will be determined and varied at periodic intervals by the University.

c) The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.

d) The Controller of Examinations will issue an Admittance Card with a photograph of the candidate on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee. This card will also show the Roll Number, date / time and venue of examination.

Written Part of Final Examination

a) The written examination will consist of 100 single best answer type Multiple Choice Questions (MCQs) and 10 Short Essay Questions (SEQs). Each correct answer in the Multiple-Choice Question paper will carry 02 marks. Each Short Essay Question will carry 10 marks.

b) The Total Marks of the Written Examination will be 300 and to be divided as follows:

- Multiple Choice Question paper Total Marks = 200
- Short Essay Question paper Total Marks = 100

Total=300

Paper 1

- MCQs 100 (2marks each)

Paper 2

- SEQs 10 (10 marks each)

a. Paper 1 shall comprise of hundred (100) "single best answer" type Multiple Choice Questions. Each Question shall carry 02 marks.

b. Paper 2 shall comprise of ten (10) Short Essay Questions, each carrying 10 marks.

Declaration of Results

c. The candidates scoring 60% marks in aggregate of Paper 1 and Paper 2 of the written examination will be declared pass and will become eligible to appear in the Clinical Examination.

Clinical, TOACS/OSCE:

a) The Clinical Examination will consist of 04 short cases, 01 long case and TOACs/OSCE with 01 station for a pair of Internal and External Examiner. Each short case will be of 10 minutes duration, 05 minutes will be for examining the patient and 05 minutes for discussion. Long case will be of 1 hour duration, 30 minutes of candidate and 30 minutes for examiner.

b) The Total Marks of Clinical and TOACs/OSCE & Oral will be 300 and to be divided as follows:

- 4 Short Cases (25 each) Total Marks = 100
- 1 Long Case Total Marks = 100
- TOACS/OSCE & ORAL Total Marks = 100

Total= 300

Declaration of Results

- A student scoring 60% in long case, 60% in short cases ad 60% in TOACS/OSCE will be considered pass in the examination.

- Candidate, who passes written examination, shall be allowed a maximum of Three availed attempts within two years to pass Clinical/Oral examination. However, in case of failure to pass Clinical examination within stipulated attempts the credit of passing the written examination

shall stand withdrawn and candidate shall have to take entire examination including written examination, afresh.

- Candidate who has completed his/her training along with all the requirements mentioned in the curriculum shall have to appear in the written of final examination at least once within a period of 7 years (from the time of induction of training) otherwise. Failure to compliance with this, the matter will be referred to the competent authority through proper channel for final decision.

Synopsis and Thesis Writing:

Thesis writing must be completed and thesis must be submitted at least 6 months before the end of final year of the program.

Thesis evaluation & defense will be carried out at the end of 4th calendar year of MD.

Submission / Evaluation of Synopsis

a) The candidates shall prepare their synopsis as per guidelines provided by the Advanced Studies & Research Board, available on the university website.

b) The research topic in clinical subject should have 30% component related to basic sciences and 70% component related to applied clinical sciences. The research topic must consist of a reasonable sample size and sufficient numbers of variables to give training to the candidate to conduct research, to collect & analyze the data.

c) Synopsis of research project shall be got approved by the end of the 2nd year of MS/MD program. The synopsis after review by an Institutional Review Committee, shall be submitted to the University for consideration by the Advanced Studies & Research Board, through the Principal / Dean /Head of the institution.

Submission and evaluation of Thesis Evaluation (300 Marks)

1. The Thesis shall be submitted to the Controller of Examination through Head of Institute, duly signed by the Supervisor, Co-Supervisor(s) and Head of the Department.
2. Submission of Thesis is a prerequisite for taking Final Theory Examination.
3. Examiners shall be appointed by the Vice chancellor on recommendation of Controller of Examination from a panel approved by Advance Studies & Research Board for evaluation of thesis.
4. All MD/MS/MDS thesis shall be evaluated by two examiners, one internal and one external (The supervisor must not be the evaluator)
5. Thesis defense shall be held after approval of evaluation reports by Advanced Studies & Research Board.
6. Thesis defense shall be conducted by the examiners who evaluated Thesis of the candidate.
7. The candidate scoring 60% marks in Thesis defense examination will be declared as pass in the examination.

