

NATIONAL POSTGRADUATE MEDICAL COLLEGE OF
NIGERIA



TRAINING CURRICULUM FOR POSTGRADUATE
MEDICAL EDUCATION FOR PAEDIATRICS AND
CHILD HEALTH

FACULTY OF PAEDIATRICS

APPROVED BY THE SENATE ON 23RD JULY, 2020

A handwritten signature in red ink, appearing to read 'Dr. Owoidoho Udofia', is positioned above the name of the Registrar.

DR OWOIDOHO UDOFIA, FMCPsych
COLLEGE REGISTRAR

**FACULTY OF PAEDIATRICS
NATIONAL POSTGRADUATE
MEDICAL COLLEGE
OF
NIGERIA
(NPMCN)
TRAINING CURRICULUM
FOR POSTGRADUATE
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FOR
PAEDIATRICS AND CHILD HEALTH**

MISSION STATEMENT

The Faculty of Paediatrics of the NPMCN, as part of the vision of the College, “aims to produce Paediatricians and Child Health Specialists with advanced Clinical, Communication, Academic, Management and Leadership skills, who can think creatively and conceptualise, execute and defend Research and other Services for the promotion of child health. This will be achieved using a curriculum based on tested and current principles in postgraduate medical education.

EDUCATIONAL OBJECTIVES OF THE FACULTY OF PAEDIATRICS : These include:

- i. Empowerment of training institutions to conduct training programmes, through accreditation,
- ii. Regular Monitoring of the training activities of eligible trainees and the training institutions
- iii. Evaluation and certification of trainees, using phased, reliable and valid assessment methods.
- iv. Maintaining standards for learning and practice of Paediatrics the continued academic development.
- v. Promoting professionalism through inculcation of attitudes of honesty and accountability, with sincerity and precision in professional thoughts, words and actions in both the Trainees and Trainers.

USE OF THE CURRICULUM

A curriculum seeks to define what is to be learnt and how best it should be learnt. However, formal Learning revolves around four key components, viz.; *learner, facilitator, curriculum and milieu*. Curriculum, being only one of four distinct components, must be considered holistically, rather than in isolation. The responsibility for understanding the content, context and processes of the curriculum, accepting to learn, adapting positively to the prevailing milieu and recognising learning opportunities is that of the resident who is the most important component of this formal education process. The Consultant’s responsibility is to facilitate learning by appreciating the objectives of the curriculum, ensuring an optimum learning environment and creating learning opportunities. Residents have the challenge of managing their educational programme, while the consultants have the challenge of verifying that the learning that occurs is in the right direction (congruence with professional expectations). Both residents and facilitators have obligations to monitor and evaluate progress in learning, using self and peer evaluation and formative and summative evaluation, respectively. With the advances in medical knowledge and technology and the demands for quality assurance and cost-effectiveness, as well as the increasing need for thinking and practice to be based on clinical, laboratory and reviewed documented evidence, standards in training and evaluation will necessarily change with time. Inherent in this is the need for periodic review of curriculum and assessment methods.

RESIDENCY APPRENTICESHIPS

Residency apprenticeships involve the residents, the patient, other health professionals in the Health team, the training institutions, the teachers, the assessors (examiners) and the Faculty / College. The learning and practice approaches should be Patient-centred, Family-centred and Community-oriented. Ethical considerations demand that residents should acquire professional virtue through principled practice and generation of goodwill, at the individual, institutional and community levels. Clinical reasoning (cognition) should be ‘forward’ (building a pyramid from base upwards – obtaining and interpreting information as evidence of involvement of system, pathologic processes, abnormality in structure or function, before concluding by way of a diagnosis), rather than ‘backwards’ (building a pyramid upside-down by reaching a hasty conclusion – ‘impression’- and then looking for information to support that diagnosis or alternative diagnosis). A clinical experience log book will be used to document exposure and or proficiency, ensuring that a regular formative evaluation (observation of performance and specific feedback) of clinical skills is an integral part of resident’s clinical postings. Its use is to be guided by the principles of honesty, openness, accountability and transparency. It should not be abused as an object of patronage of residents by consultants or a mere ‘access document’.

SPECIFIC PRACTICE, LEARNING AND EVALUATION DIRECTIONS

The specific practice, learning and evaluation directions defined by group consensus and requiring collective compliance with, are outlined;

1. For the Faculty of Paediatrics, our consensus national clinical medicine approach is the Body System Approach; i.e. the Body system with pathologic process is identified using symptoms and signs and then abnormalities are explored.
2. The term “clerking” refers to the gathering and utilisation of information on the patient regarding his or her possible illness. The components include history taking, physical examination, bedside investigations, clinical diagnosis, identification of problems needing therapeutic intervention, differential diagnosis and investigations.
3. A clinical case summary is a concise and complete list of all the patient-derived information. Its components are

- a. Symptoms obtained,
 - b. Other important aspects of history,
 - c. Signs elicited
 - d. Results of any bedside investigations
 - e. Provisional diagnosis [functional &/or Anatomic]
 - f. Any relevant interventions.
4. Our Consensus definition of Clinical Reasoning is; Logical thinking, with sequential defensible conclusions, using patient derived information.
5. The term, Clinical Diagnosis, refers to the most defensible conclusion which can be made using patient-derived information. Sequentially, it can be classified into Functional, Anatomic, Pathologic and Aetiologic diagnoses . Use of ambiguous terms such as Impression, Assessment, etc, as alternatives to 'Diagnosis' should be discouraged.
6. Differential diagnosis/es is/ refer to the plausible alternatives to the Pathologic and or Aetiologic diagnosis/es already arrived at.
7. From clerking patients, residents should learn to;
- a. sequentially obtain complete history,
 - b. perform orderly physical examination,
 - c. perform relevant bedside investigation,
 - d. articulate a clinical summary,
 - e. use the information obtained to engage in clinical reasoning,
 - f. order cost-effective investigative parameters,
 - g. document the findings legibly,
 - h. discuss the case logically and rationally with colleagues,
 - i. plan and implement appropriate treatment,
 - j. project on the course of illness,
 - k. prognosticate and
 - l. Institute any required preventive measures.
8. When assessing a resident who has clerked a patient, the things to be assessed include;
- a. Mastery in sequence and completeness of history,
 - b. Mastery in performance of physical examination,
 - c. Ability to choose, perform and interpret bedside investigations,
 - d. Identify all important information obtained,
 - e. Appropriate use of information obtained in clinical reasoning,
 - f. Ability to defend choice of lab investigations,
 - g. Legible documentation,
 - h. Comportment & Logical discussion of every aspect of the Case
 - i. Ability to choose and administer appropriate intervention,
 - j. Understanding of the course of the illness,
 - k. Ability to discuss the prognosis
 - l. Ability to identify and effect the preventive levels needed.
9. In the course of clinical clerking and clinical reasoning, the possible progressive sequential conclusions which can be reached, based strictly on the patient-derived information include;
- a. Comprehensiveness of symptoms obtained
 - b. Number of other aspects of History that are important, Ability to identify other relevant aspects of the history
 - c. Number of signs obtained, Comprehensiveness of signs obtained
 - d. System/s most likely involved in disease,
 - e. the pathological process/es most likely causing the disease,
 - f. any functional abnormalities present,
 - g. any structural abnormalities present,
 - h. any defensible functional diagnosis/es,
 - i. any defensible anatomic diagnosis/es,
 - j. any defensible pathologic diagnosis/es,
 - k. what investigations would be needed to confirm the pathologic and, or aetiology diagnosis,
 - l. the most probable aetiologic diagnosis,
 - m. the most appropriate treatment required,

n. the differential diagnosis.

THE STEERING EFFECT OF EVALUATION

This 'steering effect' of valid and reliable examinations is part of the spirit of this curriculum. A valid professional examination is one which assesses the performance abilities which the learner should acquire on completion of the programme, ensures that those who have acquired ability to perform pass, while those without the ability fail. Learners may not be good judges of their ability, may not be self-motivated or self-directed, but they always wish to pass examinations. Majority of learners tend to 'study to the test'. Because of the foregoing, valid and reliable examinations do exert a powerful steering effect on learning.

MONITORING ISSUES FOR TRAINING INSTITUTION AND THE FACULTY / COLLEGE. These include:

- Organisation of Objectives
- Educational Problems and Challenges in Meeting Objectives
- Educational Activities and Settings Related to Training Goals
- Internal Continuous Evaluation and documentation for Residents
- Evaluation of the Institutional Implementation of the Programme

TRAINING AND MONITORING

Postgraduate medical training should take place in accredited institutions. These are institutions that have met the minimum standards in staffing and facilities and training as prescribed by the College. Each trainee should be indexed with the College, by the training Institution at the commencement of training. Both the trainee and the Institution shall be monitored by the College. There are three phases of the training programme, namely, the Primary, Part One and Part Two phases.

The Primary phase, which is largely self-directed, may take place outside the training institution. Its successful completion will qualify the trainee for entry into the Part One phase. The Part One phase, which encompasses both academic and clinical skills acquisition, must take place in accredited institutions. Its successful completion will qualify the trainee for entry into the Part Two phase. The Part Two phase, which comprises training in academics, specialised clinical skills, research, management and leadership skills, should last for a minimum of **thirty six months**, the first twelve months of which must be in an accredited training institution.

EVALUATION / ASSESSMENT

Evaluation and assessment will both formative and summative. The formative assessment will be done in the training institutions with the use of the log book. The log book should be periodically monitored by a training coordinator in each institution and the full time Training Director of the Faculty. The summative evaluation will be done as three professional examinations corresponding to each phase of the training. The examinations are conducted twice yearly. Each phase of the examinations will be based on a log-frame, which details the course content and examination format. The log-frame is included as an appendix.

THE PRIMARY EXAMINATION

Eligibility : MB; BS. Degree, or its equivalent, Full registration with the Medical and Dental Council of Nigeria is optional.

Assessment Objectives

- i. Knowledge, Understanding and Application of Structure of the Human body Systems and organs
- ii. Knowledge, Understanding and Application normal Function of the Human body Systems and organs.
- iii. Knowledge, Understanding and Application normal Human Biochemical Mechanisms (Medical Biochemistry)
- iv. Mastery of normal Child Growth and Development
- v. Knowledge, Understanding and Application of Pathophysiology of Symptoms, Signs, laboratory parameters and disease processes.
- vi. Ability to correlate Pathology with Clinical Manifestations (Clinico-Pathological correlation)
- vii. Appreciation of the relationship between the Community, the Environment and Health.
- viii. Appreciation of the principles of Epidemiology and Biostatistics.
- ix. Appreciation of interactions of genetic, cultural and social milieu in child-health and disease
- x. Ability to synthesize the principles underlying the Five Levels of Prevention
- xi. Understanding and application of the principles of Pharmacology and Therapeutics

Examination Format: This will be ONE paper of 200 of the BEST of FOUR format testing progressively more at all levels of cognition. Duration: 180 minutes.

Each aspect of the curriculum and educational domains are covered using the Table of specification below (Blue Printing) so as to link assessment to learning objectives. Selected test items during blue printing are categorized into: "must know" (up to 65% of questions belong to this category), "Should know" and "may know"

Standard setting: Modified Angoff method will be used to determine the Pass mark. Candidate must have a minimum score of "C" or 50-59% to be awarded a pass.

xii. Table of Specifications for the Primary Phase of the Fellowship Programme and Examination in Paediatrics

LEARNING OBJECTIVE AREA	CREDIT UNITS	SPECIFIC TOPICS	No. of Objective Questions	TAXONOMY		
				LVL I	LVL II	LVL III
A. Structure of the Human body Systems and organs (Applied Anatomy)	3	Cardiovascular System	1	0	0	1
		Central Nervous System	2	0	1	1

		Digestive System	1	0	1	0
		Endocrine System	1	0	0	1
		Genit-Urinary System	1	0	1	0
		Haematologic System	2	0	1	1
		Musculoskeletal System	1	0	0	1
		Respiratory System	1	0	1	0
B. Function of the Human body Systems and organs (Applied Physiology)	3	Cardiovascular System	1	0	0	1
		Central Nervous System	2	0	1	1
		Digestive System	1	0	1	0
		Endocrine System	1	0	0	1
		Genit-Urinary System	1	0	1	0
		Haematologic System	2	0	1	1
		MusculoSkeletal System	1	0	0	1
C. Human Biochemical Mechanisms (Applied Medical Biochemistry)	3	Respiratory System	1	0	1	0
		Cardiovascular System	1	0	0	1
		Central Nervous System	2	0	1	1
		Digestive System	1	0	1	0
		Endocrine System	1	0	0	1
		Genit-Urinary System	1	0	1	0
		Haematologic System	2	0	1	1
D. Child Development and Growth	3	MusculoSkeletal System	1	0	0	1
		Respiratory System	1	0	1	0
		Cardiovascular System	1	0	0	1
		Central Nervous System	2	0	1	1
		Digestive System	1	0	1	0
		Endocrine System	1	0	0	1
		Genit-Urinary System	1	0	1	0
E. Pathophysiology of Symptoms, Signs and Laboratory Parameters	5	Haematologic System	2	0	1	1
		MusculoSkeletal System	1	0	0	1
		Respiratory System	1	0	0	1
		Cardiovascular System	2	0	1	1
		Central Nervous System	2	0	1	1
		Digestive System	2	0	1	1
		Endocrine System	2	0	1	1
F. Correlation of Pathology with Clinical Manifestations	5	Genit-Urinary System	2	0	1	1
		Haematologic System	2	0	1	1
		MusculoSkeletal System	2	0	1	1
		Respiratory System	1	0	1	0
		Cardiovascular System	2	0	1	1
		Central Nervous System	2	0	1	1
		Digestive System	2	0	1	1
G. Environment and Health	2	Endocrine System	2	0	1	1
		Genit-Urinary System	2	0	1	1
		Haematologic System	2	0	1	1
		MusculoSkeletal System	2	0	1	1
H. Synthesis of the Principles underlying the Five Levels of Prevention	2	Respiratory System	1	0	0	1
		Cardiovascular System	2	0	1	1
		Central Nervous System	2	0	1	1
		Digestive System	2	0	1	1
		Endocrine System	2	0	1	1
G. Environment and Health	2	Biostatistics	1	0	1	0
		Physical Environment	1	0	0	1
		Biologic Environment	2	0	1	1
		Social Environment	2	0	1	1
H. Synthesis of the Principles underlying the Five Levels of Prevention	2	Diagnosis & Treatment	2	0	1	1
		Specific Protection	2	0	1	1
		General Protection	2	0	1	1
		Limitation of Disability	2	0	1	1
H. Synthesis of the Principles underlying the Five Levels of Prevention	2	Rehabilitation	2	0	1	1
		Limitation of Disability	2	0	1	1
		Diagnosis & Treatment	2	0	1	1
		Specific Protection	2	0	1	1
LEARNING OBJECTIVE AREA	CREDIT UNITS	SPECIFIC TOPICS	No. of Objective	TAXONOMY		
				LVL I	LVL II	LVL III

