STUDY GUIDE

&

CURRICULUM

PEDIATRICS

MBBS, AIMC

STUDY GUIDE

&

CURRICULUM

MBBS

AIMC

ABBOTTABAD INTERNATIONAL MEDICAL COLLEGE

Post office Abbottabad public school islamkot main mansehra road Abbottabad
Phone: +92+992-406612-15 E-mail: info@aimi.edu.pk
Web Site: www.aimi.edu.pk.

Academic Affairs

Concerned Officials

Prof. Dr. Mumtaz khan burki	**Head of Pediatrics Medicine**
Dr. Muhammad Adnan	**Senior registrar Pediatrics**
Dr. Amna khan	**Senior registrar Pediatrics**

SYLLABUS–COMMITTEE

Prof. Dr. Mumtaz khan burki	**member**
Dr. Muhammad Adnan	**member**
Dr. Amna khan	**member**

PREAMBLE

DEPARTMENT OF PEDIATRICS

Pediatrics department was established in 2002 at DHQ hospital Haripur, comprising of general pediatrics wards (A and B) and 1 neonatal care. Pediatrics department at DHQ hospital Haripur was functional till 30 june 2019. Now it has been established in Abbottabad Medical Complex Abbottabad with fully trained personals and equipments.

Pediatrics department consist of pediatrics ward A& B, pediatrics ICU and Neonatal ICU, having 35 beds in general Pediatrics wards, 5 beds in PICU fully equipped with cardiac monitors and 1 ventilator. Neonatal ICU consist of incubators, warmers, phototherapy units equipped with monitors and ventilator and well trained staff.

Faculty of the department include Prof. Dr. Mumtaz Khan burki (Head of the Department), Dr. Amna khan (senior registrar), Dr. Muhammad Adnan(senior registrar) Medical officers and supporting staff. Dr. Nasir khan worked as Assistant professor till December 2018 and Dr. Muhammad Irshad worked as registrar till 30th june 2019.

Department of Pediatrics has expert clinicians, to care for children who need specialized care beyond the capability of a community hospital. The breadth and depth of our experience give us the ability to treat children suffering from virtually any acute or chronic illness. Range of services includes treating premature infants, full-term newborns, toddlers, children and adolescents.

While we treat complex medical problems as a focus, we also provide general pediatric care as well as emergency care

PROF. DR. MUMTAZ KHAN BURKI:

Prof. Dr. Mumtaz Khan burki is well known and Experience pediatrician of Abbottabad International medical complex. He is MBBS, Fellow of American medical Society, Fellow of Vianna mediacal Academy, and also having Diploma in child health(DCH). He is remained Professor of Pediatrics at Ayub Teaching Hospital Abbottabad, Now he is professor of pediatrics as well as head of the head of the department. He is well mannered, well experienced and very cooperative with staff and patients.

DR. MUHAMMAD ADNAN:

He is working as Senior Registrar at Abbottabad International Medical college and hospital complex. He has done MBBS from KMU, and FCPS in pediatrics. He is well mannered, well experienced and very cooperative with staff and patients.

DR.AMNA KHAN:

She is working as Senior registrar at Abbottabad International Medical college and hospital complex. She has done MBBS from KMU, and FCPS in pediatrics. She is well mannered, well experienced and very cooperative with staff and patients. cooperative with staff and patients.

N T E N T S

PEDIATRICS

The course includes systematic instructions in growth and development, nutritional needs of a child, immunization schedules and management of common diseases of infancy and childhood, scope of Social Pediatrics and counselling.

OBJECTIVES

The broad goals of the teaching of undergraduate students in Pediatrics are to acquire knowledge and appropriate skills for optimally dealing with major health problems of children and to ensure their optimal growth and development.

