Curriculum

DNB Broad Specialty

Paediatrics

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I. PROGRAMME GOAL & OBJECTIVES:

1. PROGRAMME GOAL

The goal of DNB course in Pediatrics is to produce a competent pediatrician who:

- Recognizes the health needs of infants, children and adolescents and carries out professional obligations in keeping with principles of National Health Policy and professional ethics
- Has acquired the competencies pertaining to pediatrics that are required to be practiced in the community and at all levels of health care system
- Has acquired skills in effectively communicating with the child, family and the community
- Is aware of the contemporary advances and developments in medical sciences as related to child health
- Is oriented to principles of research methodology
- Has acquired skills in educating medical and paramedical professionals
- Is aware of the contemporary advances and developments in medical sciences as related to child health

2. PROGRAMME OBJECTIVES

At the end of the DNB in Pediatrics, the student should be able to:

- Recognize the key importance of child health in the context of the health priority of the country
- Practice the specialty of Pediatrics in keeping with the principles of professional ethics

- Identify social, economic, environmental, biological and emotional determinants of child and adolescent health, rehabilitative, preventive and promotive measures to provide holistic care to children

- Recognize the importance of growth and development as the foundation of Pediatrics; and help each child realize her/his optimal potential in this regard

- Take detailed history; perform full physical examination including neuro-development and behavioral assessment and anthropometric measurements of the child and make clinical diagnosis performs relevant investigative and therapeutic procedures for the pediatric patient

- Diagnose illness in children based on the analysis of history, physical examination and investigative work up

- Plan and deliver comprehensive treatment for illness in children using principles of rational drug therapy

- Plan and advise measures for the prevention of childhood disease and disability

- Plan rehabilitation of children suffering from chronic illness and handicap, and those with special needs

- Manage childhood emergencies efficiently

- Provide comprehensive care to normal, 'at risk' and sick neonates

- Recognize the emotional and behavioral characteristics of children, and keep these fundamental attributes in focus while dealing with them

- Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities
- Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities

- Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence based pediatrics

- Demonstrate competence in basic concepts of research methodology and epidemiology facilitate learning of medical/nursing students, practicing physicians, para-medical health workers and other providers as a teacher- trainer

- Play the assigned role in the implementation of national health programs, effectively and responsibly

- Organize and supervise the desired managerial and leadership skills

- Function as a productive member of a team engaged in health care, research and education.

- Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation

- Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence-based pediatric

- Recognize the key importance of child health in the context of the health priority of the country

- Practice the specialty of Pediatrics in keeping with the principles of professional ethics

- Identify social, economic, environmental, biological and emotional determinants of child and adolescent health, and institute diagnostic, therapeutic, rehabilitative, preventive and promotive measures to provide holistic care to children

- Recognize the importance of growth, nutrition and development as the foundation of Pediatrics; and help each child realize her/his optimal potential in this regard

- Take detailed history; perform complete physical examination including neurodevelopment and behavioral assessment and anthropometric measurements of the child and make clinical diagnosis

- Perform relevant investigative and therapeutic procedures for the pediatric patient

- Interpret important imaging and laboratory results

- Diagnose illness in children based on the analysis of history, physical examination and investigative work up; Plan and deliver comprehensive treatment for illness in children using principles of rational drug therapy;

- Plan and advice measures for the prevention of childhood disease and disability

- Plan rehabilitation of children suffering from chronic illness and handicap and those with special needs
- Manage childhood emergencies efficiently

- Provide comprehensive care to normal, 'at risk' and sick neonates

- Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation

- Recognize the emotional and behavioral characteristics of children, and keep these fundamental attributes in focus while dealing with them

- Demonstrate empathy and humane approach towards patients and their families and respect cultural needs

- Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities

- Develop skills as a self-directed learner, recognize continuing educational needs use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence-based pediatrics;

- Demonstrate competence in basic concepts of research methodology and epidemiology

- Facilitate learning of medical/nursing students, practicing physicians, paramedical health workers and other providers as a teacher-trainer

- Play the assigned role in the implementation of national health programs, effectively and responsibly

- Organize and supervise the desired managerial and leadership skills

- Function as a productive member of a team engaged in health care, research and education

- Plan and perform relevant, cost-effective investigative and therapeutic procedures in confirming the possible diagnosis and excluding the other differential diagnosis

- Recognize the need for medico-legal registration and referrals of specific cases and maintenance of appropriate documentation of case details

- To document, collect and send health related information as required by government and other health agencies and help them effectively in formulation of health policies pertaining to child health

II. TEACHING AND TRAINING ACTIVITIES

The fundamental components of the teaching programme should include:

1. Case presentations & discussion- once a week
2. Seminar – Once a week
3. Journal club- Once a week
4. Grand round presentation (by rotation departments and subspecialties)- once a week
5. Faculty lecture teaching- once a month
6. Clinical Audit-Once a Month
7. A poster and have one oral presentation at least once during their training period in a recognized conference.