			Questions			
I. Principles of Therapeutics and other Clinical Interventions	2	Pharmacodynamics	1	0	0	1
		Pharmacokinetics	1	0	1	0
		Pharmacology of specific groups of drugs	1	0	0	1
		Rational use of drugs	1	0	1	0
		Fluid and electrolyte therapy	1	0	0	1
		Use of blood and blood products	1	0	1	0
J. Interactions of genetic, cultural & social milieu in development	2	General inheritance patterns	1	0	0	1
		Diagnostic testing	1	0	1	0
		Chromosomal abnormalities	1	0	0	1
		Genetic abnormalities	1	0	1	0
		Associations, Malformations, Sequences	1	0	0	1
		Embryonic basis of malformation,	1	0	1	0
		Environmental factors in fetal Development	1	0	0	1
		Genetic counselling, Ethical and social implications of genetic testing	1	0	1	0
TOTAL	32					

Level I = Recall (facts), Level II = Comprehension and application, Level III = Analysis, synthesis and evaluation

THE PART I EXAMINATION

a. Training and Eligibility

- i. Pass in, or Exemption by the Faculty Board from, the Primary examination.
- ii. A candidate whose Primary certificate has exceeded FIVE years or lapsed before commencement of residency training in accredited institution will be required to attend the relevant Update Course and attain at least 75% attendance. An End of Course assessments score of not less than 50% is needed for RE-CERTIFICATION for Two more years.)
- iii. Indexing with the College as a Trainee, for a minimum of twenty four completed months.
- iv. Evidence of Clinical Rotations in the Core-Areas, in an Accredited Institution, for at least 24 months, at the time of application for the examination, of Training. The core areas consist of:
 - (a) Newborn (3 months)
 - (b) Emergency Paediatrics (3 months),
 - (c) General Paediatrics (3 months)
 - (d) Community and Social Paediatrics and Primary Health Care/School health programme/ (3 months)
 - (e) 2 months each in at least five (5) of the subspecialties of
 - i. Paediatric Cardiology
 - ii. Paediatric Nephrology
 - iii. Paediatric Nutrition / Gastroenterology
 - iv. Paediatric Endocrinology and metabolism
 - v. Paediatric Neurology
 - vi. Paediatric Haematology / Oncology
 - vii. Paediatric Respiratology
 - viii. Paediatric Infectious diseases.
 - ix. Paediatric Dermatology and Allergic Diseases

PLUS

- (f) 4 weeks elective posting in at least TWO of the following areas
 - i. Paediatric surgery
 - ii. Anaesthesia
 - iii. Ophthalmology
 - iv. Otorhinolaryngology
 - v. Radiology
 - vi. Dermatology
 - vii. Pathology

- iv. Appropriately completed Log book.
- v. Attendance of relevant Faculty based revision and update courses
- vi. Certification in Advanced Life Support.(**ALS**), Advanced Cardiac Life Support (**ACLS**) or Paediatric Advanced Life Support (PALS)

b. Learning objectives

- i. Proficiency in history taking, physical examination and performance of diagnostic, therapeutic and other clinical technical skills.
- ii. Mastery of normal Child Growth and Development and deviations from normal.
- iii. Understanding and Application of the Pathophysiology of Symptoms, Signs and Laboratory parameters.
- iv. Ability to correlate Pathology with Clinical Manifestations (Clinico-Pathological correlation)
- v. Ability to investigate disease conditions, using appropriate and cost-effective technologies
- vi. Appreciation of the relationship between the Community, the Environment and Health.
- vii. Appreciation of interactions of genetic, cultural and social milieu in child-health and disease
- viii. Ability to synthesize the principles underlying the Five Levels of Prevention
- ix. Understanding and application of the principles of Pharmacology, Therapeutics and other Clinical Interventions in patient management.
- x. Being abreast of current management profiles of disease conditions
- xi. Appreciation of the principles of Epidemiology and Biostatistics.

OVERVIEW OF CONTENT COVERAGE OF THE RESIDENCY TRAINING FOR THE PARTS I & II EXAMINATIONS

Details of the knowledge and skills to be acquired, with their credit units, are outlined in tabular modules below:

701 - Paediatric Advanced Life Support (PALS), BLS / ACLS for Physician Faculties (Please check online for course content).

702 - ATLS for Surgical Faculties (Please check online for course content).

703 - Ethics in Clinical Practice and Health and Research (See as an attachment for course)

1. Core professional competencies in part one phase of the FMC Paed programme

Course code	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS / SKILLS	% age of Course Coverage
PED 711	A. Subject / Patient Assessment, Management and Evaluation	20 [56]	Understanding and Application Basic Medical Sciences and Pathophysiology	10
			History taking,	15
			Physical Examination	20
			Laboratory work	5
			Summary making	10
			Sequence of thought	10
			Evidence-based Conclusions	10
			Clinical Problem Solving Skills	10
			Holistic Patient Management, including appropriate Levels of Prevention	5
			Self-Evaluation of conclusions and actions taken	5
PED 712	B. Communication Skills	4 [11]	Patient Education & Counselling, Death and Bereavement Counselling	25
			Academic and Interactive Communication	25
			Applications of information technology in Medicine (Bioinformatics)	25
			Patient Education & Counselling, Death and Bereavement Counselling	25
PED 713	C. Pedagogy, Research and Continuing Professional Education Skills	4 [11]	learning by doing and teaching' Principles of Adult Education -'learning to learn'.	20
			Feedback – giving & receiving; Mentoring and Career Planning	20
			Learning Resources, ICT, CAID, Audio visuals	20
			Research methodology and Biostatistics. Retrieval, Critical Reading and Management of Information.	20
			Assessment (pre and post-test, recap, direct questioning. Impact	20
PED 714	D. Leadership, Collaboration and Consultation	4 [11]	Team-Science	25
			Multidisciplinary and collaborative Learning and Practice approaches	25
			Roles of Consultants/Mentors and Mentorship Compact	25

			Mentor/mentee relationships: expectations, roles and ethos	25
PED 715	E. Personal and Professional Responsibilities	4 [11]	Personal Responsibility and Quality Assurance	25
			Work Habits/Attitudes	25
			Professional Responsibilities(to State, Society, Employer, Association, Regulatory Body, Patients, their relations	25
			Medical Ethics and Law in Practice and Research	25

2. Preventive Paediatrics and School Health Program

	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS / SKILLS	% age of Course Coverage
PED 716	Levels of Prevention	5 [35]	Definitions	10
			Principles	20
			Applications of Level One	10
			Applications of Level Two	20
			Applications of Level Three	20
			Applications of Level Four	10
			Applications of Level Five	10
PED 717	Health Supervision	2 [15]	Core Concepts and General Principles	25
			Supervision by Age-groups- Prenatal, Newborn & Infancy	25
			Early & Middle Childhood	25
			Adolescence	25
PED 718	The School Health Programme	7 [50]	History and evolution of SHP	15
			Value and Scope	15
			Components	20
			Administration	25
			Challenges and Recommendations	20
			Evaluation	20

3. Developmental and behavioural paediatrics

Course code	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS / ISSUES	% age of Course Coverage
PED 719	Differentiating Normal from Abnormal	2 [25]	Normal motor development	30
			Normal sensory development	30
			Primitive reflexes	10
			Delayed motor milestones	15
			Intellectual Disabilities	15
PED 720	Common Developmental and Behavioural Disorders	2 [30]	Thumb sucking	5
			Nail biting	5
			Teeth grinding	10
			Breath-holding	5
			Head banging	10
			Vegetative disorders	10
			Disruptive behavioural disorders	10
			Sexuality problems	10
			Pervasive developmental disorders	15
			Mood disorders	5
			Indications for referral and to whom	15
PED 721	Anticipatory Guidance	1 [15]	Surveillance skills and instrument	40
			Parental education	30
			Youth camps	30

	Procedures and Skills for Screening and Diagnosis	2 [30]	Paediatric symptom check list	30
			Adolescent communication skills	20
			Interviewing skills	20
			Denver developmental screening test and others	30

4. Emergency, acute and inpatient care

Course code	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS /SKILLS	% age of Course Coverage
PED 722	Emergency Paediatrics Unit	7 [50%]	Shock – Classification and management	20
			Convulsions-Common causes and emergency management	20
			Coma-Common causes and emergency management	20
			Management of severe anaemia	15
			Evaluation and management of Heart failure	10
			Evaluation and management of upper airway obstruction	5
			Acute severe asthma	5
			Management of Diabetic ketoacidosis	5
PED 723	Paediatric Intensive Care Unit	3 [20%]	Cardio-respiratory arrest : recognition and management	50
			Cerebro-vascular accidents	30
			Raised Intracranial pressure: Features and management	20
PED 724	Newborn Intensive Care Unit	2 [15%]	Birth Asphyxia and Acute Respiratory distress	25
			Seizures, Hypoglycaemia and other metabolic disorders	25
			Evaluation and management Neonatal Jaundice	20
			Ventilatory support	15
			Life threatening congenital malformations	15
PED 725	Inpatient General Paediatric Service	2 [15%]	Fluid and Electrolyte management	40
			Nutritional management of the sick child	20
			Paediatric therapeutics and adverse drug reactions	20
			General management of the terminally ill child	20

5. Community and Social paediatrics

	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS/ ISSUES	% age of Course Coverage
PED 726	The Child in the Family, Cultural, Ethnic and Community Contexts	4 [27]	Child Nutrition	20
			Advocacy	15
			Protection	10
			Finance	10
			Sensitivities	5
			Environment	20
			Resources for Health and Related Services	20
PED 727	Primary Health Care and the Child	4 [27]	Overview of Primary Health Care	10
			Maternal and Child Health	20
			Immunization Practices	10
			Breast Feeding/Complementary feeding	20
			Growth Monitoring	15
			Community Health Education	10
			Cultural Issues	15
PED 728	Health Care for Children with Chronic Diseases / Disabilities and Terminal Illness	3 [22]	The physically challenged child/ Rehabilitation	30
			Chronic illness	20
			Palliative Care	20
			Organ Transplant	10
			The terminally ill child	20
PED 729	The Endangered Child	2 [15]	Adoption and Foster Care	10
			Abuse and Neglect	25
			Violence	25
			Abandonment	25
			Substance Abuse	25
PED 730	Global Health Paediatrics	1 [9]	Vital Statistics/Health Indices	40
			International Immunization Practices and International Travel.	30

		Growth and Growth Charts	30
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5B Other Aspects of Paediatrics

	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS /SKILLS	% age of Course Coverage
PED 731	Medical Economics	5 [20]	National Budget, GDP GNI	10
			Budgeting and Resource Allocation	15
			Health Insurance	25
			Health Care Funding	25
			Partners in Care Delivery	25
PED 732	Law in Medicine	5 [20]	Professional Rights and Rights of Patients/Obligations	15
			Laws and Oaths Governing Practices	25
			Misdemeanours in Practice and Sanctions	25
			Medical Agreements/Consent	35
PED 733	Medical Sociology	5 [20]	Community Participation and Ownership	25
			Advocacy and Mobilisation	25
			Social Structure	20
			Social Class and Health	30
PED 734	Management in Health	4 [20]	Qualities and Roles of the Paediatrician as a Manager	20
			Identification, Prioritisation and Allocation of Resources	25
			Resource in Health: Allocation and Challenges	30
			Conflict Management.	25
PED 735	Medical Informatics	6 [25]	Computerised Healthcare Records	25
			Softwares Relevant to Medicine	25
			Common Computer Packages in Health	30
			Advanced Computer Packages in Health	20

6. General Clinical paediatrics

Course code	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS / SKILLS	% age of Course Coverage
PED 736	Genetics and Inborn Errors of Metabolism	1 [7]	Molecular Genetics	8
			Genetic Abnormalities	10
			Chromosomal Abnormalities	20
			Genetic Counselling	8
			Dysmorphology	8
			Carbohydrate Metabolic defects and Mucopolysaccharidosis	20
			Aminoacidopathies	8
			Lipid Metabolic defects	8
PED 737	Infectious Diseases/ Tropical diseases	3 [20]	Haem pigments, Purine & Pyrimidine defects	10
			Fever	5
			Clinical use of the microbiology laboratory	10
			Genomics of infectious diseases,	10
			Clinical syndromes caused by a variety of infectious agents including malaria, tuberculosis and HIV/AIDS	15
			Sepsis and shock	10
			Emerging Epidemics – Viral Haemorrhagic fevers (VHFs),	10
			ATM – AIDS, Tuberculosis and Malaria.	10
Infection in the immunocompromised host	10			

			Preventive measures and infectious diseases	10
			Infection control	10
PED738	Malnutrition –under and –over,	2 [15]	Digestive system and absorption processes	15
			Normal nutrition – Macronutrients& Micronutrients	15
			Under nutrition – PEM, FTT & Micronutrient deficiencies	30
			Overnutrition – Overweight & Obesity	20
			Nutritional Assessment	20
PED 739	Perinatology/ Neonatology	2 [15]	Neonatal Resuscitation and Asphyxia. Stabilization and transport of ill Neonates	20
			Examination and routine care of the newborn. Gestational Age assessment and low birth weight	15
			Systemic disorders, recognition and management	20
			Newborn Nutrition and fluid. Metabolic issues	10
			Infections and Infection control in the newborn	10
			Bilirubin metabolism, disorders and complication	5
			Neonatal Mortality Epidemiology	5
			Procedures in Neonatology Ethical issues in Neonatology	15
PED 740	Adolescent Problems, including Adolescent Gynaecology	2 [15]	Health problems of the adolescent	20
			Mental/Psychological issues in adolescents	20
			Substance abuse and Violence	20
			Suicide	10
			Menstrual problems, contraception and pregnancy	20
			Sexually transmitted diseases and HIV	10
PED 741	Allergy and Immunology	1 [7]	Allergy and the immunological basis of atopic diseases in children	10
			Allergic disorders of children	20
			Anaphylaxis & serum sickness	10
			Immunology of Common Childhood Diseases	15
			Cellular and Complement systems and their Disorders	15
			Congenital Immune Deficiency Syndrome	10
			Roles of Clinical Immunology in Childhood Illnesses	15
			Tissue transplantation	5
PED 742	Oncology	1 [7]	Aetiopathogenesis, genetics and epidemiology of Solid childhood cancer	10
			Clinical features, diagnosis & staging of solid cancers	40
			Multidisciplinary management and prognosis	10
			Principles of chemotherapy	20
			Management of Oncologic emergencies and supportive care including Palliative care	20
PED 743	Paediatric Surgery	1 [7]	Principle of Management of Congenital anomalies in Paediatric Surgery including Birth Defect Registry	25
			Management of Paediatric Surgical emergencies e.g. intussusceptions, peritonitis typhoid from perforation	25
			Principles of Perioperative Management of Surgical Patients with special emphasis on Fluid and electrolytes	25
			Skills: - Venous Cutdown, -I & D of superficial abscesses	25
PED 745	Radiology	1 [7]	Principle of imaging in the paediatric age group	10
			Role and interpretation of plain radiology in paediatric practice	20
			Role and interpretation of ultrasonography in paediatric practice	25
			New imaging technique in paediatrics- CT & MRI	20

		Interventional radiology in the paediatric age group	20
		Nuclear Medicine in Paediatrics	5