Continuous Internal assessment

It will consist of professional growth oriented student-centered integrated assessment with an additional component of formative assessment and measurement-based summative assessment

Attendance

- Students joining postgraduate training program shall work as full-time residents during the duration of training and maximum 2 leaves are allowed in one month, and should take full responsibility and participation in all facets of the educational process. The period of training for obtaining degrees shall be four completed years

Presentations

- In addition to the conventional teaching methodologies interactive strategies will also be introduced to improve both clinical and

communication skills in the upcoming consultants. Presentations must be conducted regularly as scheduled and attended by all available faculty and residents. As a policy, active participation of the postgraduate resident will be encouraged. Proper written feedback will be given for these presentations and that will be a part of Resident's Portfolio as well. Reflection of the events to be written by the residents as well and must be included in their portfolios.

Task evaluation

- This competency will be learned from journal clubs, review of literature, policies and guidelines, audit projects, medical error investigations, root cause analysis and awareness of healthcare facilities. Active participation and ability to fulfill given tasks will be encouraged. Written feedback must be given and documented to be included in portfolio

Continuous Internal Assessment format (100 Marks)

1. The award of continuous internal assessment shall be submitted confidentially in a sealed envelope.
2. The supervisor shall submit cumulative score of internal assessment of all training years to be added together to provide a final cumulative score of Continuous Internal Assessments of all the trainees to the Head of the Department/ Dean of Post Graduate studies.
3. The Head of Department/ Dean shall submit the continuous internal assessment score through the Principal/ Registrar office to the Examination Department of the University. Score of continuous internal assessment once submitted shall be final and cannot be changed subsequently under any circumstances.
4. The weightage of internal assessment in the final examination will be 10%.
5. Continuous Internal Workplace Based Assessments will be done by the supervisors, that may be based on but not limited to:
    a. Generic and Specialty Specific Competency Assessments
    b. Multisource Feedback Evaluations
    c. Assessment of Candidates' Training Portfolio

Section F

Award of MD PAEDIATRICS Degree

A candidate having declared successful in all the components of examination i.e. ***Theory, Clinical and Thesis*** shall be declared pass and shall be conferred degree in MD Paediatrics.

Section G:

Log Book

As per format approved by the university (available at the university website)

Portfolio:

As per format approved by the university

Section I

Paper Scheme

Intermediate Examination

written

Sr. No.	Topics/ Subtopics	No. of MCQs	No. of SEQs
1.	Immunization		
i	New vaccines		
ii	Contraindications & complications of vaccines		
2.	Social & Preventive Paediatrics		
i	Pakistan statistical data		
ii	Child abuse		
`iii	IMCI	01	
`iv	Growth development and behavior	01	
3.	Paediatric Nutrition		
i	Breast feeding	01	
ii	Weaning		
iii	Minerals deficiency		
iv	Trace elements deficiency	01	
v	Obesity		
vi	Parenteral nutrition	01	
vii	Malnutrition		
	Vitamin A deficiency		
	Vitamin D deficiency		
4.	Fluid and electrolyte disorders		
i	Electrolyte and acid base disorders		
ii	Maintenance and replacement therapy	01	
iii	Deficit therapy		
iv	Fluid and electrolyte treatment of specific disorders		
5.	Allergic disorders		
i	Allergic rhinitis		
ii	Childhood asthma		
iii	Insect allergy	01	01
iv	Urticaria		
v	Anaphylaxis		
vi	Serum sickness		
vii	Food allergy		
6.	Respiratory Disorders		
i	URTI	01	
ii	Congenital anomalies of respiratory tract		
iii	Foreign body	01	
iv	Neoplasms		
v	Bronchiolitis	01	
vi	Pneumonias	01	
vii	Suppurative lung disease		
viii	Atelectasis/emphysema/hyperinflation	01	01
ix	Lung cysts		