Knowledge

At the end of the course, the student shall be able to:

a. Describe the normal growth and development during fetal life, neonatal period, childhood and adolescence and outline deviations thereof;
b. Describe the common pediatrics disorder and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;
c. State age related requirements of calories, nutrients, fluids, drugs etc. in health and disease;
d. Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;
e. Outline national programmes relating to child health including immunization programmes;

Skills

At the end of the course, the student shall be able to:

(a) Take a detailed pediatrics history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigations and plan and institute therapy;
(b) Take anthropometric measurements, resuscitate newborn infants with bag and mask at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, start an intravenous line and provide naso-gastric feeding, observe venesection and intra-osseous infusion if possible.
(c) Conduct/observe diagnostic procedures such as lumbar puncture, bone marrow aspiration, pleural tap and ascitic tap; observe liver and kidney biopsy.
(d) Distinguish between normal newborn babies and those requiring special care and institute early care to all new born babies including care of pre-term and low birth weight babies, provide correct guidance and counselling in breast-feeding.
(e) Provide ambulatory care to all sick children, identify indications for specialized/inpatient care and ensure timely referral of those who require hospitalization.

Integration

The training in pediatrics should be done in an integrated manner with other disciplines, such as pediatrics surgery, adult Medicine, Obstetrics and Physical Medicine, curative and rehabilitative services for care of children both in the community and at hospital as part of a team.

COURSE CONTENT/CURRICULUM:

Vital statistics

1. Definition and overview of Pediatrics with special reference to age-related disorders. Population structure, pattern of morbidity and mortality in children. Maternal, perinatal, neonatal, infant and preschool mortality rates.
2. Definition, causes, present status and measures for attainment of goals.
3. Current National programmes such as national immunization days, EPI, Vitamin A prophylaxis, AFP,ARI, Diarrhea control programme IMNCI and Other National Programmes

Growth and development

1. Normal growth from conception to maturity.
2. Anthropometry – measurement and interpretation of weight, length/height, head circumference,
3. mid-arm circumference. Use of weighing machines, infantometer
4. Interpretation of Growth Charts: Road to Health card and percentile growth curves.
5. Abnormal growth patterns – failure to thrive, short stature.
6. Growth pattern of different organ systems such as lymphoid, brain and sex organs.
7. Normal pattern of teeth eruption.
8. Principles of normal development
9. Important milestones in infancy and early childhood in the areas of Gross Motor, Fine Motor,
10. Language and Personal–Social development. 3-4 milestones in each of the developmental fields, age of normal appearance and the upper age of normal psychological and behavioral problems.
11. Measurement and interpretation of sitting height, US: LS ratio and arm span.
12. Age-independent anthropometric measurement-principles and application.

Nutrition

1. Normal requirements of protein, carbohydrates, fats, minerals and vitamins for newborn, children and pregnant and lactating mother. Common food sources.
2. Breast feeding, physiology and lactation, composition of breast milk, Colostrum, Initiation and
3. technique of feeding. Exclusive breast milk. Hazards and demerits of prelacteal feed, top milk and bottle-feeding. Feeding of LBW babies.

4. Infant feeding/weaning foods, method of weaning.
5. Assessment of nutritional status of a child based on history and physical examination.
6. Protein energy malnutrition-Definition, classification according to IAP/Wellcome Trust, acute versus chronic malnutrition. Clinical features of Marasmus & kwashiorkar. Causes and management of PEM including that of complications planning a diet for PEM.
7. Vitamins-Recognition of vitamin deficiencies (A, D, K, C, B Complex). Etiopathogenesis, clinical feature, biochemical and radiological findings, differential diagnosis an management of nutritional rickets & scurvy. Hypervitaminosis A and D.
8. Characteristics of transitional and mature milk (foremilk & hind milk). Prevention and management of lactation failure and feeding problems.
9. Definition, causes and management of obesity.

Immunization

1. Extended program on immunization (EPI).
2. Principles of Immunization. Vaccine preservation and cold-chain.
3. Types, contents, efficacy storage, dose, site, route, contra-indications and adverse reactions of
4. vaccines – BCG, DPT, OPV, Measles, MMR and Typhoid
5. Investigation and reporting of vaccine preventable diseases. AFP (Acute Flaccid Paralysis) surveillance
6. Special vaccines like Hepatitis B, H influenza B, Pneumococcal, Hepatitis A, Chicken pox, Meningococcal, and Rabies.