The rounds should include bedside sessions, file rounds & documentation of case history and examination, progress notes, round discussions, investigations and management plan) interesting and difficult case unit discussions.

The training program would focus on knowledge, skills and attitudes (behavior), all essential components of education. It is being divided into theoretical, clinical and practical in all aspects of the delivery of the rehabilitative care, including methodology of research and teaching.

i. **Theoretical:** The theoretical knowledge would be imparted to the candidates through discussions, journal clubs, symposia and seminars. The students are exposed to recent advances through discussions in journal clubs. These are considered necessary in view of an inadequate exposure to the subject in the undergraduate curriculum.

ii. **Symposia:** Trainees would be required to present a minimum of 20 topics based on the curriculum in a period of three years to the combined class of teachers and students. A free discussion would be encouraged in these symposia. The topics of the symposia would be given to the trainees with the dates for presentation.

iii. **Clinical:** The trainee would be attached to a faculty member to be able to pick up methods of history taking, examination, prescription writing and management in rehabilitation practice.

iv. **Bedside:** The trainee would work up cases, learn management of cases by discussion with faculty of the department.

v. **Journal Clubs:** This would be a weekly academic exercise. A list of suggested Journals is given towards the end of this document. The candidate would summarize and discuss the scientific article critically. A faculty member will suggest the article and moderate the discussion, with participation by other faculty members and resident doctors. The contributions made by the article in furtherance of the scientific knowledge and limitations, if any, will be highlighted.

vi. **Research:** The student would carry out the research project and write a thesis/ dissertation in accordance with NBE guidelines. He/ she would also be given exposure to partake in the research projects going on in the departments to learn their planning, methodology and execution so as to learn various aspects of research.

III. SYLLABUS

Basic Sciences

i. Embryogenesis of different organ systems especially heart, genitourinary system, gastrointestinal tract, applied anatomy of different organs, functions of kidney, liver, lungs, heart and endocrinal glands.
ii. Physiology of micturition and defecation, placental physiology, fetal and neonatal circulation, regulation of temperature (especially newborn), blood pressure, acid base balance, fluid electrolyte balance, calcium metabolism, vitamins and their functions, hematopoiesis, hemostasis, bilirubin metabolism.
iii. Growth and development at different ages, puberty and its regulation, nutrition, normal requirements of various nutrients
iv. Basic immunology
v. Biostatistics, clinical epidemiology, Research Methodology, ethical and medico legal issues
vi. Teaching methodology and managerial skills
vii. Pharmacokinetics of commonly used drugs
viii. Microbes and their epidemiology

Basic and applied Sciences

S. No	Topic
1.	Embryogenesis of different organ systems especially, heart, genito-urinary system, gastro-intestinal system and brain
2	Gross and applied anatomy of liver, lung, heart, kidney, brain & spinal cord and endocrine glands and their functions
3	Osteology

4	Details of various metabolic pathways
5	Physiology of micturition and defecation
6	Physiology of Placenta
7	Integrative physiology (environmental physiology, exercise physiology and yoga).
8	Fetal and neonatal circulation
9	Regulation of temperature (especially newborn) and blood pressure
10	Growth and development at different ages
11	Puberty and its regulation
12	Nutrition and normal requirements of various nutrients
13	Basic immunology
14	Bio-Statistics, clinical epidemiology, ethical and Medico legal issues; teaching methodology and management skills
15	Pharmacology of commonly used drugs in neonates and children
16	Pharmaco-epidemology of common drugs
17	Common microbial agents and their epidemiology
18	Morphological properties of organisms causing childhood diseases
19	Vitamins and their functions
20	Haematopoiesis , Haemostasis and Bilirubin metabolism
21	Calcium metabolism
22	Acid-Base balance and Fluid electrolyte balance
23	Etio-pathogenesis of common neonatal and childhood diseases
24	Histopathology
25	Basics of Genetics

Growth and development

- Principles of growth and development
- Assessment of Growth and Development
- Normal growth and development (Fetal, Infant, Preschool, Early school, School, Adolescence)
- Bio-psychological models of Development
- Normal growth and development in sexual maturation and its disturbances
- Childhood and adolescence failure to thrive and short stature
- Normal newborn

Psychological Disorders

Assessment, Interviewing and Management

- Vegetative Disorders – Rumination, Pica, Enuresis, Encopresis, Sleep
- Habit Disorders
- Anxiety Disorders including Suicide
- ADHD
- ASD
- Poor Scholastic Performance
- Psychosomatic illness
- Psychiatric Considerations of CNS injury
- Mood Disorders
- Psychosis/Schizophrenia

Social Issues

- Adoption
- Street children
- Childcare
- Separation, death
- Abuse and neglect
- Child Labour
- Media and its effect on the Children
- Foster care