x	Asthma	01	
xi	Bronchiectasis	01	
xii	Pleural effusion/Pneumothorax	01	
xiii	Mediastinal mass		
xiv	Respiratory failure	01	
7.	Cardiovascular Disorders		
i	Cyanotic congenital heart disease	01	
ii	Acyanotic congenital heart disease	01	
iii	Rheumatic fever	01	
iv	Rheumatic heart disease	01	
v	Infective endocarditis		
vi	Arrhythmias	01	01
vii	Diseases of myocardium	01	
viii	Diseases of pericardium		
ix	Systemic hypertension	01	
x	Hyperlipidemia		
xi	X-rays & ECGs of cardiovascular diseases	01	
xii	Heart failure & cardiac arrest	01	
8.	Gastrointestinal and Liver Disorders		
i	Diseases of mouth, oral cavity and tongue		
ii	Disorders of deglutition and esophagus		
iii	Peptic ulcer disease		
iv	Foreign body	01	
v	Congenital pyloric stenosis		
vi	Intestinal obstruction		
vii	Malabsorption syndrome	01	
viii	Acute & chronic diarrhea		
ix	IBS	01	
x	IBD		
xi	Hirschsprung's disease	01	01
xii	Anorectal malformations		
xiii	Hepatitis		
xiv	Chronic liver disease		
xv	Cirrhosis and portal hypertension	02	
xvi	Wilson's disease		
xvii	Budd-Chiari syndrome		
xviii	Metabolic diseases of liver		
xix	Worm infestations		
xx	Protozoal infections	01	
xxi	Abdominal pain		
xxii	Abdominal paracentesis		
9.	Neurologic and Neuromuscular Disorders		
ii	Encephalitis		
iii	Cerebral Malaria	01	

iv	Febrile Convulsions		
v	Seizures		
vi	Headaches	01	
vii	Neurocutaneous syndromes		
viii	Movement disorders & encephalopathies		
ix	DBD	01	01
x	Stroke		
xi	CNS vasculitis	01	
xii	Brain abscess	01	
xiii	Pseudotumor cerebri		
xiv	Neuromuscular disorders		
xv	Muscular dystrophies	01	
xvi	Myopathies		
xvii	Neuropathies		
xviii	AFP	01	
xix	Spina bifida	01	
10.	Haematological Disorders		
i	Congenital Aplastic Anemias	01	
ii	Congenital Dyserythropoietic Anemias		
iii	Physiological Anemia of Infancy		
iv	Megaloblastic Anemia	01	
v	Iron Deficiency Anemia		
vi	Hereditary Spherocytosis/Elliptocytosis/pyro poikilocytosis	01	
vii	PNH		
viii	Hemoglobinopathies		
ix	Enzymatic Defects	01	
x	Hemolytic Anemias		
xi	Polycythemia	01	
xii	Inherited Bone Marrow Failure Syndromes		
xiii	Hemorrhagic and Thrombotic Diseases	01	
xiv	DIC	01	
xv	Platelets and Blood Vessel Disorders	01	
xvi	Spleen		
xvii	Lymphatic System	01	
xviii	Bone Marrow Biopsy		
11.	Neonatology		
i	Care of a Newborn	01	
ii	Birth Asphyxia	01	
iii	RDS		
iv	Neonatal Sepsis	01	
v	Neonatal Seizures		
vi	Prematurity		
vii	JNN	01	
viii	IDM		01
ix	Anemia and Bleeding Disorders		
x	Neurological Disorders		

xi	GIT Disorders	01	
xii	Renal Disorders		
xiii	Common Skin Problems		
xiv	Birth Trauma		
xv	Common Congenital Anomalies	01	
xvi	Neonatal Resuscitation		
12.	Endocrine Disorders		
i	Short Stature	01	01
ii	Diabetes Mellitus	01	
iii	Pubertal Disorders	01	
iv	Gonadal Dysfunction and Intersexuality	01	
v	Gynecological Disorders		
vi	Hypo/Hyperthyroidism	01	
vii	Hypo/Hyperparathyroidism	01	
viii	Adrenal Insufficiency	01	
ix	Cushing Syndrome	01	
x	Failure to Thrive	01	
xi	Hypoglycemia	01	
13.	Infectious Diseases		
i	Tetanus	01	01
ii	Diphtheria		
iii	Whooping Cough	01	
iv	Enteric Fever	01	
v	Malaria		
vi	Measles		
vii	Chicken Pox		
viii	Poliomyelitis	01	
ix	AIDS	01	
x	Common Skin Infections		
xi	Nosocomial Infections		
xii	Fungal Diseases	01	
xiii	Mycobacterial Infections		
xiv	Parasitic Infections		
xv	Soft Tissue, Bone and Joint Infections	01	
xvi	STDs		
xvii	Infections in Immunocompromised Host		
xviii	GIT Infections	01	
xix	Animal and Human Bite Wound		
xx	Travel Related Infections	01	
xxi	Bioterrorism		
xxii	Basic Principals of Anti-infective Therapy		
14.	Nephrology		
i	Hematuria	01	
ii	AKI	01	
iii	CKD		
iv	Nephrotic Syndrome	01	