Infectious diseases

1. Epidemiology, basic pathology, natural history, symptoms, signs, complications, investigations,
2. differential diagnosis, management and prevention of common bacterial, viral and parasitic infections in the region, with special reference to vaccine-preventable disease:
3. Diarrhea, Pneumonia, Tuberculosis, Poliomyelitis, Meningitis, Diphtheria, Whooping cough, Tetanus including neonatal tetanus, Measles, Mumps, Rubella, Typhoid, Viral Hepatitis, Cholera, Chickenpox, Giardiasis, Amoebiasis, Intestinal helminthiasis, Malaria, Dengue fever, AIDS. Kala-Azar, Leprosy, Chlamydia infection

Hematology

1. Causes of anemia in childhood. Classification based on etiology and morphology.
2. Epidemiology, recognition, diagnosis, management and prevention of nutritional anemia-iron deficiency, megaloblastic.
3. Clinical approach to a child with anemia with lymphadenopathy and/or hepato-splenomegaly.
4. Epidemiology, clinical features, investigations and management of Thalassemia.
5. Approach to a bleeding child.
6. Diagnosis of acute lymphoblastic leukemia and principles of treatment.
7. Clinical features and management of hemophilia, ITP.

8. Diagnosis and principles of management of lymphomas.
9. Types, clinical features and management of acute hemolytic anemia.
10. Non-thrombocytopenic purpura (Henoch-Schonlein purpura)

Respiratory system

1. Clinical approach to a child with cyanosis, respiratory distress, wheezing. Significance of recession, retraction.
2. Etiopathogenesis, clinical features, complications, investigations, differential diagnosis and management of acute upper respiratory infections, pneumonia with emphasis on bronchopneumonia, bronchiolitis, bronchitis. Acute and chronic otitis media.
3. Etiopathogenesis, clinical features, diagnosis, classification and management of bronchial asthma. Treatment of acute severe asthma.
4. Pulmonary tuberculosis-tuberculous infection versus tuberculous disease, Etiopathogenesis, diagnostic criteria in children versus adults. Diagnostic aids-technique and interpretation of Mantoux test and BCG test. Radiological patterns, Chemoprophylaxis and treatment.
5. Diagnosis and management of foreign body aspiration. Differential diagnosis of stridor.
6. Pathogenesis, clinical features and management of pneumothorax, pleural effusion and empyema.
7. Multidrug resistant tuberculosis, Bronchiectasis.

Gastro Intestinal Tract

1. Clinical approach to a child with jaundice, vomiting, abdominal pain, upper and lower GI bleeding, hepato-splenomegaly.
2. Acute diarrheal disease-Etiopathogenesis, Clinical differentiation of watery and invasive diarrhea, complications of diarrheal illness. Assessment f dehydration, treatment at home and in hospital. Fluid and electrolyte management. Oral rehydration, composition of ORS.
3. Persistent and chronic diarrhea
4. Clinical features and management of acute viral hepatitis and acute liver failure, causes & diagnosis of Chronic Liver Disease.
5. Common causes of constipation.
6. Abdominal tuberculosis.
7. Celiac disease.
8. Inflamatory bowel disease

Central Nervous System

1. Evaluation of milestones and developmental age
2. Localization of neurological deficit
3. Clinical approach to a child with coma, mental retardation
4. Common causes and approach to convulsion
5. Clinical diagnosis, investigations and treatment of acute pyogenic meningitis, encephalitis &

Tubercular Meningitis, Cerebral Malaria

6. Seizure Disorder-Causes and types of convulsions at different ages. Diagnosis categorization &
7. management of Epilepsy (Broad outline). Febrile convulsions-definition, types Management of seizures and status epilepticus.
8. Causes, diagnosis and management of cerebral palsy.
9. Acute flaccid paralysis – Differentiation between Polio and Guillain – Barre syndrome.
10. Microcephaly, Hydrocephalus, chorea
11. Counseling parents for inherited neurological diseases

Cardiovascular system

1. Clinical features, diagnosis, investigation, treatment and prevention of acute rheumatic fever. Common forms of rheumatic heart disease in childhood.
2. Recognition of congenital acyanotic and cyanotic heart disease. Hemodynamics, clinical features and management of VSD, PDA, ASD and Fallot's tetralogy (Cyanotic spells).
3. Recognition of congestive cardiac failure in children.
4. Hypertension in children-recognition and referral.
5. Diagnosis and management of bacterial endocarditis, pericardial effusion, myocarditis.