The specialty clinical areas and the systems

	COURSES	CREDIT UNITS [%age]	SPECIFIC TOPICS / PROBLEMS	% age of Course Coverage
PED 746	Cardiovascular System	3 [12]	Congenital Heart Diseases	40
			Acquired Heart Diseases	30
			Heart Failure in Children	15
			Preventive Cardiology	15
PED 747	Nervous System	4 [20]	Neurological Evaluation	10
			Congenital Anomalies	10
			CNS infections	10
			Seizure Disorders	10
			Encephalopathies and Coma	10
			Spinal cord disorders	10
			Neurodegenerative disorders	5
			Neuromuscular disorders	5
			Peripheral Nervous disorders	10
			Special Senses I-Ear, Nose and Throat	10
			Special Senses II-Ophthalmology	10
PED 748	Digestive System	3 [12]	Acute gastroenteritis	15
			Persistent / Chronic Diarrhoea	15
			Malabsorption syndromes	10
			Dentition and the Oral cavity	10
			Liver and biliary diseases	30
			Congenital anomalies	10
			Recurrent Abdominal Pain	10
PED 749	Endocrine System	3 [12]	Thyroid Disorders	20
			Adrenal Disorders	20
			Diabetes mellitus	20
			Pubertal disorders/ambiguous genitalia	20
			Hypothalamic and pituitary disorders	10
			Parathyroid disorders	10
PED 750	Genito-Urinary System	3 [12]	Congenital anomalies	15
			Urinary Tract infections	10
			Glomerular disorders	15
			Tubular disorders	15
			Acute Kidney Injury.	10
			End-stage kidney disease	15
			Peritoneal and Haemodysis	10
			Sexually Transmitted Infections	10
PED 751	Haematologic System	3 [12]	Anaemias	25
			Haemoglobinopathies	15
			Haemorrhagic and thrombotic diseases	10
			Blood/Blood Products and Transfusion Services	15
			Spleen and the lymphatics	10
			Polycythaemia	5
			Leukaemias	20
PED 752	Musculo-Skeletal System	2 [8]	Osteomyelitis	10
			Septic arthritis	10
			Congenital musculoskeletal disorders	10
			Trauma	10
			Dermatology	30
			Connective Tissue Disorders	30
PED 753	Respiratory System	3 [12]	Upper respiratory infections	20
			Pneumonia and other Lower respiratory infections	20
			Upper airway obstruction	10
			Asthma and Bronchiolitis	15
			Chronic suppurative pulmonary diseases	10

		Pulmonary oedema and pulmonary embolism	5
		Pleurisy, Pleural effusion, empyema, pneumothorax and pneumomediastinum	10
		Respiratory failure	10

8. Essential clinical, therapeutic, technical and procedural skills

COURSES	CREDIT UNITS [%age]	SPECIFIC SKILLS / PROCEDURES	% age of Course Coverage
Proficiency in History Taking Skills	3 [15]	Communication skills-Due courtesies	30
		Proper sequence in history taking-attention to details	40
		Proper review of systems	15
		Legible documentation in summary sheet	15
Advance Paediatric Life Support	4 [20]	Intravenous access	50
		Intraosseous access	10
		Endotracheal intubation	30
		Chest tube insertion	20
Proficiency in performance of physical examination in different contexts:	4 [20]	Proper attention to dignity of patient	10
		General physical exam	30
		System specific exam	50
		Documentation in summary sheet.	10
Proficiency in Clinical Reasoning in different contexts	5 [25]	Identify important information in History, ROS and PE	20
		Identify pathological process	20
		Identify functional & structural abnormalities	30
		Make evidence-based provisional diagnosis	30
Proficiency in, or Exposure to Therapeutic and Technical Procedures	2 [7]	Identify therapeutic and technical procedures	30
		Prioritize procedures	20
		Discuss/counsel on procedures	30
		Logical documentation	20
Proficiency or Exposure Diagnostic and Screening Procedures	2 [7]	Identify and perform screening tests	20
		Identify and perform immediate bedside tests	20
		Discuss/counsel on diagnostic procedures	30
		Interpret results	30
Proficiency/ Exposure in Laboratory Procedures and Specimen Collection	2 [6]	Identify needed investigative procedures	10
		Prioritize investigative procedures	20
		Discuss/counsel on investigative procedures including Consent/Assent	20
		Sample collection skills	15
		Prioritize and Perform of Point of Care investigations	15
		Interpret results	20

The detailed objectives and contents of the essential skills are outlined and tabulated hereunder.

A OBJECTIVES FOR CLINICAL INFORMATION GATHERING AND REASONING SKILLS

1 Proficiency in History Taking Skills

- a Courtesy to subject / persons involved in history taking
- b Mastery of, and compliance with, the sequence of history taking
- c Thoroughness and timeliness in enquiry of each aspect of history
- d Appropriateness and congruence of affect to the context of history taking
- e In-process appreciation of the value of information obtainable from each aspect of history
- f Explanation of the need for, and value of direct questioning for review of systems
- g Provision of concise and legible documentation of history obtained

2 Proficiency in performance of physical examination in different contexts: ability to:

- a Obtain informed consent for skill performance
- b Sequentially, correctly perform a gentle flowing examination
- c Be thorough and timely in the performance of each segment of examination
- d Exhibit appropriate courtesy to subject / persons involved in the physical examination
- e Exhibit appreciation of the value of information obtainable from each aspect of examination
- f Provide accurate, timely, and appropriate written documentation

	SPECIFIC EXAMINATION AS MAY BE DESIRED	Proficiency Required	Time Line
i	General examination only	X	
ii	Central Nervous System only	X	
iii	Cardiovascular system only	X	
iv	Digestive System only	X	
v	Endocrine system only	X	
vi	Genitourinary system only	X	
vii	Haematologic system only	X	
viii	Musculoskeletal system only	X	
ix	Respiratory system only	X	
x	Combined Digestive and Genitourinary systems (Abdomen)	X	
xi	Combined Cardiovascular and Respiratory systems (Thorax)	X	
xii	Combined Central nervous and Musculoskeletal systems	X	
xiii	Combined Endocrine and Haematologic systems	X	
xiv	Body Regions, Head, Neck, Mouth	X	
xv	Body Regions, Spine	X	
xvi	Body Regions, Perineum	X	
xvii	Body Regions, Limbs	X	
xviii	Body Organs, Ear (including Auroscopy), Nose, Throat	X	
xix	Body Organs, Eye (including Ophthalmoscopy)	X	
xx	Body Organs, Heart	X	
xxi	Body Organs, Liver, Spleen, Kidneys	X	
xxii	Body Organs, Skin	X	
xxiii	Body Organs, Rectum	X	
xxiv	Body Organs, Lymph nodes	X	
xxv	Abnormal Masses, Solid, Cystic,	X	

- 3 Proficiency in Clinical Reasoning in different contexts, implying ability to:**
- a Identify all important (positives first, significant negatives last) information obtained.
 - b Quantify, organise and document the information as a cohesive clinical summary
 - c Immediately appreciate the "big picture" (system & pathologic process) involved in disease
 - d Apply symptoms and signs to identify specific abnormal organ of system structure
 - e Apply symptoms and signs to identify specific abnormal organ of system function
 - f Relate identified abnormalities to known pathologies in diseased system ("big picture" in mind).
 - g Identify appropriate investigations that will confirm or exclude any relationships
 - h Use epidemiologic knowledge to associate identified abnormality or pathology to aetiologic agents
 - i Evaluate the correctness of the conclusions drawn by matching clinical evidence with diagnosis
 - j Project on the possible outcome of any interventions instituted
 - k Consider the Level of Prevention applicable for the case in view.

B OBJECTIVES FOR THERAPEUTIC TECHNICAL AND INVESTIGATIVE SKILLS

1 Proficiency in Life Saving Skills

- a Paediatric Advance Life Support
- b Neonatal Advance Life Support

2 Proficiency in, or Exposure to, Therapeutic and Technical Procedures implies ability to:

- a Perform task correctly
- b Counsel recipients about indications, contraindications and complications
- c Obtain informed consent for invasive procedures and sedation
- d Provide developmentally appropriate pain management, as needed
- e Discuss ethical, legal and financial issues
- f Provide accurate, timely, and appropriate written documentation

	THERAPEUTIC PROCEDURES	Proficiency Required	Exposure Needed
I	Abscess, Aspiration	X	
li	Abscess, Simple Incision & Drainage	X	
lii	Allergy shot, Administration		X
Iv	Anaesthesia, Conscious sedation		X
V	Anaesthesia, Digital blocks		X
Vi	Anaesthesia, Local	X	

Vii	Anaesthesia, Topical	X	
Viii	Arterial puncture	X	
Ix	Arthrocentesis, Large knee effusion, Large ankle effusion,		X
X	Bladder Catheterisation	X	
Xi	Bladder, Suprapubic aspiration	X	
Xii	Breast pump use	X	
Xiii	Burn, Management of 1 st . & 2 nd ;degree	X	
Xiv	Burn, Acute stabilisation of major burn		X
Xv	Cardiopulmonary resuscitation	X	
Xvi	Cardiogram, Perform		X
Xvii	Cardiogram, Interpret in emergency	X	
Xviii	Cardioversion / Defibrillation/Use of AED		X
Xix	Central Venous line, Set up, use, care	X	
Xx	Cerumen removal	X	
Xxi	Cervical spine immobilisation	X	
Xxii	Chest tube placement	X	
Xxiii	Cut down	X	
Xxiv	Endotracheal intubation	X	
Xxv	Exchange transfusion	X	
Xxvi	Eye irrigation, Lid eversion, Patch	X	
Xxvii	Foreign body removal (simple), Nose, Ear, Conjunctival	X	
Xxxviii	Gastric suction / Lavage	X	
Xxix	Gastric tube placement, Oro-gastric / naso-gastric	X	
Xxx	Gastrostomy tube replacement		X
Xxx1	Genital wart treatment		X
Xxxii	Heimloch manoeuvre	X	
Xxxiii	Immobilisation techniques for common fractures and sprains	X	
Xxxiv	Immunisation administration (PO, SC, IM)	X	
Xxxv	Ingrown toe nail treatment		X
Xxxvi	Inguinal and umbilical hernia, simple reduction	X	
Xxxvii	Inhalation equipment, clinic aerosol, nebulizer, metered dose	X	
Xxxviii	Injection / Medication delivery, endotracheal, IM,SC,ID,IT, rectal, aerosol	X	
Xxxix	Intravenous line placement	X	
xL	Intraosseous line placement	X	
xLi	Liquid nitrogen treatment for molluscum / warts	X	
xLii	Lumbar puncture	X	
xLiii	Newborn resuscitation	X	
xLiv	Oxygen delivery systems, Select and use	X	
xLv	Paracentesis abdominis	X	
xLvi	Paraphimosis reduction	X	
xLvii	Paronychia incision & drainage	X	
xLviii	Pericardiocentesis		X
xLix	Peritoneal dialysis		X
L	Physiologic monitoring, automated, cardiac, BP, TPR,	X	
Li	Pneumatic otoscopy	X	
Lii	Pulmonary Pressure Detector, place and read	X	
Liii	Pulmonary function tests, peak flow meter, spirometry	X	
Liv	Pulse oximetry	X	
Lv	Reduction of, nursemaid elbow		X
Lvi	Reduction of, phalangeal dislocation		X
Lvii	Rehydration therapy	X	
Lviii	Sexual abuse, examination for and evaluation	X	
Lix	Skin scraping	X	
Lx	Subungal haematoma, drain	X	

Lxi	Suctioning, nares, oropharynx, trachea, tracheostomy,	X	
Lxii	Thoracocentesis	X	
Lxiii	Tooth, temporary reinsertion		X
Lxiv	Tracheostomy tube, replacement	X	
Lxv	Umbilical artery catheterisation	X	
Lxvi	Umbilical vein catheterisation	X	
Lxvii	Universal precautions	X	
Lxviii	Venipuncture	X	
Lxix	Ventilation, bag-valve-mask	X	
Lxx	Ventilation support, initiation	X	
Lxxi	Ventriculo- peritoneal shunt external taps		X
Lxxii	Wood's lamp examination of the skin, UV light 3600 3800A	X	
Lxxiii	Wound care (simple)	X	
Lxxiv	X-ray, emergency interpretation - abdominal, chest, extremities,	X	
Lxxv	X-ray, emergency interpretation - lateral neck, skeletal survey	X	
Lxxvi	X-ray interpretation- Computerised tomography of head		X

3 Proficiency or Exposure Diagnostic and Screening Procedures, implying ability to

- a Perform task correctly
- b Interpret results for self, parents and child
- c Discuss common sources of error and indications for repeat testing
- d Discuss applications for general paediatrics, including analysis of strengths, limitations and costs

	DIAGNOSTIC AND SCREENING PROCEDURES	Proficiency Required	Exposure Needed
I	Attention Deficit Hyperkinetic Disorder; home and school questionnaires	X	
li	Anthropometric Assessment	X	
lii	Behavioural screening questionnaire (Eyberg Child Behaviour Inventory)	X	
Iv	Blood pressure measurement, -Doppler, -Sphygmomanometer	X	
V	Blood Glucose estimation by glucometer	X	
Vi	Developmental Screening test	X	
Vii	Language screening test (e.g., Early Language Milestone Screening Test)	X	
Viii	Lung function tests (Peak Flow Rate)	X	
Ix	GIT endoscopy		X
X	Gynaecologic examination, pre-pubertal, post-pubertal	X	
Xi	Hearing screening, general, pure tone audiometry	X	
Xii	Interpretation of endocrine function tests	X	
Xiii	Jejunal biopsy		X
Xiv	Oral Glucose Tolerance Test	X	
Xv	Percutaneous liver biopsy		X
Xvi	Pleural biopsy		X
Xvii	Renal biopsy		X
Xviii	Skin fold thickness measurement	X	
Xix	Tuberculin Skin Test	X	
Xx	Tympanometry		X
Xxi	Urethral catheterization	X	
Xxii	Urine for reducing substances	X	
Xxiii	Visual Screening, Acuity, Colour	X	

4 Proficiency/ Exposure in Investigative Procedures and Specimen Collection, implying ability to

- a Perform task correctly
- b Interpret results correctly for self, parents and child
- c Discuss common points of error and indications for repeat testing
- d Identify resources for quality control and verification of competence
- e Discuss applications for general paediatrics, including analysis of strengths, limitations and costs

	INVESTIGATIVE PROCEDURES AND SPECIMEN COLLECTION	Proficiency Required	Exposure Needed
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	Collection techniques and proper handling for:		
I	Abscess fluid	X	
li	Blood culture	X	
lii	Complete blood count with differentials	X	
Iv	Conjunctival scraping		X
V	Conjunctival swab, bacterial	X	
Vi	Growth Hormone assay		X
Vii	Hair collection (tinea)	X	
Viii	Joint fluid	X	
Ix	Nasal smear for PMNs and Nasopharyngeal wash	X	
X	Newborn blood screen (PKU)	X	
Xi	PAP smear		X
Xii	Pleural fluid	X	
Xiii	Rectal swab	X	
Xiv	Sexual assault specimens	X	
Xv	Skin scrapings, fungal, scabies,	X	
Xvi	Spinal fluid	X	
Xvii	Throat swab	X	
Xviii	Tracheal aspirate (including child with tracheostomy)		X
Xix	Thyroid function tests.		X
Xx	Urethral culture, adolescent male	X	
Xxi	Vaginal and cervical cultures	X	
xxii	Perform and interpret:		
xxiii	Complete blood count with automated equipment & print out		X
xxiv	Complete blood count with differentials - with manual method	X	
xxv	Smear for RBC morphology	X	
xxvi	Wright stain for WBC and platelets	X	
xxvii	CSF cell count	X	
xxviii	Haematocrit and ESR	X	
xxix	Gram stain: CSF, Urethral smear, Urine	X	
xxx	KOH preparation: hair, skin, vaginal	X	
xxxi	Nasal smear for PMNs	X	
xxxii	Rapid tests: Group A strep antigen, Mononucleosis, Pregnancy, RDT	X	
xxxiii	Stool tests: occult blood, Wright stain for PMNs, ova, Pin worm,		
xxxiv	Throat culture, selective media for Group A presumptive diagnosis	X	
xxxv	Urinalysis, dipstick and microscopic, Urine culture colony count	X	