Children with Special Needs

- FTT-Problem, Approach and Evaluation
- Development Disabilities
- Intellectual Disabilities- Problems, Approach and Evaluation

Perinatology and Neonatology

- Perinatal care Normal newborn,High risk pregnancy and high risk neonates, Care in the labor room and resuscitation, Dysmorphology, Preterm and low birth

weight newborn, Other high risk and sick newborn states, Neonatal diseases including antenatal, Prenatal problems and disturbances Newborn feeding,

- Common transient phenomena, Respiratory distress,
- Apnea, prenatal, perinatal and postnatal infections, Jaundice, anemia and bleeding disorders, Neurologic disorders,
- Gastrointestinal disorders, Renal disorders, Malformations,
- Thermoregulation and its disorders, Neonatal emergencies
- Metabolic infections, cardiac, respiratory, gastrointestinal, endocrinal, renal and neurologic understanding of perinatal medicine and pharmacology
- Ventilation (Invasive and Non Invasive) CPAP

ECMO ANTENATAL CARE

- Fetus
- Growth and Development
- Fetal Distress
- Maternal Medications
- Detection, treatment, prevention of fetal diseases (Antenatal diagnosis, Fetal therapy, Antenatal Therapy, Counseling, Teratogens, Radiation
- Developmentally Suppportive Care Congenital Anomalies/ malformations Neonatal Infections

Adolescent Health

- Epidemiology
- Sexual development and SMR stages
- Deliveries of health care
- Problems
- Pregnancy
- Contraception
- Vaccinations
- STDs
- Menstrual problem
- Anorexia/Bullemia nervosa
- Depression
- Substance Abuse
- Suicide

- Sleep Disorders

Nutrition

- Nutritional Requirements- Water,energy, Protein, CHO, Fats, Minerals, Vitamins
- Maternal nutritional disorders
- Nutrition for the low birth weight and impact on fetal outcome
- Breast feeding
- Breast milk feeding, Human Lactation Management, BFHI, IYCF
- Infant feeding including vitamin and mineral deficiencies
- Complementary feeding
- Feeding through 1st and 2nd Years
- Protein energy malnutrition
- Obesity
- Adolescent nutrition
- Parenteral and enteral nutrition
- Vitamin D deficiency and excess
- Vitamin A deficiency and excess
- Nutritional management of systemic neonates and children
- Chronic Illness (Celiac disease, Hepatobiliary disorders, nephrotic syndrome)
- - InbornErrors of Metabolism (I.E.M) I.E.M of Protein and aminoacids, carbohydrate, Lipids,etc.

Immunological System

- Basics
- Approach to immunodeficiency
- HIV
- BMT
- Primary B cell diseases
- Primary T cell diseases
- Complement and phagocytic diseases
- CGD
- Chediak Higashi Disease
- Neutrophil Abnormalities
- Adhesion Disorders

Allergic Disorders

- Basics of allergy and immunologic association
- Diagnosis
- Therapy – principles
- Allergic Rhinitis
- Asthma
- Atopic Dermatitis
- Urticaria
- Angioedema
- Anaphylaxis
- Serum Sickness
- Adverse Drug Reactions
- Insect and Ocular allergy
- Adverse Food Reaction

Cardiovascular

- Physiology and Pathophysiology of Transitional Circulation and embryology of heart
- ECG, ECHO, CXR, Cath.
- Congenital heart diseases (cyanotic and acyanotic)
- Rheumatic fever and rheumatic heart disease
- Infective endocarditis
- Arrhythmia
- Disease of myocardium
- Diseases of pericardium (cardiomyopathy, myocarditis)
- Systemic hypertension
- Hyperlipidemia in children

Respiratory

- Congenital and acquired disorders of nose
- Development and Function of lung
- Infections of upper respiratory tract
- Obstructive sleep apnea
- Congenital anomalies of lower respiratory tract

- Foreign body in larynx, trachea & bronchus
- Trauma to larynx
- Neoplasm of larynx and trachea chronic
- Bronchitis
- Bronchiolitis
- Aspiration pneumonia
- GER
- Acute pneumonia
- Recurrent and interstitial pneumonia
- Suppurative lung diseases like bronchiectasia
- Atelectasis
- Lung cysts
- Emphysema and hyper-inflation
- Bronchial asthma
- Pulmonary edema
- Pleural effusion
- Pulmonary leaks
- CYSTIC FIBROSIS
- Neuromuscular skeletal Disorders
- Cough syncope
- Mediastinal mass

GIT, Liver and Pancreas Embryology, Malformation, Functions

- Disease of mouth, oral cavity and tongue
- Disorders of deglutition and esophagus
- Peptic ulcer disease
- H. pylori infection
- Foreign body
- Congenital pyloric stenosis
- Intestinal obstruction
- Malabsorption syndrome
- Acute and chronic diarrhea
- Irritable bowel syndrome
- Ulcerative colitis
- Hirschsprung's disease
- Anorectal malformations