Genito-Urinary system

1. Basic etiopathogenesis, clinical features, diagnosis, complications and management of acute poststreptococcal glomerulo-nephritis and nephrotic syndrome.
2. Etiology, clinical feature, diagnosis and management of urinary tract infection – acute and recurrent.
3. Etiology, diagnosis and principles of management of acute renal failure.
4. Causes and diagnosis of obstructive uropathy in children.
5. Diagnosis and principles of management of chronic renal failure.
6. Causes and diagnosis of hematuria.
7. Renal and bladder stones
8. Hemolytic-uremic syndrome

Endocrinology

1. Etiology clinical features & diagnosis of diabetes and hypothyroidism, hyperthyroidism,
2. growth hormone deficiency,
3. diabetes in children.
4. Congenital adrenal hyperplasia, Addison disease.

Neonatology

1. Definition – live birth, neonatal period, classification according to weight and gestation, mortality rates.

2. Delivery room management including neonatal resuscitation and temperature control
3. Etiology, clinical features, principles of management and prevention of birth asphyxia.
4. Birth injuries – causes and their recognition.
5. Care of the normal newborn in the first week of life. Normal variations and clinical signs in the neonate.
6. Breast feeding-physiology and its clinical management
7. Identification of congenital anomalies at birth with special reference to anorectal anomalies, tracheoesophageal fistula, diaphragmatic hernias, neural tube defects.
8. Neonatal Jaundice: causes, diagnosis and principles of management.
9. Neonatal infection– etiology, diagnosis, principles of management. Superficial infections, sepsis.
10. Low birth weight babies-causes of prematurity and small-for-date baby, clinical features and differentiation. Principles of feeding and temperature regulation. Problems of low birth weight babies. Identification of sick newborn (i.e. detection of abnormal signs – cyanosis, jaundice, respiratory distress, bleeding, seizures, refusal to feed, abdominal distension, failure to pass meconium and urine).
11. Recognition and management of specific neonatal problems-hypoglycemia, hypocalcemia, anemia, seizures, necrotizing enterocolitis, hemorrhage
12. Common intra-uterine infections
13. Transportation of a sick neonate.

Pediatrics Emergencies

1. Status epilepticus
2. Status asthmaticus/Acute Severe Asthma
3. Shock and anaphylaxis.
4. Burns
5. Hypertensive emergencies.
6. Gastrointestinal bleed.
7. Comatose child
8. Congestive cardiac failure
9. Acute renal failure

Fluid-Electrolyte

1. Principles of fluid and electrolyte therapy in children. Hyponatremia, hypernatremia, hypokalemia, hyperkalemia
2. Pathophysiology of acid-base imbalance and principle of management

Genetics

1. Principles of inheritance and diagnosis of genetic disorders
2. Down’s syndrome

Behavioral Problems

1. Breath holding spells,
2. nocturnal enuresis,
3. temper tantrums,
4. pica

Pediatrics Surgical Problems

1. Diagnosis and timing of surgery of Cleft lip/palate, hypospadias, undescended testis, tracheoesophageal fistula, hydrocephalus, Umbilical and inguinal hernia, malformations, hypertrophic pyloric stenosis.

Therapeutics & poisoning

1. Pediatric doses, drug combinations, drug interactions, age specific choice of antibiotics.
2. Paracetamol poisoning
3. Opoids poisoning
4. Iron poisoning
5. Organophosphate poisoning
6. Snake bite
7. Dog bite

TEACHING AND LEARNING ACTIVITIES

Teaching in the department will include lectures and practical training for 3rd, 4th and final year MBBS as well as for foundation year(house job).