PART 1 EXAMINATION FORMAT

The examination will consist of the following;

- a. Objective broad theoretical evaluation of the General field of Paediatrics and specialties,
- b. Objective Structured Pictorial Examination (OSPE),
- c. Oral discussion of at least TWO clinical problem and ONE Social Paediatrics issues,
- d. Objective Performance and Cognition Skills Evaluation (PACSE) in at least **SIX** different stations
- e. Assessment of clinical reasoning and management skills, using real case full clerking records, summary and clinical reasoning format and objective questions.
- f. Each aspect of the curriculum and educational domains are covered using the Table of specification below (Blue Printing) so as to link assessment to learning objectives. Selected test items during blue printing are categorized into: "must know" (up to 65% of questions belong to this category), "Should know" and "may know"
- g. **Standard setting:** Modified Angoff method will be used to determine the Pass mark.
- h. The grades of scores are:
 - 70% or more -- A (very Good pass or P+1)
 - 60 -69% ----- B (Good pass or P+)
 - 50 -59 % ----- C (Pass or P)
 - 40 -49% -----D (Borderline or P-)- can cross compensate with a B in Theory or Oral examinations
 - 39% and below- E (Fail; P-1 – no cross compensation is allowed)
- i. For a candidate to pass the Clinical, he /she must score at least a 50% or "C" in the Clinical examination

S/No.	ASSESSMENT TYPE	HOW WILL IT BE ASSESSED	RESOURCES REQUIRED	TIME REQUIRED
a) Theory	Objective broad theoretical evaluation of the General field of Paediatrics and specialties using 200 Multiple Choice Questions (Best of Four) (A pass in this section of the examination qualifies candidate to proceed to the remaining sections).	Paper I: 100 Multiple Choice Questions (Best of Four) and Paper II: 100 Multiple Choice Questions (Best of Four)	2-day meeting of the Court of Examiners before the examination to standardize and moderate questions and ensure Blue Printing. Stationery	180 minutes ie 90minutes per paper
b) OSPE	Objective Structured Pictorial Examination. There will be 100 Multiple Choice Questions, made up of at least 10 questions from each of the 8 systems.	Multiple Choice Questions based on projected slides	LCD projector Dedicated Laptop Digital Camera Backup power	150 minutes
c) Viva voce	Oral discussion of THREE Questions drawn from Clinical and Social Paediatrics.	ALL Candidates to answer ALL SAME THREE Questions	Stationery including index cards. HP-Photo smart scanner, printer, photocopier (with cartridge)Timer	15 minutes per candidate
d) Performance And Cognition Skills Evaluation (PACSE)	Objective performance and cognition skills evaluation (PACSE) in ten different stations	Candidates will be evaluated at least THREE performance and THREE cognition skills stations from a template of twenty (see prototype below). Examiners will observe, listen and score the candidates.	Subjects, (patients, simulators, assistants, interpreters) Check- off and scoring sheets	60 minutes per candidate cycle
e) Clinical Reasoning and Management	Assessment of clinical reasoning and management skills, using real case full clerking records, summary and clinical reason format and objective questions.	Each candidate will be evaluated on at least two real case clerking records and will answer multiple choice questions...	Case clerking, completed summary and clinical reasoning sheets MCQ answer sheets.	60 minutes and made up of 30minutes per task

TEMPLATE FOR TWENTY-STATION PERFORMANCE AND COGNITION SKILLS EVALUATION (PACSE) STATIONS

TIME / ITEM	STATION 1	STATION 2	STATION 3	STATION 4	STATION 5	STATION 6	STATION 7	STATION 8	STATION 9	STATION 10
10minutes	Physical Examination	Physical Examination	Physical Examination	Physical Examination	History of Presenting Complaints	Review of Systems	Family and Social History	Nutritional History	Developmental Assessment	Communication Skills
	STATION 11	STATION 12	STATION 13	STATION 14	STATION 15	STATION 16	STATION 17	STATION 18	STATION 19	STATION 20
10minutes	Recognition and Cognition	Recognition and Cognition	Recognition and Cognition	Recognition and Cognition	Assess other skills	Assess other skills	Assess other skills	Assess other skills	Assess other skills	Assess other skills
									Pallor	Rehydration

NOTE

1. From this Twenty-station template ten stations will be selected as a set which can be replicated as required.
2. Ten stations assumes a minimum of 20 examiners [2 per station].

TABLES OF SPECIFICATION FOR DELIVERY AND COGNITION LEVEL OF EXAMINATION OF EACH OF THE EIGHT COMPETENCY AREAS

1. CORE PROFESSIONAL COMPETENCIES IN PART ONE PHASE OF THE FMCPaed PROGRAMME

COURSES	CREDIT UNITS [%age]	Specific topics / Skills	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUT ORIAL	SEMI NAR S	CLINI CALS	WORK SHOPS	LVL-I	LVL-II	LVL-III
A. Subject / Patient Assessment, Management and Evaluation	20 [56]	Understanding and Application Basic Medical Sciences and Pathophysiology	10	5		5		0	2	3	5
		History taking,	15	5	0	0	10	0	3	5	7
		Physical Examination	20	10	0	0	10	0	4	6	10
		Laboratory work	5	2	0	0	3	0	0	2	3
		Summary making	10	5	0	2	3	0	2	3	5
		Sequence of thought	10	3	2	2	3	0	2	3	5
		Evidence-based Conclusions	10	3	2	2	3	0	2	3	5
		Clinical Problem Solving Skills	10	3	2	2	3	0	2	3	5
B. Communication Skills	4 [11]	Holistic Patient Management, including appropriate Levels of Prevention	5	2	0	1	2	0	1	1	3
		Self Evaluation of conclusions and actions taken	5	2	0	1	2	0	1	1	3
		Basic Communication and Medical language Skills	25	5	5	5	5	5	5	10	10
		Patient Education & Counselling	25	5	5	5	5	5	5	10	10
C. Pedagogy, Research and Continuing Professional Education Skills	4 [11]	Academic and Interactive Communication	25	5	5	5	5	5	5	10	10
		Applications of information technology in Medicine	25	5	5	5	5	5	5	10	10
		Learning by doing and teaching' Principles of Adult Education -'learning to learn'.	20	4	4	4	4	4	5	5	10
		Feedback – giving & receiving; Mentoring and Career Planning	20	4	4	4	4	4	5	5	10
		Learning Resources, ICT, CAID, Audiovisuals	20	4	4	4	4	4	5	5	10
D. Leadership, Collaboration and Consultation	4 [11]	Research and Biostatistics. Retrieval, Critical Reading and Management of Information.	20	4	4	4	4	4	5	5	10
		Assessment(pre and post test, recap, direct questioning. Impact	20	5	5	5	3	2	5	10	10
		Team-science/Leadership Roles and Qualities	25	5	5	5	5	5	5	10	10
		Multidisciplinary and collaborative Learning and Practice approaches	25	5	5	5	5	5	5	10	10
E. Personal and Professional Responsibilities	4 [11]	Roles of Consultants/Mentees	25	5	5	5	5	5	5	10	10
		Places of Consultants/Mentees	25	5	5	5	5	5	5	10	10
		Personal Responsibilities and Quality Assurance	25	5	5	5	5	5	5	10	10
		Work Habits/Attitudes	25	5	5	5	5	5	5	10	10
		Professional Responsibilities	25	5	5	5	5	5	5	10	10
		Medical Ethics and Law	25	5	5	5	5	5	10	10	

2. PREVENTIVE PAEDIATRICS AND SCHOOL HEALTH PROGRAM

COURSES	CREDIT UNITS [%age]	Specific Topics / Skills	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUTORIAL	SEMINARS	CLINICALS	WORK SHOPS	LVL-I	LVL-II	LVL-III
Levels of Prevention	5 [35]	Definitions	10	5	0	5	0	0	2	3	5
		Principles	20	10	0	10		0	4	6	10
		Applications of Level One	10	5	0	0	5	0	2	3	5
		Applications of Level Two	20	10	0	0	10	0	4	6	10
		Applications of Level Three	20	10	0	0	10	0	4	6	10
		Applications of Level Four	10	5	0	0	5	0	2	3	5
		Applications of Level Five	10	5	0	0	5	0	2	3	5
Health Supervision	2 [15]	Core Concepts and General Principles	25	5	5	5	5*	5	5	5	15
		Supervision by Age-groups- Prenatal, Newborn & Infancy	25	5	5	5	5*	5	5	5	15
		Early & Middle Childhood	25	5	5	5	5*	5	5	5	15
		Adolescence	25	5	5	5	5*	5	5	5	15
The School Health Programme	7 [50]	History and evolution of SHP	20	5	5	5	3	2	5	5	10
		Value and Scope	20	5	5	5	3	2	5	5	10
		Components	20	5	5	5	3	2	5	5	10
		Administration	20	5	5	5	3	2	5	5	10
		Evaluation	20	5	5	5	3	2	5	5	10

3. DEVELOPMENTAL AND BEHAVIOURAL PAEDIATRICS

COURSES	CREDIT UNITS [%age]	Specific Topics / Issues	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUTORIAL	SEMINARS	CLINICALS	WORK SHOPS	LVL-I	LVL-II	LVL-III
Differentiating Normal from Abnormal	2 [25]	Normal motor development	30	10	10	0	10	0	6	9	15
		Normal sensory development	30	10	10	0	10	0	6	9	15
		Primitive reflexes	10	5	0	0	5	0	2	3	5
		Delayed motor milestones	15	5	5	0	5	0	3	5	7
		Intellectual disability	15	5	5	0	5	0	3	5	7
	2	Thumb sucking	5	2	0	0	3	0	1	1	3

Common Developmental and Behavioural Disorders	[30]	Nail biting	5	2	0	0	3	0	1	1	3
		Teeth grinding	10	5	0	0	5	0	2	3	5
		Breath-holding	5	2	0	0	3	0	1	1	3
		Head banging	10	5	0	0	5	0	2	3	5
		Vegetative disorders	10	5	0	0	5	0	2	3	5
		Disruptive behavioural disorders	10	5	0	0	5	0	2	3	5
		Sexuality problems	10	5	0	0	5	0	2	3	5
		Pervasive developmental disorders	15	5	5	0	5	0	3	5	7
		Mood disorders	5	2	0	0	3	0	1	1	3
Indications for referral and to whom	15	0	5	5	0	5	3	5	7		
Anticipatory Guidance	1 [15]	Surveillance skills and instrument	40	15		10	5	10	8	12	20
		Parental education	30	5	10	5		10	6	9	15
		Youth camps	30		10	5		15	6	9	15
Procedures and Skills for Screening and Diagnosis	2 [30]	Paediatric symptom check list	30		10	10		10	6	9	15
		Adolescent communication skills	20	0	5	5	0	10	4	6	10
		Interviewing skills	20	0	5	5	0	10	4	6	10
		Denver developmental screening test and others	30	5	5		10	10	6	9	15

4. EMERGENCY, ACUTE AND INPATIENT CARE

COURSES	CREDIT UNITS [%age]	Specific Topics /Skills	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUTORIAL	SEMINARS	CLINICALS	WORKSHOPS	LVL-I	LVL-II	LVL-III
Emergency Paediatrics Unit	7 [50%]	Shock – Classification and management	20	5	0	5	10	0	4	6	10
		Convulsions-Common causes and emergency management	20	5	0	5	10	0	4	6	10
		Coma-Common causes and emergency management	20	5	5	0	10	0	4	6	10
		Management of severe anaemia	15	5	5	0	5	0	3	5	7
		Evaluation and management of Heart failure	10	0	5	0	5	0	2	3	5
		Evaluation and management of upper airway obstruction	5	2	0	0	3	0	1	1	3
		Acute severe asthma	5	2	0	0	3	0	1	1	3
		Management of Diabetic ketoacidosis	5	2	0	0	3	0	1	1	3
Paediatric Intensive Care Unit	3 [20%]	Cardio-respiratory arrest : recognition and management	50	10	15	0	25	0	10	15	25
		Cerebro-vascular accidents	30	10	10	0	10	0	6	9	15

		Raised Intracranial pressure: Features and management	20	5	5	0	10	0	4	6	10
Newborn Intensive Care Unit	2 [15%]	Birth Asphyxia and Acute Respiratory distress	25	5	5	0	15	0	5	8	12
		Seizures, Hypoglycaemia and other metabolic disorders	25	5	5	0	15	0	5	8	12
		Evaluation and management Neonatal Jaundice	20	5	5	0	10	0	4	6	10
		Ventilatory support	15	2	3	0	10	0	3	5	7
		Life threatening congenital malformations	15	2	3	0	10	0	3	5	7
		Fluid and Electrolyte management	40	10	10	0	20	0	8	12	20
Inpatient General Paediatric Service	2 [15%]	Nutritional management of the sick child	20	5	5	0	10	0	4	6	10
		Paediatric therapeutics and adverse drug reactions	20	5	0	0	10	5	4	6	10
		General management of the terminally ill child	20	5	0	0	10	5	4	6	10

5. COMMUNITY AND SOCIAL PAEDIATRICS

COURSES	CREDIT UNITS [%age]	Specific Topics/ Issues	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUTORIAL	SEMINARS	CLINICALS	WORK SHOPS	LVL-I	LVL-II	LVL-III
The Child in the Family, Cultural, Ethnic and Community Contexts	4 [27]	Child Nutrition	20	5	0	5	10	0	4	6	10
		Advocacy	15	5	5	5	0	0	3	5	7
		Protection	10	5	5	0	0	0	2	3	5
		Finance	10	5	0	5	0	5	2	3	5
		Sensitivities	5	2	0	0	3	0	1	2	2
		Environment	20	5	0	0	5	10	4	6	10
		Resources for Health and Related Services	20	5	0	5	0	10	4	6	10
Primary Health Care and the Child	4 [27]	Overview of Primary Health Care	10	5	0	0	0	5	2	3	5
		Maternal and Child Health	20	5	0	5	10	0	4	6	10
		Immunization Practices	10	0	0	5	5	0	2	3	5
		Breast Feeding/Complementary feeding	20	5	5	0	5	5	4	6	10
		Growth Monitoring	15	0	5	0	10	0	3	5	7
		Community Health Education	10	0	0	5	0	5	2	3	5
		Cultural Issues	15	5	0	5	0	5	3	5	7
Health Care for Children with Chronic Diseases / Disabilities and	3 [22]	The physically challenged child/ Rehabilitation	30	10	5	0	15	0	6	9	15
		Chronic illness	20	5	5	0	10	0	4	6	10
		Palliative Care	20	5	5	0	10	0	4	6	10

Terminal Illness		Organ Transplant	10	0	0	5	5	0	2	3	5
		The terminally ill child	20	5	5	0	10	0	4	6	10
The Endangered Child	2 [15]	Adoption and Foster Care	10	4	2	2	0	2	2	3	5
		Abuse and Neglect	25	10	5	5	0	5	4	8	13
		Violence	25	10	5	5	0	5	4	8	13
		Abandonment	25	10	5	5	0	5	4	8	13
		Substance Abuse	25	10	5	5	0	5	4	8	13
Global Health Paediatrics	1 [9]	Vital Statistics/Health Indices	40	10	0	10	10	10	8	12	20
		International Immunization Practices and International Travel.	30	10	0	10	0	10	6	9	15
		Growth and Growth Charts	30	5	5	0	10	10	6	9	15