v	Hypertension	01	01
vi	UTI		
vii	Acute and Chronic Glomerulonephritis	01	
viii	HUS		
ix	VUR	01	
x	Renal Tubular Disorders	01	
xi	Congenital and Hereditary Renal Disorders		
xii	Renal and Bladder Stones and Tumors	01	
xiii	PUV	01	
xiv	Hydronephrosis		
xv	Voiding Dysfunction		
xvi	Undescended Testes		
xvii	Fluid and Electrolytes Disturbances	01	
15.	Genetics		
i	Different Patterns of Inheritance	01	
ii	Down Syndrome	01	
iii	Turner Syndrome		
iv	Chromosomal Disorder	01	
v	Single Gene Disorders		
vi	Polygenic Disorders		
vii	Genetic and Prenatal Diagnosis		
16.	Poisoning and Toxicology		
i	Amphetamine	03	
ii	Antiarrhythmic		
iii	Anticholinergic		
iv	Antihistamines		
v	Arsenic		
vi	Barbiturates		
vii	Carbonmonoxide		
viii	Chloral Hydrate		
ix	Cocaine		
x	Cyanide		
xi	TCA		
xii	Digitalis		
xiii	Iron		
xiv	Lead		
xv	Lithium		
xvi	Methemoglobinemia		
xvii	Narcotics		
xviii	Phenothiazines		
xix	Physostigmine		
xx	Propranolol		
xxi	Quinine		
xxii	Salicylate		
xxiii	Theophylline		
17.	Metabolic Diseases		

i	Carbohydrate Disorders	01	
ii	Amino acid Disorders		
iii	Organic acid Disorders		
iv	Fat Metabolic Disorders		
v	Lysosomal and Peroxisomal Disorders		
vi	Mitochondrial Disorders		
18.	Emergency and Critical Care		
i	CPR	01	01
ii	Respiratory Failure		
iii	Shock		
iv	Febrile Child		
v	Head Injury	01	
vi	Spine Injury		
vii	Drowning		
viii	Accidents		
ix	CCF	01	
x	Snake and Scorpion Bite	01	
19.	Immunology and Rheumatology		
i	Acute and Chronic Arthritis	01	
ii	Connective Tissue Disorders		
iii	Major Orthopedic Deformities		
iv	Bone and Joint Infections		
v	T and B Cell Disorders		
20.	Dermatology		
i	Exanthematous Illnesses	02	
ii	Vascular Lesions		
iii	Pigment Disorders		
iv	Vesicobullous Disorders		
v	Pyogenic, Fungal and Parasitic Infections		
vi	SJS		
vii	Eczema		
viii	Urticaria		
ix	Drug Rash		
x	Alopecia		
xi	Ichthyosis		
21.	Behavioral and psychiatric disorder		
i	Rumination and PICA	01	
ii	Motor disorders and Habits		
iii	Anxiety disorder		
iv	Mood disorders		
v	Suicide and attempted suicide		
vi	Eating disorders		
vii	Conduct disorders		
viii	Autism spectrum disorder		
ix	Childhood psychosis		
X	Nocturnal Enuresis		

Xi	Encopresis		
Xii	ADHD		
xiii	ASD		
xiv	Dyslexia		
22.	Learning disorders		
i	ADHD		
ii	Dyslexia		
iii	Language development and communication disorder		
iv	Intellectual disability		
23.	Disorders of eye		
i	Disorders of conjunctiva, cornea, lens		
ii	Disorders of retina, optic nerve		
iii	Glaucoma		
iv	Orbital problems		
24.	Disorders of ear		
i	Hearing loss		
ii	Otitis externa and media		
iii	Disorders of inner ear		
25.	Rehabilitation medicine		
i	Severe traumatic brain injury		
ii	Spinal cord injury		
iii	Sports related injuries		