Lectures

1. Introduction to child health and age related influences on child health
2. Growth: Principles, Normal pattern, clinical indices and use of growth charts
3. Growth: Abnormal, etiology and approach to management
4. Development: Principles and normal milestones
5. Abnormal development: etiology and management
6. Protein energy malnutrition: Etiology, classification, clinical features, management
7. Clinical aspects of fluid and electrolyte balance in children
8. Common vaccines: doses, schedule, contraindications and side effects
9. Approach to a child with shock
10. Approach to a child with acute fever
11. Deficiency disorders of vitamins and micro-nutrients

12. Approach to a child with acute diarrhea, dehydration and ORS
13. Persistent diarrhea: etiology, clinical features and management. Dietary therapy in chronic diarrhea
14. Approach to management of common abdominal symptoms -pain, vomiting, constipation, rectal
1. bleeding etc
15. Approach to a child with upper respiratory tract infection (LTB, epiglottitis, otitis media, cough and
2. cold)
16. Approach to a child with lower respiratory infection (pneumonia, bronchiolitis)
17. Approach to a child with wheezing including asthma
18. Introduction to newborn care, and classification of neonates.
19. Care of normal newborn
20. Breast feeding , weaning diets and lactation failure
21. Approach to a newborn with respiratory distress
22. Approach to jaundice in the newborn
23. Infections in the newborn
24. Perinatal asphyxia: etiology, clinical features and management
25. Approach to a child with bleeding & coagulation disorders
26. Approach to a child with malignancy
27. Approach to a child with congestive cardiac failure
28. Rheumatic fever: clinical features, management and prophylaxis
29. Approach to a child with congenital heart disease
30. Approach to a child with urinary tract infection including recurrent UTI
31. Approach to a child in coma
32. Approach to a child with acute flaccid paralysis
33. Neonatal seizures and febrile convulsions diagnosis and management
34. Approach to common genetic disorders including Downs Syndrome
35. Short stature, hypothyroidism: etiology and management
36. Adolescent growth, sexual maturation and disorders of Puberty
3. And lectures for remaining course content

Practical Training

Practical training is conducted in outpatient department, pediatrics ward, and neonatal unit.

Learning objectives (Skills)

1. Taking a detailed Pediatric history
2. Conducting physical examination of children
3. Understanding normal growth and development

4. Performing anthropometry and its interpretation
5. Developmental assessment of a child
6. Assessment of calorie/ protein intake and advise regarding feeding practice
7. Immunization schedule and administration
8. Evaluation and management of common OPD conditions
9. Medical conduct during patient examination

Clinical OPD cases

1. Tutorials and demonstration for first one week
2. Case discussion of common OPD conditions

Subjects for Tutorials cum demonstration

1. History taking I (Present, past and family)
2. History taking II (Antenatal, development, immunization, feeding)
3. General physical examination and Anthropometry
4. Developmental examination and interpretation of abnormal development
5. Assessment of nutritional intake and nutritional advice
6. Demonstration of BCG, OPV, DPT and Measles vaccination, Mx testing

List of OPD cases for discussion

1. Approach to a child with acute fever (evaluation and management of common febrile conditions including viral fever, enteric fever, malaria, UTI)
2. Approach to a child with chronic fever (evaluation and management of pulmonary tuberculosis)
3. Common viral exanthems including measles and chicken pox.
4. Common skin conditions including pyoderma, scabies
5. Common GI conditions including acute gastroenteritis, persistent diarrhea and infective hepatitis
6. Common respiratory conditions including viral URI, bacterial pharyngitis, laryngeal stridor and croup, acute lower respiratory tract infection (LRTI) and asthma.
7. Common CNS conditions including febrile seizures, epilepsy, developmental delay
8. Evaluation of normal infants for growth and development and advice regarding nutrition and Immunization

3rd year MBBS

Learning objectives (Skills)

1. Emphasis on Pediatric history taking, physical examination, anthropometry and assessment of growth and development
2. Care of normal newborn at birth and lying in ward
3. Counseling for breast feeding/ infant feeding
4. Evaluation and management of common fluid and electrolyte problems
5. Evaluation and management of common conditions related to Infectious diseases, Adolescent pediatrics, Respiratory tract, GI tract and Cardiovascular system.

Teaching schedule

1. Ward rounds of the allotted beds
2. Clinical case discussion
3. Tutorials/ Demonstration

Ward Rounds

Each student will be allotted 4 beds on the first day of the posting. The students are expected to maintaina diary of all the cases admitted on those 4 beds. The student should be acquainted with the diagnosis and day to day progress of the child. The rounds will be taken daily on a rotation basis.