5B Other Aspects of Paediatrics

COURSES	CREDIT UNITS [%age]	Specific Topics / Skills	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUTORIAL	SEMINARS	CLINICALS	WORK SHOPS	LVL-I	LVL-II	LVL-III
Medical Economics	5 [20]	National Budget, GDP, GNI	10	5	5	0	0	0	2	3	5
		Budgeting and Resource Allocation	15	5	5	5	0	0	2	3	10
		Health Insurance	25	5	5	10	0	10	5	10	10
		Healthcare Funding	25	5	5	10	0	10	5	10	10
		Partners in Care Delivery	25	5	5	10	0	10	5	10	10
Law in Medicine	5 [20]	Professional Rights and Rights of Patients/Obligations	15	3	5	5	0	2	2	5	8
		Laws and Oaths Governing Practices	25	5	10	5	0	5	5	7	13
		Misdemeanours in Practice and Sanctions	35	10	10	10	0	5	10	10	15
		Medical Agreements/Consent	25	5	10	5	0	5	5	7	13
Medical Sociology	5 [15]	Community Participation and Ownership	25	5	10	5	0	5	5	7	13
		Advocacy and Social Mobilisation	25	5	10	5	0	5	5	7	13
		Social Structures	20	5	5	5	0	5	3	5	12
		Social Class and Health	30	10	5	10	0	10	5	10	15
Management in Health	4 [20]	Roles and Qualities of the Paediatrician as a Manager	20	5	5	5	0	5	5	5	10
		Identification, Prioritization and Allocation of Resources	25	5	10	5	0	5	5	10	10
		Resources in Health : Allocation and Challenges	30	5	10	5	0	10	5	10	15
		Conflict Management	25	5	10	5	0	5	5	10	10

Medical Informatics	6 [25]	Computerised Health Records	25	5	10	5	0	5	5	8	12
		Softwares Relevant to Medicine	25	5	10	5	0	5	5	8	12
		Common Computer Packages in Health	30	5	10	5	0	10	5	10	15
		Advanced Computer Packages in Health	20	5	5	5	0	5	3	5	12

6. GENERAL CLINICAL PAEDIATRICS

COURSES	CREDIT UNITS [%age]	Specific Topics / Skills	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUTORIAL	SEMINARS	CLINICALS	WORKSHOPS	LVL-I	LVL-II	LVL-III
Genetics and Inborn Errors of Metabolism	1 [7]	Molecular Genetics	8	0	3	3	0	2	2	2	4
		Genetic Abnormalities	10	2	3	3	2	0	2	3	5
		Chromosomal Abnormalities	20	4	6	6	4	0	4	6	10
		Genetic Counselling	8	0	3	3	0	2	2	2	4
		Dysmorphology	8	0	4	4	0	0	2	2	4
		Carbohydrate Metabolic defects and Mucopolysaccharidosis	20	4	6	6	4	0	4	6	10
		Aminoacidopathies	8	2	3	2	1	0	2	2	4
		Lipid Metabolic defects	8	2	3	2	1	0	2	2	4
Infectious Diseases/ Tropical diseases	3 [20]	Haem pigments, Purine & Pyrimidine defects	10	2	4	3	1	0	2	3	5
		Fever	5	2	0	0	3	0	0	2	3
		Clinical use of the microbiology laboratory	10	2	2	2	2	2	2	3	5
		Genomics of Infectious Diseases	10	2	2	2	2	2	2	3	5
		Clinical syndromes caused by a variety of infectious agents including malaria, Tb, HIV/AIDS	15	2	3	3	2	5	3	5	7
		Sepsis and shock	10	2	2	2	2	2	2	3	5
		Emerging Epidemics. VHF's	10	2	2	2	2	2	2	3	5
		ATM – AIDS, Tb and Malaria	10	2	2	2	2	2	2	3	5
		Infection in the immunocompromised host	10	2	2	2	2	2	2	3	5
		Preventive measures and infectious diseases	10	2	2	2	2	2	2	3	5
Malnutrition –under and –over,	2 [15]	Infection control	10	2	2	2	2	2	2	3	5
		Digestive system and absorption processes	15	5	2	2	5	1	3	5	7
		Normal nutrition – Macronutrients & Micronutrients	15	5	2	2	5	1	3	5	67

		Under nutrition – PEM, FTT & Micronutrient deficiencies	30	10	4	4	10	2	6	9	15
		Overnutrition – Overweight & Obesity	20	6	3	3	6	2	4	6	10
		Nutritional Assessment	20	6	3	3	6	2	4	6	10
Perinatology/ Neonatology	2 [15]	Neonatal Resuscitation and Asphyxia. Stabilization and transport of ill Neonates	20	5	0	0	10	5	4	6	10
		Examination and routine care of the newborn. Gestational Age assessment and low birth weight	15	3	2	0	10	0	3	5	7
		Systemic disorders, recognition and management	20	8	2	2	8	0	4	6	10
		Newborn Nutrition and fluid. Metabolic issues	10	5	0	0	5	0	2	3	5
		Infections and Infection control in the newborn	10	3	0	2	5	0	2	3	5
		Bilirubin Metabolism, Disorders and Complications	5	3	0	2	0	0	1	2	2
		Neonatal Mortality Epidemiology	5	3	0	2	0	0	1	2	2
Procedures in Neonatology Ethnical issues in Neonatology	15	3	2	0	10	0	3	5	7		
Adolescent Problems, including Adolescent Gynaecology	2 [15]	Health problems of the adolescent	20	5	5	5	2	3	4	6	10
		Mental/Psychological issues in adolescents	20	5	5	5	2	3	4	6	10
		Substance abuse and Violence	20	5	5	5	2	3	4	6	10
		Suicide	10	3	2	2	1	2	2	3	5
		Menstrual problems, contraception and pregnancy	20	5	5	5	2	3	4	6	10
Sexually transmitted diseases and HIV	10	3	2	2	1	2	2	3	5		
Allergy and Immunology	1 [7]	Allergy and the immunological basis of atopic diseases in children	10	2	2	2	2	2	2	3	5
		Allergic disorder of children	20	5	4	4	5	2	5	5	10
		Anaphylaxis & serum sickness	10	2	1	1	5	1	2	3	5
		Immunology of Common Childhood Diseases	15	5	1	2	5	2	3	5	7
		Cellular and Complement systems and their Disorders	15	5	1	2	5	2	3	5	7
		Congenital Immune Deficiency Syndromes	10	2	2	2	2	2	2	3	5
		Roles of Clinical Immunology in Childhood Illnesses	15	5	1	2	5	2	3	5	7
Tissue transplantation	5	2	0	1	2	0	1	2	2		
Oncology	1 [7]	Aetiopathogenesis, genetics and epidemiology of Solid childhood cancer	10	5	0	5	0	0	2	3	5

		Clinical features, diagnosis & staging of solid cancers	40	15	5	5	15	0	8	12	20	
		Multidisciplinary management and prognosis	10	3	0	2	5	0	2	3	5	
		Principles of chemotherapy	20	8	3	2	7	0	4	6	10	
		Management of Oncologic emergencies and supportive care including Palliative care	20	8	0	5	7	0	4	6	10	
Paediatric Surgery	1 [7]	Principle of Management of Congenital anomalies in Paediatric Surgery	25	5	5	3	10	2	5	8	12	
		Management of Paediatric Surgical emergencies e.g. intussusceptions, peritonitis typhoid from perforation	25	5	5	3	10	2	5	8	12	
		Principles of Perioperative Management of Surgical Patients with special emphasis on Fluid and electrolytes	25	5	5	3	10	2	5	8	12	
		Skills: - Venous Cutdown - I & D of superficial Abscesses that is those of moderate size and not contiguous to vital structures	25	5	5	3	10	2	5	8	12	
Radiology	1 [7]	Principle of imaging in the paediatric age group	10	2	2	2	2	2	2	3	5	
		Role and interpretation of plain radiology in paediatric practice	20	4	4	4	4	4	4	4	6	10
		Role and interpretation of ultrasonography in paediatric practice	25	5	2	4	10	4	5	7	13	
		New imaging technique in paediatrics- CT & MRI	20	4	4	4	4	4	4	4	6	10
		Interventional radiology in the paediatric age group	20	4	4	4	4	4	4	4	6	10
		Nuclear Medicine in Paediatrics	5	2	0	0	0	3	0	1	4	

7. SPECIALTY CLINICAL AREAS AND THE SYSTEMS

COURSES	CREDIT UNITS [%age]	Specific Topics / Problems	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INSTR	TUTORIAL	SEMINARS	CLINICALS	WORK SHOPS	LVL-I	LVL-II	LVL-III
Cardiovascular System	3 [12]	Congenital Heart Diseases	40	10	0	10	20	0	8	12	20
		Acquired Heart Diseases	30	10	0	8	12	0	6	9	15
		Heart Failure in Children	15	4	0	2	9	0	3	5	7
		Preventive Cardiology	15	4	0	2	9	0	3	5	7
Nervous System	4	Neurological Evaluation	10	2	0	0	8	0	2	3	5
		Congenital Anomalies	10	4	0	2	4	0	2	3	5

	[20]	CNS infections	10	4	0	2	4	0	2	3	5
		Seizure Disorders	10	4	0	2	4	0	2	3	5
		Encephalopathies and Coma	10	4	0	2	4	0	2	3	5
		Spinal cord disorders	10	4	0	2	4	0	2	3	5
		Neurodegenerative disorders	5	2	0	1	2	0	1	1	3
		Neuromuscular disorders	5	2	0	1	2	0	1	1	3
		Peripheral Nervous disorders	10	4	0	2	4	0	2	3	5
		Special Senses I- Ear, Nose and Throat	10	4	0	2	4	0	2	3	5
Special Senses II- Ophthalmology	10	4	0	2	4	0	2	3	5		

Digestive System	3 [12]	Acute gastroenteritis	15	5	0	5	5	0	3	5	7
		Persistent / Chronic Diarrhoea	15	5	0	5	5	0	3	5	7
		Malabsorption syndromes	10	4	0	2	4	0	2	3	5
		Dentition and the Oral cavity	10	4	0	2	4	0	2	3	5
		Liver and biliary diseases	30	8	4	4	12	2	6	9	15
		Congenital anomalies	10	4	0	2	4	0	2	3	5
		Recurrent Abdominal Pain	10	4	0	2	4	0	2	3	5
Endocrine System	3 [12]	Thyroid Disorders	20	8	0	4	8	0	4	6	10
		Adrenal Disorders	20	8	0	4	8	0	4	6	10
		Diabetes mellitus	20	8	0	4	8	0	4	6	10
		Pubertal disorders/ambiguous genitalia	20	8	0	4	8	0	4	6	10
		Hypothalamic and pituitary disorders	10	4	0	2	4	0	2	3	5
		Parathyroid disorders	10	4	0	2	4	0	2	3	5
Genito-Urinary System	3 [12]	Congenital anomalies	15	5	0	5	5	0	3	5	7
		Urinary Tract infections	15	5	0	5	5	0	3	5	7
		Glomerular disorders	15	5	0	5	5	0	3	5	7
		Tubular disorders	15	5	0	5	5	0	3	5	7
		Acute Kidney Injury	15	5	0	5	5	0	3	5	7
		End-stage kidney disease	15	5	0	5	5	0	3	5	7
		Sexually Transmitted Infections	10	4	0	2	4	0	2	3	5
Haematologic System	3 [12]	Anaemias	25	9	0	7	9	0	5	8	12
		Haemoglobinopathies	15	5	0	5	5	0	3	5	7
		Haemorrhagic and thrombotic diseases	10	4	0	2	4	0	2	3	5
		Blood transfusion	15	5	0	5	5	0	3	5	7
		Spleen and the lymphatics	10	4	0	2	4	0	2	3	5
		Polycythaemia	5	2	0	1	2	0	1	1	3
		Leukaemias	20	8	0	4	8	0	4	6	10
Musculo-Skeletal System	2 [8]	Osteomyelitis	10	4	0	2	4	0	2	3	5
		Septic arthritis	10	4	0	2	4	0	2	3	5
		Congenital musculoskeletal disorders	10	4	0	2	4	0	2	3	5

		Trauma	10	4	0	2	4	0	2	3	5
		Dermatology	30	5	0	5	15	5	6	9	15
		Connective Tissue Disorders	30	10	0	5	15	0	6	9	15
Respiratory System	3 [12]	Upper respiratory infections	20	8	0	4	8	0	4	6	10
		Pneumonia and other Lower respiratory infections	20	8	0	4	8	0	4	6	10
		Upper airway obstruction	10	4	0	2	4	0	2	3	5
		Asthma and Bronchiolitis	15	5	0	5	5	0	3	5	7
		Chronic suppurative pulmonary diseases	10	4	0	2	4	0	2	3	5
		Pulmonary oedema and pulmonary embolism	5	2	0	1	2	0	1	1	3
		Pleurisy, Pleural effusion, empyema, pneumothorax and pneumomediastinum	10	4	0	2	4	0	2	3	5
		Respiratory failure	10	4	0	2	4	0	2	3	5

8. ESSENTIAL CLINICAL, THERAPEUTIC, TECHNICAL AND PROCEDURAL SKILLS

COURSES	CREDIT UNITS [%age]	Specific Skills / Procedures	% age of Course Coverage	MODE OF DELIVERY					LEVEL OF COGNITION		
				SELF INST R	TUTO RIAL	SEMI NAR S	CLINI CALS	WORK SHOPS	LVL-I	LVL-II	LVL-III
Proficiency in History Taking Skills	3 [15]	Communication skills-Due courtesies	30	10	5	0	10	5	6	9	15
		Proper sequence in history taking-attention to details	40	10	5	0	25	0	8	12	20
		Proper Review of Systems	15	5	5		5	0	3	5	7
		Legible documentation	15	5	5	0	5	0	3	5	7
Advance Paediatric Life Support	4 [20]	Intravenous access	50	10	0	0	30	10	10	15	25
		Intraosseous access	10	0	0	0	10		2	3	5
		Endotracheal intubation	30	0	0	0	25	5	6	9	15
		Chest tube insertion	20	0	0	0	15	5	4	6	10
Proficiency in performance of physical examination in different contexts:	4 [20]	Proper attention to dignity of patient	10	0	5	0	5	0	2	3	5
		General physical exam	30	5	5	0	20	0	6	9	15
		System specific exam	50	5	10	0	35	0	10	15	25
		Documentation in summary sheet.	10	2	0	0	5	3	2	3	5
Proficiency in Clinical Reasoning in different contexts	5 [25]	Identify important info in History and Physical Examination	20	0	5	0	10	5	4	6	10
		Identify pathological process	20		5		10	5	4	6	10
		Identify functional & structural abnormalities	30		5		15	10	6	9	15
		Make evidence-based diagnosis	30		5		15	10	6	9	15
	2 [7]	Identify therapeutic and technical procedures	30	5	5	0	10	10	6	9	15

Proficiency in, or Exposure to Therapeutic and Technical Procedures		Prioritize procedures	20			5	10	5	4	6	10
		Discuss/counsel on procedures	30	2	3	0	15	10	6	9	15
		Logical documentation	20	0	5	0	5	10	4	6	10
Proficiency or Exposure Diagnostic and Screening Procedures	2 [7]	Identify and perform screening tests	20	5	5	0	5	5	4	6	10
		Identify and perform immediate bedside tests	20	5	5	0	10	0	4	6	10
		Discuss on diagnostic procedures	30	0	5	5	10	10	6	9	15
		Interpret results	30	5	5	5	10	5	6	9	15
Proficiency/ Exposure in Laboratory Procedures and Specimen Collection	2 [6]	Identify investigative procedures	10	5	0	0	5	0	2	3	5
		Prioritize investigative procedures	20	5	5	0	10	0	4	6	10
		Discuss on investigative procedures	20	5	5	0	10	0	4	6	10
		Sample collection skills	15	5	0	0	10	0	3	5	7
		Perform investigations	15	5	0	0	10	0	3	5	7
		Interpret results	20	5	5	0	10	0	4	6	10

Part II. Course codes and course credit units for MD programmel (Paediatrics)

Course code	Course	Credit units
PED 941	Advanced Neonatology	2
NPMC 995	Advanced Research Methodology	3
NPMC 996	Advanced Health Resources Management	2
PED 942	Advanced Endocrinology	2
PED 943	Advanced Haematology-Oncology	2
PED 944	Advanced Gastroenterology	2
PED 945	Advanced Neurology	2
PED 946	Advanced Cardiology	2
PED 947	Advanced Pulmonology	2
PED 948	Advanced Nephrology	2
PED 949	Advanced Infectious Diseases	2
PED 950	Seminars (three Seminars each with 2 credit units)	6
PED 812	Bioethics	1
PED 899	Thesis / Dissertation	12
TOTAL		40

THE PART II EXAMINATION

Eligibility

- Pass at the Part I Examination of the NPMCN.
- Completion of thirty six months post Part one, twelve months of which must in an accredited institution while the remaining 24months will be in the candidate’s area of specialization.
- Completed Dissertation, the proposal of which had been assessed and approved prior to commencement of the project
- Attendance to College based courses ie Research Methodology and Human Resource Management.