Final Examination

written

Sr. No.	Topics/ Subtopics	No. of MCQs	No. of SEQs
1.	Immunization		
i	New vaccines		
ii	Contraindications & complications of vaccines		
2.	Social & Preventive Paediatrics		
i	Pakistan statistical data		
ii	Child abuse		
`iii	IMCI	01	
`iv	Growth development and behavior	01	
3.	Paediatric Nutrition		
i	Breast feeding	01	
ii	Weaning		
iii	Minerals deficiency		
iv	Trace elements deficiency	01	
v	Obesity		
vi	Parenteral nutrition	01	
vii	Malnutrition		
	Vitamin A deficiency		
	Vitamin D deficiency		
4.	Fluid and electrolyte disorders		
i	Electrolyte and acid base disorders		
ii	Maintenance and replacement therapy	01	
iii	Deficit therapy		
iv	Fluid and electrolyte treatment of specific disorders		
5.	Allergic disorders		
i	Allergic rhinitis		
ii	Childhood asthma		
iii	Insect allergy	01	01
iv	Urticaria		
v	Anaphylaxis		
vi	Serum sickness		
vii	Food allergy		
6.	Respiratory Disorders		
i	URTI	01	
ii	Congenital anomalies of respiratory tract		
iii	Foreign body	01	
iv	Neoplasms		
v	Bronchiolitis	01	
vi	Pneumonias	01	
vii	Suppurative lung disease		
viii	Atelectasis/emphysema/hyperinflation	01	01
ix	Lung cysts		

x	Asthma	01	
xi	Bronchiectasis	01	
xii	Pleural effusion/Pneumothorax	01	
xiii	Mediastinal mass		
xiv	Respiratory failure	01	
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i	Cyanotic congenital heart disease	01	
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iii	Rheumatic fever	01	
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v	Infective endocarditis		
vi	Arrhythmias	01	01
vii	Diseases of myocardium	01	
viii	Diseases of pericardium		
ix	Systemic hypertension	01	
x	Hyperlipidemia		
xi	X-rays & ECGs of cardiovascular diseases	01	
xii	Heart failure & cardiac arrest	01	
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iii	Peptic ulcer disease		
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xii	Fungal Diseases	01	
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x	Renal Tubular Disorders	01	
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xii	Renal and Bladder Stones and Tumors	01	
xiii	PUV	01	
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xv	Voiding Dysfunction		
xvi	Undescended Testes		
xvii	Fluid and Electrolytes Disturbances	01	
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16.	Poisoning and Toxicology		
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vi	Barbiturates		
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viii	Chloral Hydrate		
ix	Cocaine		
x	Cyanide		
xi	TCA		
xii	Digitalis		
xiii	Iron		
xiv	Lead		
xv	Lithium		
xvi	Methemoglobinemia		
xvii	Narcotics		
xviii	Phenothiazines		
xix	Physostigmine		
xx	Propranolol		
xxi	Quinine		
xxii	Salicylate		
xxiii	Theophylline		
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iv	Fat Metabolic Disorders		
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v	Head Injury	01	
vi	Spine Injury		
vii	Drowning		
viii	Accidents		
ix	CCF	01	
x	Snake and Scorpion Bite	01	
19.	Immunology and Rheumatology		
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ii	Connective Tissue Disorders		
iii	Major Orthopedic Deformities		
iv	Bone and Joint Infections		
v	T and B Cell Disorders		
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iii	Pigment Disorders		
iv	Vesicobullous Disorders		
v	Pyogenic, Fungal and Parasitic Infections		
vi	SJS		
vii	Eczema		
viii	Urticaria		
ix	Drug Rash		
x	Alopecia		
xi	Ichthyosis		
21.	Behavioral and psychiatric disorder		
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ii	Motor disorders and Habits		
iii	Anxiety disorder		
iv	Mood disorders		
v	Suicide and attempted suicide		
vi	Eating disorders		
vii	Conduct disorders		
viii	Autism spectrum disorder		
ix	Childhood psychosis		
X	Nocturnal Enuresis		

Xi	Encopresis		
Xii	ADHD		
xiii	ASD		
xiv	Dyslexia		
22.	Learning disorders		
i	ADHD		
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iv	Intellectual disability		
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i	Disorders of conjunctiva, cornea, lens		
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iv	Orbital problems		
24.	Disorders of ear		
i	Hearing loss		
ii	Otitis externa and media		
iii	Disorders of inner ear		
25.	Rehabilitation medicine		
i	Severe traumatic brain injury		
ii	Spinal cord injury		
iii	Sports related injuries		

Section J

Resources and references (books and other resource material)

Nelson text book of Paediatrics,

Gomella neonatology

Wayne Harris examination

Red book by Dr. Shaukat Raza

Websites:

https://pubmed.ncbi.nlm.nih.gov

http://www.aap.org

http://www.nejm.org

Journals:

Annals of PMC

Journal of University Medical and Dental College

The Professional Medical Journal

Journal of Aziz Fatima Medical and Dental College

Archives of Medical Sciences

Section K

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