Clinical case discussion

A. Neonatology

1. Neonatal history
2. Examination of newborn
3. Care of normal newborn at birth and lying in ward
4. Breast feeding
5. Management of common neonatal problems

B. Pediatrics

Clinical case discussion with emphasis on history taking, physical examination, nutrition and developmental assessment, differential diagnosis, investigations and management.

Log Book

Each student will be provided a Log Book in the start of 3rd year. It will be compulsory for the students to maintain the proper record of the Log book and get it signed by the respective teacher on daily basis. Log books will be evaluated during ward tests and professional examinations and marks will be included in internal assessment

4th year MBBS

Learning objectives (Skills)

1. Diagnosis and management of common conditions in community including diarrhea, respiratory tract infections, infections and malnutrition

2. Immunization
3. Newborn care at the community level
4. Awareness regarding National Health programmes

Teaching schedule

1. Clinical case discussion
2. Tutorials
3. ward round

Clinical case discussion

1. Neonatal history taking, examination of newborn and breast-feeding.
2. Management of low birth weight including temperature regulation and sepsis
3. Case discussion of common pediatric conditions including diarrhea, malnutrition and lower respiratory tract infection

Subjects for tutorials/ demonstration

1. Newborn resuscitation
2. Common vaccines used in Pediatrics
3. Malnutrition and Vitamin deficiencies
4. National Health programmes specifically EPI, DOTS, IMNCI

Log Book

Each student will be provided a Log Book in the start of 3rd year. It will be compulsory for the students to maintain the proper record of the Log book and get it signed by the respective teacher on daily basis. Log books will be evaluated during ward tests and professional examinations and marks will be included in internal assessment

FINAL YEAR MBBS

Learning Objectives (skills)

1. Re-emphasis on taking a detailed Pediatric history, conducting an appropriate physical and
1. development examination of children including neonates, making a clinical diagnosis, interpreting common laboratory results and planning therapy
2. Evaluation and management of emergencies including neonatal and pediatric resuscitation
3. Management of neonates requiring special care (including low birth weight and preterm babies)
4. Exposure to diagnostic and therapeutic procedures such as intravenous access, naso-gastric feeding, venesection, pleural tap, ascitic tap, bone marrow aspiration, lumbar puncture, liver and kidney biopsy
5. Prescription writing for common disorders of childhood.

Teaching schedule

1. Ward rounds of the allotted beds
2. Clinical case discussion
3. Tutorials/Demonstration

Ward Rounds

Each student will be allotted 4 beds on the first day of the posting. The students are expected to maintain a diary of all the cases admitted on those 4 beds. The student should be acquainted with the diagnosis and day to day progress of the child. The rounds will be taken daily on a rotation basis.

Clinical case discussion

A. Neonatology

1. Normal newborn: History, examination, common problems, breast-feeding.
2. Management of low birth weight neonates (preterm neonates and IUGR neonates)
3. Management of neonatal jaundice
4. Identification of sick newborn

B. Pediatrics

Clinical case discussion with emphasis on history taking, physical examination, nutrition and developmental assessment, differential diagnosis, investigations and management.

Log Book

Each student will be provided a Log Book in the start of 3rd year. It will be compulsory for the students to maintain the proper record of the Log book and get it signed by the respective teacher on daily basis. Log books will be evaluated during ward tests and professional examinations and marks will be included in internal assessment

List of Xrays

1. Pneumonia
2. Primary complex, Miliary tuberculosis
3. Obstructive emphysema
4. Pleural effusion
5. Pneumothorax
6. Normal thymus
7. Congenital heart disease with increased/ decreased pulmonary blood flow
8. Rickets, scurvy, hemolytic anemia
9. Skull (suture separation, enlarged sella, and raised intracranial tension)

List of Instruments

1. Tuberculin syringe
2. Intravenous cannula
3. Lumbar puncture needle
4. Bone marrow aspiration needle
5. Liver biopsy needle
6. Ambu bag and mask
7. Endotracheal tube

8. Laryngoscopes
9. Emergency drugs/ vaccine

List of Procedures

1. Injections (IM, IV, S/C, I/D)
2. Blood sampling, IV cannula insertion
3. Naso-gastric tube insertion
4. Lumbar puncture
5. Pleural/ Ascitic tap
6. Bone marrow aspiration
7. Liver/ Kidney biopsy
8. Peritoneal dialysis

ASSESSMENT AND DISTRIBUTION OF MARKS

Final Professional Examination

Theory paper

Duration of the theory paper shall be 3 hours. Total marks in final examination shall be 100. The theory paper will be divided into two sections A and B. Section A will have 45
MCQS and section B will have 9 SEQS. Both sections have to be answered on separate sheets.
10 marks will be for internal assessment.