Training Goals to be assessed:

- i. Advanced competences as in Part I, but with more emphasis on Communication, academics, management and leadership skills, as well as creative thinking.
- ii. Research capability through ability to conceptualise, design, execute, report and defend a Dissertation

Training Format:

The minimum training period is 36 months. During the first 12 months, senior residents should rotate every three months through each of the three core clinical areas (Newborn unit, Emergency Paediatrics Unit, General Paediatrics). Another three months should be devoted to relevant courses, specialty training workshops or attachments and any field work. The second 24-month period, should be spent working under the supervision of two consultants in six month rotations, as ‘under study’.

Part II Examination Framework

OBJECTIVE: To conduct a body system based, valid and reliable assessment, at all levels of cognition, of the learning outcomes from the 24 months of Paediatrics postings requirement using;

		The Endangered Child			
		Teaching issues			
		Leadership issues			
		Ethical issues			

	<p>P-1 (Referred) i.e. where the dissertation contains major errors which the candidate needs to address, rewrite, represent and defend at a subsequent examination.</p> <p>Rejected i.e. the dissertation is adjudged not to have been executed in compliance with the approved proposal.</p>	
C) Final Part 2 result	<p>Candidate's performance at the end of his/her Part II examinations can be summarized and presented as:</p> <p>Pass: Candidate had full Pass (P+1) in the Dissertation and passed viva voce</p> <p>Provisional Pass (PP): Candidate had P- in the Dissertation and Pass in the viva voce</p> <p>Referred Dissertation (Ref Dis): Candidate had passed the viva vice but had P-1 in the Dissertation. Such candidates will represent and defend only the dissertation at the next examination.</p> <p>Failed viva voce (FGP): Candidate had P- in the dissertation but failed the viva voce. Candidate will do some minor corrections in the dissertation and do the viva voce only at the next examination.</p> <p>Fail: Candidate failed both dissertation and viva voce and should repeat all sections of the examination</p>	

Guidelines for writing Dissertations.

Preamble

The aim of the Dissertation is to introduce residents to carry out research projects and / or make observations and document same in clear well written scientific language in the candidate's area of interest. It is not necessarily aimed at breaking new grounds. The project should be supervised by at least one Fellow of the Faculty in the cognate sub speciality and at least five years post-Fellowship experience. The supervisor should be directly and fully involved in guiding the candidate at the different stages of proposal writing, data gathering and dissertation writing.

A second supervisor (where needed) may be a Fellow of the Faculty for less than 5 years, or a Fellow of another Faculty within the College or a Fellow of another recognized College, or any other person approved by the College. The field work must not commence before approval of the proposal. In view of MD/Ph D, the External Assessor will include a MD / Ph D holder

- a. The research proposal should address a relevant issue – epidemiologic, clinical, therapeutic or investigational etc. It should not be a copy of someone else's past works. The focus must be clear.
- b. Should have a title reflecting the focus of the study. It must be concise, no more than 22 words if possible.
- d. The facilities for executing the research work should be available and appropriate.
- e. The study should be executable within the allotted time frame of the residency programme

Proposal format. An acceptable proposal must conform to the following format.

1. Name of Candidate
2. Faculty of Candidate
3. Name of Training Institution
4. Address of Training Institution
5. Month and Year Part I Examination was passed
6. Proposed Examination Date
7. Proposed Title of Project
8. Introduction, including definition of the research problem and justification (not more than 600 words)
9. Literature review, including relevant African literature (not more than 2500 words)
10. Aims and objectives of the study
11. Proposed methodology (not more than 1000 words).
12. References in the Vancouver style
13. Application supported by:
 - a. Head of Departments Name: If a Fellow, year of Fellowship: Signature and Date:
 - b. Supervisors Name/Address: If a Fellow, year of Fellowship: Signature and Date:
 - c. Second Supervisor (if required) If a Fellow, year of Fellowship: Signature and Date:
 - d. Other Supervisor Name/Address: If a Fellow, year of Fellowship: Signature and Date:
14. Candidate's Name: Signature and Date:

The components of the Dissertation

a. Title Page

b. Declaration Page

Declarant must affirm the originality of the work and that it has not been previously published elsewhere.

c. Attestation Page

Here the supervisor(s) should state that they supervised the work. The statement must be dated and signed.
Attestation on plagiarism

d. Table of Contents Page

e. Dedication Page

f. Acknowledgements Page (limited to a page)

The three sections immediately above are self-explanatory.

g. Summary Page

The summary should be structured and not more than 500 words. It should be a synopsis containing the statement of the problem, the objectives of the study, subjects studied, methodology, results and conclusions. Every statement in the summary must derive from what is available in the body of the dissertation.

Introduction

This section should briefly define of the subject matter, identify the research questions and justify the need for the study.

Literature Review

The literature review should be an analytic appraisal of previous reports on the subject. It should be comprehensive but not unduly lengthy.

Research Questions

Hypotheses to be tested

Aim and Specific Objectives

The Aim should address the overall objective of the study, while Specific Objectives should outline the measurable outcomes variables. These should not differ from the approved proposal.

Subjects (Materials) and methods

Details must be given here of

- a. The study location
- b. study design,
- c. sample size determination
- d. subject recruitment (sampling technique, characteristics of the subjects and selection criteria) methods, including laboratory and other techniques,
- e. data management,
- f. others.
- g. The nature of the candidate's participation in the execution of the research should be stated and acknowledgements given in respect of the contributions of others.

Results

The period of the study should be stated. Results should be presented simply but succinctly using a combination of prose, tables, charts and figures as appropriate. The presentation of the results should be done systematically to address each of the specific objectives. Preferably at least a table or other forms of illustration should be dedicated to each specific Aim or Objective where needed

Discussion

The discussion should focus on interpretation of the results of the study. Generalisations not borne out of the study findings should be avoided. Findings should be compared with previous reports and reasons proffered for observed differences as seen from the candidates point of view. This section must accommodate discussions on findings derived from each Aim or Objective The implications of the findings should also be discussed.

Conclusions. This is best presented as itemized points in simple, unambiguous prose. As much as possible figures should be deemphasised

Recommendations. Recommendations may be made but must be defensible from the findings of the study

Limitations (if any)

Lines of future research Lines of future research may be suggested.

References References should comply with the Vancouver style, as used by the Journal of the National Postgraduate Medical College of Nigeria.

Appendix

The following should be presented as appendices:

- a. the study questionnaire
- b. Certificate of ethical clearance,
- c. Consent form
- d. Other relevant information that do not strictly belong to the text.

Defence of Dissertation

The candidate will be examined by at least two examiners who would have read the Dissertation or casebook. The examination should last for approximately sixty minutes.

The Dissertation is graded as follows:

The examination should last for sixty minutes after which the candidate is assessed and the Dissertation graded as follows:

P+ 1: Full Pass i.e. Accepted

P : accepted with minor editorial errors where the dissertation is adjudged to be good with only minor typographical/spelling errors

P- : (Provisional Pass) i.e. provisionally accepted with minor errors beyond typographic and spelling. The corrected dissertation must be returned within three months.

P-1 (Referred) i.e. where the dissertation contains major errors which the candidate needs to address and rewritten, represented and defended at a subsequent examination.

Rejected i.e. the dissertation is adjudged not to have been executed in compliance with the approved proposal. .

CHECK-OFFS AND CLINICAL REASONING FORMAT

SKILL: Genito-Urinary System Examination		PERFORMANCE CHECK-OFF				
Examination No						Date
	PERFORMANCE / DO STEPS	NOT	Badly	Fairly	Well	ITEM
		Done(0)	Done(1)	Done(3)	Done(5)	Score
1	General : Inspection					
A	Pallor					
B	Oedema					
C	Hair changes					
D	Skin changes					
	BIO-PHYSICAL MEASUREMENTS					
A	Length / Height					
B	Weight					
C	Mid upper arm circumference					
D	Occipito-frontal circumference					
2	Abdomen – Inspection					
A	Abdominal size					
B	Symmetry					
C	Masses					
D	Marks					
E	Umbilicus					
3	Abdomen – Palpation					
A	ask for any painful area					
B	Look at patients face					
C	Light palpation for tenderness					
D	Light palpation for masses					
E	Deep palpation for masses					
f	Palpation for the bladder					
l	Balloting for the kidneys					
F	Fluid thrill					
4	Abdomen – Percussion					
A	Shifting dullness: - presence / extent					
B	" " - testing for shifting					
C	Bladder					
d	Fist percussion/Renal angle tenderness					
5	Abdomen - Auscultation					
a	Bruit					
6	Perineum -					
a	Courtesy to patient					
b	Genital inspection					
c	Genital palpation					
7.	Related Systems					
a.	Pulse					
b.	Blood pressure					
8.	Urine examination					
A	Ask for specimen					
B	Inspect specimen					
C	Test specimen					
		Zero(0)	Bad(2)	Fair (6)	Good(10)	
8	Overall attention to sequence					
		Zero(0)	Bad(1)	Fair(3)	Good(5)	
9	Speed of performance					
10	Composure/Orderliness					
11	Courtesy					
12	Affect					
13	COLLATED SCORES					
14	SPECIFIC FEED-BACK COMMENTS					

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SKILL: Central Nervous System Examination		PERFORMANCE CHECK-OFF				
Examination No					Date	
	PERFORMANCE / DO STEPS	NOT Done(0)	Badly Done(1)	Fairly Done(3)	Well Done(5)	ITEM Score
1	General inspection/ Communication					
A	Consciousness					
B	Speech					
C	Orientation					
D	Intelligence					
E	Cerebral dominance					
2	Inspection/Communication/Manipulation					
	Cranial nerves					
A	Olfactory nerve					
B	Optic nerve					
C	Cr Ns 3,4,6					
D	Cr N. 5 motor					
E	Cr N. 5 sensory					
F	Cr N. 7 motor					
G	Cr N. 8 cochlear					
h	Cr N. 8 vestibular					
l	Cr N. 9 sensory					
j	Cr N. 9 motor					
k	Cr N. 10 motor					
l	Cr N. 11					
m	Cr N. 12					
3	Inspection, communication & palpation					
a	Muscles & limbs					
b	Skin texture					
c	Buccal mucosa					
d	Posture					
e	Gait					
4	Palpation and manipulation					
a	Tone upper limbs					
b	Tone lower limbs					
c	Power upper limbs					
d	Power lower limbs					
e	Deep tendon reflexes - Triceps					
f	Biceps					
g	Brachioradialis					
h	Knee					
i	Ankle					
j	Superficial reflexes – Abdominal					
k	Plantar					
l	Cremasteric					
5	Manipulation for sensory functions –					
a	-Light touch					
b	- Pain					
c	- Temperature					
d	- Joint position					
e	- Vibration					

f	-Stereognosis					
g	- Romberg's test					
6	manipulation for autonomic functions					
a	Rest & exercise pulse					
b	BP in diff. postures					
c	Continenence					
7a	Soft Neurologic signs- Neck stiffness					
b	Kernig's sign					
c	Brudzinski's sign					
d	Cerebellar function- intention tremor					
e	Nystagmus					
f	Dysdiadokokinesia					
		Zero(0)	Bad(2)	Fair (6)	Good(10)	Score
8	Overall Attention To Sequence					
9	Composure					
10	Speed Of Performance					
		Zero(0)	Bad(1)	Fair(3)	Good(5)	Score
12	Courtesy					
	Affect					
13	COLLATED SCORES					
14	SPECIFIC FEED-BACK COMMENTS					

SKILL: Cardiovascular System Examination		PERFORMANCE CHECK-OFF				
Examination No					Date	
S/ No	PERFORMANCE / DO STEPS	NOT Done(0)	Badly Done(1)	Fairly Done(3)	Well Done(5)	ITEM Score
1	GENERAL EXAMINATION					
	Inspection					
A	Respiratory distress					
B	Pallor					
C	Cyanosis					
D	Digital clubbing					
E	Neck Pulsations					
F	Oedema – Presence/extent/characteristics					
	Oedema –Palpation					
A	Extent					
B	Pitting					
2	Palpation					
	Pulse (Radial)					
A	Rate					
B	Rhythm					
C	Volume					
D	Vessel wall					
E	Collapsing					
F	Presence / Synchrony with other radial artery					
G	Synchrony with femoral arteries					
H	Synchrony with carotid artery					
I	Synchrony with brachial artery					
J	Synchrony with Popliteal artery					
K	Symmetry of the dorsalis pedis arteries					
3	Routine Blood Pressure –					
a	Patient positioning					
b	Cuff positioning					
c	Location of brachial pulse					
d	Cuff inflation					
e	Systolic reading by palpation					
f	Stethoscope positioning					
g	Blood pressure by auscultation					
4	Jugular Venous Pressure (JVP)					
a	Patient positioning					
b	Location of internal jugular vein					
c	Measurement of JVP					
5	Precordium –					
a	Inspection					
	Palpation					
a	Apex beat					
b	Heave/ thrill					
c	Percussion of precordium					
6	Auscultation –					
a	Heart sounds – apex					
b	Count heart rate					
C	Auscultate all valve areas - mitral, tricuspid, aortic and pulmonary.					
D	Auscultate for radiation to axilla /up the neck/back.					
6.	Related Systems					
A	Palpation for liver					
B	Ascites – shifting dullness					

C	Auscultate abdomen				
D	Auscultate base of lungs				
		Zero(0)	Bad(2)	Fair (6)	Good(10)
	Overall Attention To Sequence				
	Composure				
	Speed Of Performance				
		Zero(0)	Bad(1)	Fair (3)	Good(5)
	Courtesy				
	Affect				
	COLLATED SCORES				
	SPECIFIC FEED-BACK COMMENTS				