Practical

Total marks in final examination shall be 100, 10 marks specified for internal assessment

The practical examination will be held over 4 days, 25 students each day.
1. Long case 20 marks
2. Short case 10 marks
3. OSCEs 60 marks which will be interactive as well as static.

Types of Questions suggested

Theory:

Short Essay Questions (SEQs) and MCQs;

Practical / Clinical Assessment:

Long Case, Short Case, Objective Structured Clinical Examination (OSCE)

Notes on OSCE

Objective Structured Clinical Examination (OSCE) has proved to be a valid, reliable and objective modality of assessment for assessing clinical skills. This involves breaking up clinical competence in to a series of clinical skills (history taking, performing physical examination, interpreting lab data, differential diagnosis, treatment & follow up), and testing each skill in a separate 'station'. Each station is provided with a real or simulated patient, mannequin, equipment, X-Ray, or even a question which should be tackled by a student within a

prescribed time limit say, 2 – 5 minutes, on rotation basis. The performance is observed by an observer using a predetermined check list for assigning marks. A detailed discussion on the preparation of OSCE is beyond the scope of this book. However, a few tips have been given for initial introduction.

Principles of Designing OSCE

Pre-Professional Examination

The pattern will be similar

The division of marks for the subject of Pediatrics in the Final Professional examination will be as follows:

Total marks 200

Theory 100

Practical 100

Ward test and class tests

A ward test compromising of short cases and TOACS(100 marks) will be conducted at the end of clinical rotation. The result will be incorporated in internal assessment of final professional examination

Assessment of 3rd and 4th Year

A ward test compromising of short cases and TOACS(100 marks) will be conducted at the end of clinical rotation. The result will be incorporated in internal assessment of final professional examination.

CURRICULUM OF

M.B.B.S

Prepared by:

PAKISTAN MEDICAL & DENTAL COUNCIL

&

HIGHER EDUCATION COMMISSION ISLAMABAD

PEDIATRICS

PAEDIATRICS

PERFORMANCE OBJECTIVES:

COURSE CONTENT

List of suggested topics for teaching the undergraduates is given below, however the individual faculties can alter/add topics as per their discretion in respective institution:

- Common Problems of children in Pakistan and statistics of Pakistani Children.
- Clinical Methods in Paediatrics.
- Nutrition (Breast feeding, infant feeding, Weaning) and Nutritional Disorders: (PCM, Rickets, Vitamin A Deficiency, iodine deficiency, Iron Deficiency).
- Growth and Development.
- Common Paediatric infections: Measles, tetanus, polio, diphtheria, whooping cough, AIDS, Malaria, Enteric Fever, Tuberculosis, Chicken pox, Common Skin infections.
- Expanded Programme of Immunization (EPI). Newer vaccines.
- Diarrhoeal diseases.
- Acute Respiratory Infections (ARI).
- IMCI (Integrated Management of Childhood Illness).
- Neonatology: Resuscitation of new born, care of normal new-born, birth asphyxia, premature and low birth weight babies, Neonatal Jaundice, Neonatal sepsis, Neonatal fits, Respiratory distress of new born, Common skin conditions of neonates;Pyloric stenosis, Myelo-meningocele, Hydrocephalus, common congenital abnormalities and Birth trauma.
- Neurology: Meningitis, febrile, convulsions, epilepsy, Cerebral Palsy, mental handicap, Cerebral Malaria, Encephalitis.
- Cardiology: Congenital heart diseases [VSD, PDA, TOF, ASD], Rheumatic fever. Congestive cardiac failure, Clinical assessment of a cyanotic neonate/infant.
- Haematology: Anaemias, Thalassemia, Leukemias, Bleeding disorders.
- Nephrology: Nephrotic syndrome, Urinary tract infections, Acute Glomeulonephritis.
- Endocrinology: Hypothyroidism, short stature, Diabetes.
- Pulmonology: Croup, Asthma, Tuberculosis, Pneumonias, Pleural effusions.
- Gastroenterology: Abdominal pain, Malabsorption, Hepatitis, cirrhosis, Acute liver failure, Diarrhoea [acut/echronic] Dysentery, Worm infestations, Giardia, amoebiasis Rectal Polyp.
- Genetics: Patterns of inheritance, Down's syndrome.
- Social Paediatrics:Right of child, child abuse, Enuresis, encoparesis,

Hyperactivity, Dyslexia, Attention Deficit disorder.

- Miscellaneous: Poisoning, prevention of home accidents, behavioural disorders.
- Paediatric Surgery: Hernia, Intussusseption, Intestinal obstruction, Tallipes, congenital Dislocation of Hip, Vesico ureteral reflux.

A. KNOWLEDGE AND UNDERSTANDING

1. Student will be able to give description of common paediatric problems and diseases, in children at different ages.
2. Student will show an understanding of national programmes working for health promotion and disease prevention in children

   e.g. EPI, ARI etc.
3. Student will show an understanding of processes of growth and development in childhood and will be able to describe growth parameters and developmental milestones at different ages.
4. Student will demonstrate understanding of the importance of nutrition in children and be able to describe diets suitable for different ages and in different diseases.
5. Student will show an understanding of the interaction between heredity and environment in the genesis of disease in children.
6. Student will be able to describe care of new-born baby, in health and when suffering from common problems, along with importance of perinatal factors impacting on the well being of the new-born.
7. The Student will show understanding and knowledge about common accidents and poisoning in children and their management.

B. SKILLS:

1. Students will demonstrate his ability to obtain a relevant clinical history from a parent or an older child.
2. Student will demonstrate his ability to perform adequate clinical examination of a child of any age (including new-born).
3. Student will be able to interpret clinical and laboratory data arriving at a diagnosis.
4. Student will be able to advise appropriate nutritional measures for healthy and sick children (Breast feeding, avoidance of bottle, proper weaning).
5. Student will be able to counsel the parents on health promotive and disease preventive strategies for the child e.g. immunisation procedures; hand washing)
6. Student will be able to recognize and manage common health problems of children.
7. Student will recognize the danger signs of disease in children and be able to appropriately refer children with severe disease to appropriate specialists/hospitals.
8. Student will demonstrate his ability to perform essential clinical

procedures relevant to children, e.g.

- Resuscitation of new-born.
- Basic cardio-pulmonary resuscitation. Anthropometric measurements.
- Measuring blood pressure.
- Starting Intravenous lines/draw blood sample.
- Administration of Oxygen therapy
- Giving Nebulizer therapy [Bronchodilator] Use of Growth chart.
- **OBSERVE THE FOLLOWING SKILLS:**
- Lumbar Puncture
- Bone marrow aspiration
- Supra pubic puncture
- Subdural tap
- Thoracocentesis Pericardiocentesis
- Liver Biopsy,
- Observe passing of catheter
- Observe pericardial tap

9. The Student will show ability to provide general care of sick Paediatric patients and be able to carry out simple diagnostic tests in the side lab.

A curriculum of Paediatrics should be designed based on common problem of Pakistani children which a medical student should at least know.

OBJECTIVES

1. Students acquire the knowledge of health promotion, disease prevention and management of common diseases in children (including new-borns).
2. Students become proficient in basic clinical skills of history taking, physical examination, data interpretation and basic technical procedures as applied to children of different ages.
3. Students develop an attitude of sympathetic care for the child patient and his parents.
4. Students develop a desire for self-learning.
5. Students are able to visualize the impact of the disease on the community as a whole and be able to study the genesis of epidemics and be able to plan prevention of those.
6. The students are equipped with the knowledge and confidence to play the role of a teacher, supervisor and organizer in a primary health care setup.

RECOMMENDED BOOKS

- **Basis of Pediatrics by Pervez Akbar Khan**
- **Illustrated Textbook of Paediatrics**
- **Nelson Essentials of Pediatrics**
- **Nelson Pediatrics Review**
- **Nelson Textbook of Pediatrics**
- **OP Ghai Essential of Pediatrics Textbook**