SKILL: Digestive System Examination		PERFORMANCE CHECK-OFF				
Examination No						Date
S/N	PERFORMANCE / DO STEPS	NOT Done(0)	Badly Done(1)	Fairly Done(3)	Well Done(5)	ITEM Score
1	GENERAL : Inspection for / Pallor					
a	Hair – texture & distribution					
b	Jaundice					
c	Finger clubbing					
d	Oedema					
e	Wasting					
F	Palms & soles of feet					
2	MOUTH AND PHARYNX; Inspection / Lips					
a	Gums					
b	teeth [state and numbers]					
c	Tongue					
d	swallow reflex					
3	ABDOMEN – Inspection / Symmetry					
a	abdominal size					
b	Marks					
c	Umbilicus					
d	peristaltic movements					
e	prominent veins					
f	Abnormal swellings					
4	ABDOMEN –Palpation					
a	ask for painful area					
b	look at patient's face					
c	light palpation for tenderness					
d	light palpation for masses					
e	Deep palpation for masses					
f	palpation for the liver					
g	palpation for the spleen					
h	Hernial orifices					
i	Fluid thrill					
5	ABDOMEN - Percussion					Score
a	Shifting dullness: - presence / extent					
b	" " - testing for shifting					
c	" : - quadrant coverage					
d	Liver span					
6	ABDOMEN - Auscultation					Score
a	Bowel sound – present/absent					
b	" - frequency					
c	Liver bruit					
d	Other bruit					
7	PERINEUM					
a	Courtesy to patient					
b	Genital inspection					
c	Rectal examination					
		Zero(0)	Bad(1)	Fair(3)	Good(5)	Score
8	Overall Attention To Sequence					
9	Composure					
10	Speed Of Performance					
11	Courtesy					
		Zero(0)	Bad(0)	Fair(1)	Good(2)	Score
12	Affect					
13	COLLATED SCORES					
14	SPECIFIC FEED-BACK COMMENTS					

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SKILL: Endocrine System Examination		PERFORMANCE CHECK-OFF				
Examination No					Date	
S/N.	PERFORMANCE / DO STEPS	NOT Done(0)	Badly Done(1)	Fairly Done(3)	Well Done(5)	ITEM Score
1	General Inspection					
a	Pallor /Palm, Sole &Nail bed					
b	Mucous membranes					
c	Conjunctiva					
2	Skin Inspection					
a	Skin Colour change					
b	Hair distribution and Hair change					
3.	Eye Examination					
a	Proptosis					
b	Exophthalmos					
c	Lid lag					
d	Lid retraction					
e	Ophthalmoplegia					
f	Ecchymosis					
4	PALPATION					
a	Lymph nodes Location					
b	Characteristics – size, consistency, attachment, mobility, tenderness					
5	Oedema					
a	Presence, location, extent					
b	Pitting / non-pitting					
6	Neck / Thyroid Examination					
a	Inspect anteriorly					
b	Observe swallowing					
c	Observe as patient protrudes the tongue					
d	Palpate anteriorly for tenderness, size, consistency, warmth					
e	Palpate while standing behind the patient					
f	Percuss for retrosternal extension					
g	Auscultate for bruit					
7	Breast Examination					
a	Inspect–symmetry, size, nipples, guttering accessory glands, prominent veins, ,					
b	Palpation – Warmth,					
c	Palpation –Tenderness					
d	Quadrant coverage & Axillae					
e	Discharge					
F	Breast tissue in males					
8	Genitalia					
a.	Inspection – Hair distribution, penis/ clitoris					
b	Palpation – Penis / clitoris – Size					
c	Testes / Labia – location, size, consistency, warmth, tenderness					
9	Anthropometry (Obesity Assessment)					
a	Inspection – Distribution of fat, striae					
b	Measurements - Height / Weight					
c	Hip Circumference					
d	Waist Circumference					
e	Calculate BMI & Waist / Hip Ratio					

10	Bedside Urine Test – Glucose, osmolality					
		Zero(0)	Bad(3)	Fair(6)	Good(10)	
11	Overall Attention To Sequence					
12	Composure					
13	Speed Of Performance					
14	Courtesy					
15	Affect					
16	COLLATED SCORES					
	SPECIFIC FEED-BACK COMMENTS					

SKILL: Haematologic System Examination		PERFORMANCE CHECK-OFF				
Examination No						[Date
S/N	PERFORMANCE / DO STEPS	NOT Done(0)	Badly Done(1)	Fairly Done(3)	Well Done(5)	ITEM Score
1	GENERAL Inspection					
a	Overview from foot of the bed (lower limbs, abdomen, chest, upper limbs, head & neck)					
b	Skin (spots, marks or swellings)					
	Pallor / Jaundice -					
c	Palms, Soles & Nail beds					
d	Pallor - Mucous membranes					
e	Pallor - Conjunctiva					
f	Pallor – Skin					
	PALPATION					
g	Oedema					
h	Presence, location, extent					
i	Pitting / non-pitting					
2	Lymph Nodes					
a	Cervical (anterior & posterior)					
b	Posterior auricular					
c	Submental / submandibular					
d	Supraclavicular					
e	Axillary					
f	Supratrochlear					
g	Inguinal					
h	Popliteal					
3	ABDOMEN – Palpation					
a	Ask for any painful area					
b.	Look at patient’s face					
c.	Light palpation for tenderness					
d	Deep palpation for masses & lymph nodes					
e.	Liver					
f.	Spleen (size, tenderness, consistency)					
5	ABDOMEN Percussion					
a	Liver span					
		Zero(0)	Bad(2)	Fair (6)	Good(10)	
	Overall Attention To Sequence					
		Zero(0)	Bad(1)	Fai(3)	Good(5)	
	Speed Of Performance					
	Composure					
	Courtesy					
	Affect					
	COLLATED SCORES					
	SPECIFIC FEED-BACK COMMENTS					

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SKILL: Musculoskeletal System Examination		PERFORMANCE CHECK-OFF				
Examination No		Date				ITEM Score
S/N	PERFORMANCE / DO STEPS	NOT Done(0)	Badly Done(1)	Fairly Done(3)	Well Done(5)	
	General Examination					
1.	Inspection					
a	Physical abnormality					
b	Swelling /discoloration					
c	Oedema					
d	Extent of oedema					
e	Posture					
f	Gait					
2	Measurements					
a	Height / Length					
b	Upper segment					
c	Lower segment					
d	Arm span					
e	Head circumference					
3	Head & Neck ; Inspect for					
a	Shape,					
b	Size					
c	Swellings					
d	Fontanelles					
e	Deformities					
	Head & Neck ; Palpate for					
f	Sutures/ suture lines					
g	Crepitus					
4	Upper Limbs: Inspection					
a	Posture					
b	Wasting					
c	Range of movements:					
d	Shoulder					
e	Elbow					
f	Wrist					
g	Phalanges					
	Upper Limbs: Palpation					
h	Power of Grip					
i	Passive movement					
j	Warmth					
k	Tenderness					
l	Crepitus					
5	Lower limbs: Inspection					
a	deformity, shortening					
b	Posture					
c	Wasting					
	Lower limbs: Range of movements					
d	Hip					
e	Knee					
f	Ankle					
g	Phalanges					
h	Soles of feet (ulcers, callosities)					
l	Trendelenberg					

	Lower limbs: Palpation /					
j	Warmth					
k	Tenderness					
l	Crepitus					
m	Patellar test (for effusion)					
n	Passive movement					
o	Ortolani					
p	Barlow's manoeuvre					
q	Gower's sign					
6	Rib cage:					
a	Inspect /Shape, Symmetry, Deformity					
b	Palpate / swellings					
c	Palpate / tenderness					
7	Spine:					
a	Inspect from different positions/ Kyphosis					
b	Scoliosis					
c	Lordosis					
	Spine: Palpation					
D	Swellings					
e	Warmth					
f	Tenderness					
		Zero(0)	Bad(1)	Fair (3)	Good(5)	
8	Overall Attention To Sequence					
9	Speed Of Performance					
10	Composure					
		Zero(0)	Bad(1)	Fair(2)	Good(3)	
11	Courtesy					
		Zero(0)	Bad(0)	Fair(1)	Good(2)	
12	Affect					
	COLLATED SCORES					
	SPECIFIC FEED-BACK COMMENTS					

SKILL: Respiratory System Examination		PERFORMANCE CHECK-OFF				
Examination No						Date
S. No	PERFORMANCE / DO STEPS	NOT Done(0)	Badly Done(1)	Fairly Done(3)	Well Done(5)	ITEM Score
1	GENERAL EXAM / INSPECTION					
a	Shape and symmetry.					
B	Voice: Listen to speech for hoarseness					
C	Use of accessory muscles of respiration					
D	Count respiratory rate					
E	Look at ears and pharynx					
F	Pallor					
G	Cyanosis					
H	Digital clubbing					
I	Finger staining [tobacco]					
2	PALPATION (Anterior & Posterior)					
A	Cervical lymph nodes					
B	Axillary lymph nodes					
C	Position of trachea					
D	Tenderness					
E	Chest movement					
F	Tactile fremitus					
3	PERCUSSION (Anterior & Posterior)					
A	Hand and finger positioning					
B	Finger alignment to intercostal spaces					
C	Symmetrical progression of percussion & Zone coverage					
4	AUSCULTATION (Anterior & Posterior)					
A	Neck and trachea					
B	Symmetrical progression of auscultation					
C	Zone coverage					
D	Vocal fremitus					
		Zero(0)	Bad(2)	Fair (6)	Good(10)	
5	Overall Attention To Sequence					
6	Speed Of Performance					
7	Composure					
		Zero(0)	Bad(1)	Fair(3)	Good(5)	
8	Courtesy					
9	Affect					
10	COLLATED SCORES					
	SPECIFIC FEED-BACK COMMENTS					

STRUCTURED CLINICAL SUMMARY AND REASONING FORMAT

PATIENT'S NAME:	Age:	Date of Birth	Gender	Date
ADDRESS				

S/No	Symptoms Obtained (from PC, HPC & ROS)	Other Aspects of History (From PMH to F&SH)	Signs Elicited (Positives ^{1st}) (From physical exam)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

ANY BEDSIDE INVESTIGATION OR SIDELAB RESULTS OBTAINED

Test-1:	Result-1:
2	2
3	3

System/s most likely involved in disease, in order of Evidence-Based Priority

A	B	C
---	---	---

Review the two most likely Systems in the numbered spaces below each named System

A			B		
I	ii	iii	I	ii	iii
iv	v	vi	iv	v	vi
vii	viii	ix	vii	viii	ix
x	xi	xii	x	xi	xii
xiii	xiv	xv	xiii	xiv	xv
xvi	xvii	xviii	xvi	xvii	xviii

Pathological process/es likely occurring in the system/s

A	B	C
---	---	---

Functional abnormalities elicited from History & or Physical Exam		Structural abnormalities elicited from History & or Physical Exam	
1	2	1	2
3	4	3	4
5	6	5	6
7	8	7	8

FUNCTIONAL DIAGNOSIS /ES

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ANATOMIC DIAGNOSIS /ES

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IMPORTANT / DIAGNOSTIC INVESTIGATIONS INDICATED

1	2	3	4
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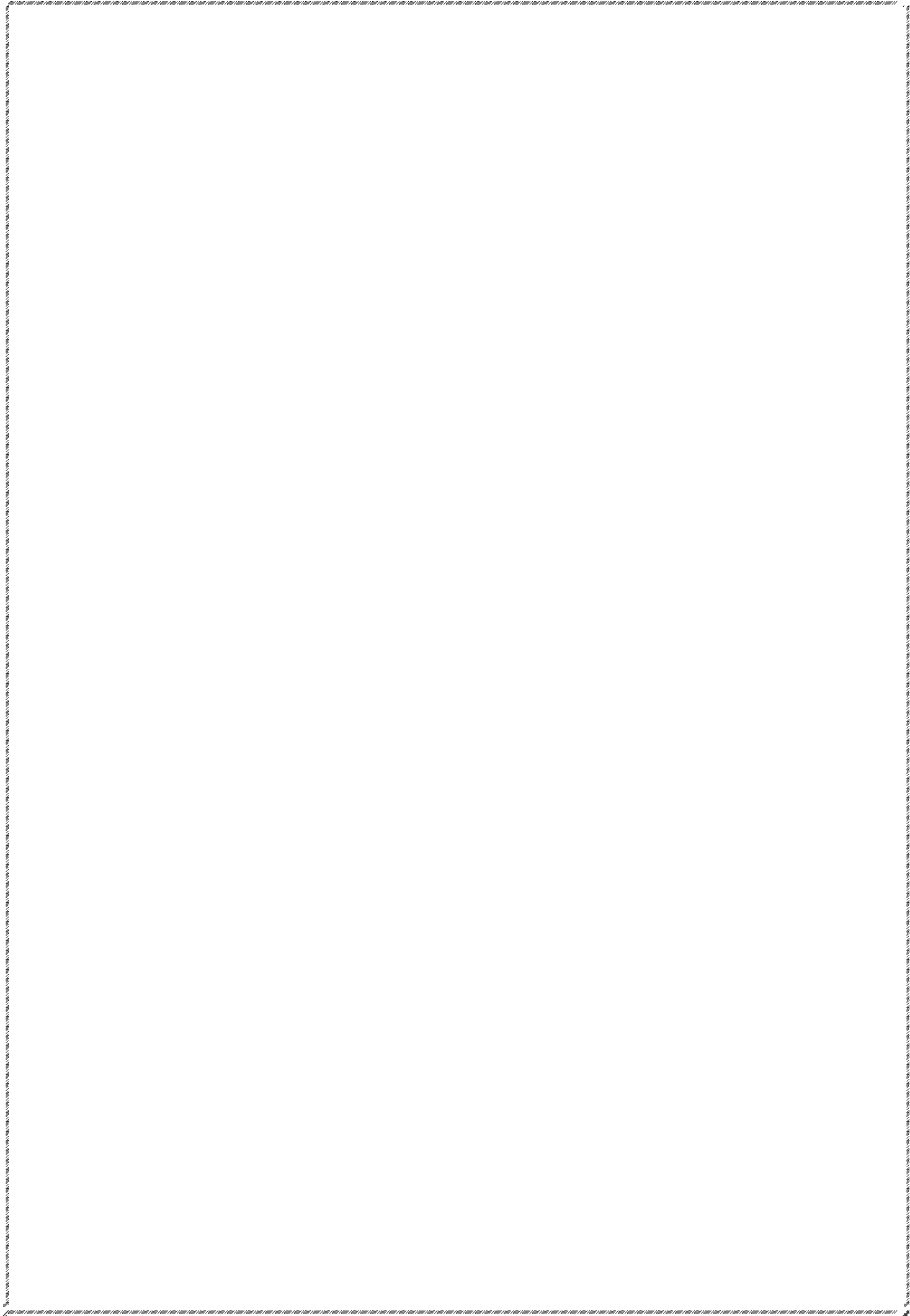
PATHOLOGIC DIAGNOSIS / ES

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AETIOLOGIC DIAGNOSIS /ES

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Resident's Name	Signature	Date
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ACADEMIC REGULATIONS FOR DOCTOR OF MEDICINE (MD)

ACADEMIC SESSION: An academic session consists of two semesters. Each semester comprises 15 weeks of teaching and two weeks of examinations.

MODULAR SYSTEM: All postgraduate programmes shall be run on modular system, commonly referred to as Course Unit System. All courses should therefore be sub-divided into more or less self-sufficient and logically consistent Packages that are taught within a semester and examined at the end of that particular semester. Credit weights should be attached to each course.

DEFINITION OF CREDIT UNIT

Credits are weights attached to a course. One credit is equivalent to ONE CREDIT UNIT and consists of:

1 hour /week of lectures or tutorials or Self instruction	per semester of 15weeks	= [15 Lecture hours] or
3 hours/week of term paper work	per semester of 15 weeks	= [45 term-paper hours] or
3 hours/week of practicals/clinicals	per semester of 15 weeks.	= [45 Practicals or Clinicals hours]

DURATION OF PROGRAMME

A Full time MD. should run for a minimum of 8 semesters and a maximum of 16 semesters. For part time MD programmes, the minimum duration should be 10 semesters and a maximum of 20 semesters. Residency training is full time, for 48 weeks per year (allowing for only four weeks of annual leave) which amounts to 3 semesters. With an apprenticeship period of 6 years, this translates to a minimum of 18 semesters. The resident does a 60hours week, with every hour spent doing hands-on experiential learning in clinics, wards, patient/family education, seminars, tutorials, post-mortems, clinico-pathologic conferences mortality review and community out-reach. All the theoretical learning is self-instructional outside the 60hours week.

REQUIREMENTS FOR GRADUATION OF THE DOCTOR OF MEDICINE (COLLEGE MD PROGRAMME) - A minimum workload of 54 credit units of which:

- 12 credit units are for the thesis,
- 30 credit units are for coursework and
- 6 credit units are for three departmental seminars.
- 2 credit units for Mandatory College research methodology workshop
- 2 credit units for Mandatory College Management workshop
- 2 credit unit for departmental specialty course

FMCPaed PROGRAMME CREDIT UNITS ASSIGNMENT / REQUIREMENTS FOR PRESENTING FOR EACH OF THE THREE PHASES OF THE FELLOWSHIP EXAMINATIONS

The Primary phase [24 CREDIT UNITS] consisting of;

Self-instructional learning for a minimum of 15hours a week [3hours/day] for 96 weeks (24 CREDIT UNITS)

The Part One phase [144 CREDIT UNITS] consisting of;

Self-instructional learning for a minimum of 10hours a week [2hours/day] for 96 weeks [24 months] (64 CREDIT UNITS)

Tutorials for 1hour per week for 96 weeks (6 CREDIT UNITS)

Seminars for 1hour per week for 96 weeks (6 CREDIT UNITS)

Clinicals for 30hours per week [5hours per day for 6days /week] for 96 weeks (64 CREDIT UNITS)

Mandatory Intensive External Update/ Revision Workshops, 30 hours per week [6hours/day] for 2 weeks (4 CREDIT UNITS)

The Part Two phase [56 CREDIT UNITS] consisting of

Clinicals for 30hours per week [5hours per day for 6days /week] for 48 weeks	(32 CREDIT UNITS)
Seminars, Tutorials, Facilitation of learning junior residents, for 1hour per week for 96 weeks	(6 CREDIT UNITS)
Mandatory Health Management Workshops, 30 hours per week [6hours/day] for 2 weeks	(2 CREDIT UNITS)
Mandatory Research Methodology Workshops, 30 hours per week [6hours/day] for 2 weeks	(2 CREDIT UNITS)
Dissertation; proposal, literature gathering, field work, reporting.	(12 CREDIT UNITS)
[TOTAL NUMBER OF CREDIT UNITS, OVER A SIX YEAR (EIGHTEEN SEMESTER) PERIOD	=220 CREDIT UNITS]

Faculty Courses and Course codes

PED 941: Advanced Neonatology: 2 Credit Units (30lectures)

Physiology of neonatal transition, Normal peri-natal care, prematurity and problem of the premature babies, Low and large birth weight babies, respiratory problems in the newborn, helping babies breathe, advanced neonatal resuscitation and care of the new born. Congenital and syndromic diseases in newborn, neonatal jaundice, Haematologic diseases of the newborn: haemorrhagic and haemolytic diseases of the new born, neonatal infections. Principles and management of neonatal emergencies. Neonatal screening (hypothyroidism, SCA, etc), ambiguous genitalia, genetics and dysmorphologies: X-linked AR and multifactorial inheritance. Common metabolic diseases in the newborn specialized investigations including intra-cranial ultrasounds.

Seminar on Advanced Neonatology

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 942: Advanced Paediatric Endocrinology: 2 Credit Units (30lectures)

Physiology of carbohydrate metabolism, Type 1 diabetes mellitus, Type 2 diabetes mellitus, Hypoglycaemia, Monogenic diabetes mellitus, Physiology of normal growth, Short stature, Tall stature, Overgrowth syndromes, Overweight/Obesity, Failure to thrive (weight faltering), Fetal and neonatal thyroid gland physiology, Thyroid hormones and receptors, Congenital hypothyroidism, Acquired hypothyroidism, Hyperthyroidism, Thyroiditis, Impact of illnesses on thyroid function, Disorders of anterior and posterior pituitary functions (Hypopituitarism), Management of multiple pituitary hormone deficiency (MPHD), Endocrine effects of cancer, Pituitary tumours, Biosynthesis and metabolism of adrenal steroids, Adrenal insufficiency, Cushing syndrome, Hyperaldosteronism, Virilizing and feminizing adrenal tumours, Congenital adrenal hyperplasia, Disorders of adrenal medulla, Development and differentiation of reproductive system, Normal sexual maturation. Disorders of sex development, Precocious puberty, Delayed puberty, adolescent menstrual disorders, disorders of calcium, phosphate and magnesium homeostasis, disorders of parathyroid gland, disorders of

Vitamin D metabolism, Primary bone mass disorders, Secondary osteoporosis, Skeletal dysplasias, Lipids and lipoprotein abnormalities, Gastrointestinal tract hormones and their disorders.

Seminar on Advanced Paediatric Endocrinology

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 943: Advanced Paediatric Haematology/Oncology: 2 Credit Units (30lectures)

Advanced epidemiology of blood diseases in children, anaemia in the tropics, bleeding and coagulation disorders, blood dyscrasias and malignancies, haemoglobinopathies (sickle cell disease, sickle trait and thalasaemias) and their clinical markers: serum lactate for leg ulcers, glutathione levels serum cardiac troponin-1; childhood tumors (wilms, nephroblastoma, neuroblastoma, sarcomas and fibrosarcomas), lymphomas (hodgkins, burkitts, small cell lymphoma), bone tumors (ewing sarcoma and osteosarcomas). Apoptosis and necrosis. Management of childhood tumors: chemotherapy, hormone and hormone anatagonists, surgery, and radiotherapy, Principles of stem cell transplant. Paediatric haematologic and oncologic emergencies. Protocols for managing childhood malignancies and haematologic disorders. Cell cycles and effect on various chemotherapy.

Seminar on Advanced Paediatric Haematology and Oncology:

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 944: Advanced Paediatric Gastroenterology, Hepatology and Nutrition: 2 Credit Units (30lectures)

Advanced knowledge of the nutritional needs of healthy/sick infants and children. Parenteral nutrition, Breastfeeding/formula feeding and infant feeding practices, code of marketing breast milk substitutes, gut microbiota, advanced anthropometric measurements and interpretations, protein-energy malnutrition (PEM): over and under nutrition, food allergies, specific vitamin and micronutrient deficiencies, advanced nutritional rehabilitation. Development and evaluation of functions of GIT including congenital anomalies of GIT such as atresia and stenosis of the duodenum, inflammatory bowel disease, short gut syndrome and intestinal failure, irritable bowel syndrome, infections of the GIT. Knowledge of the anatomy and function of the liver and gall bladder. Metabolic liver diseases, conjugated hyperbilirubinemia, bacterial, parasitic and viral diseases of the liver, liver tumors. Others include principles of endoscopy, liver biopsy, multi-visceral transplant and liver support therapy.

Seminar on Advanced Gastroenterology, Hepatology and Nutrition

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 945 Advanced Paediatric Neurology: 2 Credit Units (30lectures)

Advanced knowledge of the basic neuroanatomy of the spinal cord, brain stem, cranial nerves, cerebellum, hypothalamus, thalamus, limbic system, basal ganglia, cerebral cortex. Neurochemistry and neuropharmacology, including neurotransmitters and their mechanisms of action. Neuropathology- general response of the brain to injury or disease including types of brain oedema, neuronal changes and astrocyte reactions. Normal brain development and congenital malformations of the CNS. Child development - theories of development, developmental domains, developmental assessment and developmental disorders. Diseases of the CNS presenting in the neonatal period including hypoxic-ischaemic encephalopathy, neonatal seizures, diseases of prematurity. Seizures in children - febrile seizures, epilepsy and paroxysmal non-epileptic disorders (PNED). Headaches in children; primary and secondary headaches, disorders of the special senses - visual, auditory and speech. Paediatric strokes- ischaemic stroke, haemorrhagic stroke, sino-venous thrombosis. Neuromuscular disorders including diseases of the anterior horn cell, peripheral nerves, neuromuscular junction and muscular dystrophies. Neurological emergencies - status epilepticus, acute stroke. Movement disorders- tics, chorea, myoclonus, Tourette syndrome. Intracranial infections including meningitis, encephalitis and brain abscess. Brain tumours in children - infratentorial and supratentorial. Sleep and sleep disorders in children. Metabolic encephalopathy. Neurocutaneous syndrome and investigations in Paediatric neurology practice - cranial USS, transcranial Doppler ultrasonography, EEG, computerised tomography (CT) scan, magnetic resonance imaging (MRI).

Seminar on Advanced Paediatric Neurology

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 946: Advanced Paediatric Cardiology: 2 Credit Units (30lectures)

Basic anatomy of the heart and blood vessels, basic physiology of the heart, embryology of the heart, acyanotic congenital heart disease, cyanotic congenital heart disease, duct-dependent lesions, complex congenital heart disease, acute rheumatic fever and rheumatic heart disease, cardiomyopathies including endomyocardial fibrosis, myocarditis, pericarditis, infective Endocarditis, Kawasaki's disease, Pericardiostomy syndrome, HIV/AIDS and the heart, Heart Failure in Children, Arrhythmias in Child, overview of diagnosis in paediatric cardiology, reading Paediatric electrocardiography, basic principles of echocardiography, basics principles of cardiac catheterization, imaging techniques in paediatric cardiology (Chest radiograph, CT Scan and MRI), common drugs used in Paediatric cardiology, common surgeries in paediatric cardiology, basics of interventional cardiac catheterization, ethical dilemmas in the management of children with congenital heart disease, peculiarities in the management of Nigerian children with structural heart disease, future perspectives.

Seminar on Advanced Paediatric Cardiology

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 947 Advanced Paediatric Pulmonology: 2 Credit Units (30lectures)

The instructional emphasis is on understanding the aetiology, physiology, pathogenesis, pathophysiology and investigative procedures of three major areas: allergic diseases(allergic rhinoconjunctivitis, atopic eczema, urticaria and food allergy), respiratory infectious diseases(acute upper respiratory tract infections, acute community-acquired pneumonia, nosocomial pneumonias including ventilator associated pneumonia, acute bronchiolitis, novel Severe Acute Respiratory Syndrome-Coronavirus-2 causing covid-19[nSARSCoV-2]), and asthma.

Bronchial Asthma and other wheezing Disorders :Definitions, pathophysiology and basic epidemiology, different phenotypes and their different pathologies and long-term outcomes, environmental factors relevant to asthma and other wheezing disorders, diagnosis and management of bronchiolitis and its complication and long term sequelae, relevant abnormalities in lung function including airway responsiveness, understanding difficulties in diagnosis and differential diagnosis, evidence-based management of asthma at different ages including age-related pharmacology, emerging therapeutic strategies.

Allergic Disorders: Understanding pathophysiology of immune response, control of IgE regulation and the mechanisms of allergic inflammation, basic genetics, basic epidemiology, *In vivo* testing for Ig E-mediated sensitivity(Procedure and interpretation of skin prick testing, challenge testing: meaning and validity of test results), *In vivo* methods for determination of specific IgE, inflammation markers, additional tests in allergology

(patch tests, allergen bronchial provocation tests), diagnosis and management of anaphylaxis, allergic rhinitis, atopic dermatitis, food allergy etc., specific immunotherapy, prevention measures. Congenital malformations of the respiratory tract and treatment. Airway endoscopy.

Working in the clinical laboratory for allergic diseases, where specialized procedures are conducted, such as bronchoprovocation, pulmonary function tests (pulse oximetry, spirometry, blood gas analysis), exercise testing and skin prick testing. The preparation and standardization of allergenic extracts. Immunotherapy for allergic diseases. Allergy and clinical immunology. Detailed knowledge of the immune system and the principles involved in assessing the humoral and cellular competence of patients with immunological and hypersensitivity diseases. Immunological aspects of other diseases, such as infectious and parasitic diseases, neoplasia and connective tissue diseases. Diagnosis and management of a wide variety of allergic and immunological diseases. Imaging techniques.

Seminar on Advanced Paediatric Pulmonology

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 948 Advanced Paediatric Nephrology 2 Credit Units (30lectures)

Detailed Physiology and Anatomy of the Kidney including Functions of the kidney, Basic nephrology care including evaluations, Diagnostic Nephrology, investigations (basic skills in urinalysis, urine sediment, microscopy and other assessment methods including Novel biomarkers in pediatric nephrology practice ,relevant radio isotopic studies , renal histopathology, relevant formulae in assessment and management) and treatment: Congenital anomalies of kidneys and urinary tract, Urinary tract infections, Nephrotic syndrome, Acute glomerulonephritidis, Renal tubular acidosis, Acute Kidney injury, Chronic kidney disease, Haemolytic uraemic syndrome, Immune mediated diseases, voiding disorders. Advanced nephrology care: Enhanced knowledge and understanding of the topics listed under: Basic nephrology care with emphasis on pathophysiology, recent advances and detailed management of each case, Rudiments of kidney transplantation in children. Renal replacement therapy modalities, Paediatric nephrology emergencies including hypertension and hypertensive emergencies, Child nephrology in the tropics including prevention, Nephrology care in neonates, Kidney biopsy and renal tissue handling and processing including immunohistochemistry, Renal pathology (gross and microscopic), Immunology and the kidney including diseases that are immune related. Researches and advanced research methods in Nephrology, Community paediatric nephrology. Advanced Biostatistics and Research methodologies. Ethics in

research and practice of nephrology, Palliative care, Epidemiology, counselling and communication skills, Emerging childhood diseases and the kidney Chemotherapeutics relevant in Nephrology.

Seminar on Advanced Paediatric Nephrology

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.

PED 949 Advanced Paediatric Infectious diseases: 2 Credit Units (30lectures)

Overview of advanced Paediatric infectious diseases, sepsis, vaccinology: childhood immunizations, investigations in infectious diseases, rational use & principles of antibiotic therapy, malaria, common bacterial infections, common viral illnesses in childhood, HIV in children and adolescents, viral haemorrhagic fevers, childhood tuberculosis, Helminthic infections, vaccine preventable diseases, emerging and re-emerging diseases

Seminar on Advanced Paediatric Infectious diseases:

All candidates will present research topic before the departmental panels for assessment with their supervisors in attendance. Attendance is mandatory for all candidates. This seminar will cover topics listed above and other relevant and related topics to the course.