- Hepatitis & hepatic failure
- Chronic liver disease
- Auto immune Hepatitis
- Wilson's disease
- Budd-Chiari syndrome
- Metabolic diseases of liver
- Cirrhosis and portal hypertension
- Development of Pancrease
- Acute, chronic and recurrent pancreatitis
- GI Function Tests

Nephrologic & Urologic disorders: Embryology, functions, evaluation

- Structure and Function of Kidney
- Renal Function Tests
- HEMATURIA-Acute and chronic glomerulonephritis
- PROTEINURIA-Nephrotic syndrome
- Hemolytic uremic syndrome
- Urinary tract infection
- VUR and renal scarring
- Renal involvement in systemic diseases
- Renal tubular disorders (RTA, DI)
- INTERSTITIAL NEPHRITIS
- CORTICAL NECROSIS
- RENAL FAILURE
- RRT
- Congenital and hereditary renal disorders
- Renal and bladder stones
- Posterior urethral valves
- Hydronephrosis, voiding dysfunction
- Undescended testis
- GENITOURINARY TRAUMA
- NEUROGENIC BLADDER
- Wilm's tumor
- Fluid and Electrolyte disturbances

GYNAECOLOGIAL PROBLEMS

- Examination of genital system of child
- Vulvovaginitis, Congenital Anomalies

Neurological disorders: Neuromuscular system

Embryology, Functions, assessment and clinical evaluation, Limping child, convulsions, abnormality of gait, intracranial space occupying lesion, paraplegia, quadriplegia, large head, small head, floppy infant, acute flaccid paralysis, cerebral palsy and other neuromotor disability, headache. Seizure and non seizure paroxysmal events, epilepsy and epileptic syndromes of childhood, meningitis, brain abscess, coma, acute encephalitis and febrile encephalo- pathies, Guillain-Barre syndrome, neurocysticercosis and other neuro-infestations, HIV encephalopathy, SSPE, cerebral palsy, neurometabolic disorders, mental retardation, muscular dystrophies, acute flaccid paralysis and AFP surveillance, ataxia, movement disorders of child-hood, CNS tumors and malformations.

- EXAMINATION, LOCALIZATION OF LESION
- Seizure and non-seizure paroxysmal events
- Epilepsy and epileptic syndromes
- Meningitis of childhood
- Brain abscess
- Coma
- Acute encephalitis and febrile encephalopathies
- Autoimmune Encephalitis
- Guillain-Barre syndrome
- Neurocysticercosis
- HIV encephalopathy
- SSPE
- Cerebral palsy
- Neurometabolic disorders
- Neurodegenerative disorders
- Neuromuscular disorder
- Mental retardation---- -INTELLECTUAL DISABILITY
- Learning disabilities
- Muscular dystrophies
- Acute flaccid paralysis and AFP surveillance

- Ataxias
- Movement disorders of childhood
- CNS tumors
- Malformations and Neuronal Migration Disorders
- BRAIN DEATH
- Bell's Palsy
- Newer AEDs

Hematology & Oncology

- Development of Hematopoietic system
- Deficiency anemias
- Hemolytic anemias
- Aplastic anemias
- Thrombocytopenia
- Hemostasis
- Hemorrhagic Disorders (acquired and congenital, Physiology, Bleeding and Coagulation disorders)
- Hypercoagulable states
- Blood component therapy
- Transfusion related infections
- Bone marrow transplant/stem cell transplant
- Acute and chronic leukemia
- Myelodysplastic syndrome
- Hodgkin disease
- Non-Hodgkin's lymphoma
- Neuroblastoma
- Retinoblastoma
- Bone Neoplasm
- Soft tissue sarcoma
- GCT
- Childhood Histiocytosis
- Oncological Emergencies
- HLH

Lymphoreticular system

Tonsils, adenoids, Lymphadenopathy, spleenic disorders including, hypersplenism, Hyposplenism and histiocytosis

Endocrinology

- Hypopituitarism/hyperpituitarism
- Diabetes insipidus
- Pubertal disorders
- Hypo- and hyperthyroidism
- Adrenal insufficiency
- Cushing's syndrome
- Adrenogenital syndromes
- Diabetes mellitus
- Hypoglycemia
- Short stature
- Gonadal dysfunction and intersexuality
- Obesity

Infections

- Fever
- Fever without focus
- Sepsis and shock
- CNS infections
- Pneumonia
- Gastroenteritis
- Osteomyeilitis, septic arthritis
- Bacterial
- Viral
- Fungal
- Parasitic
- Rickettsial
- Mycoplasma
- Protozoal
- Tuberculosis

- Nosocomial
- HIV
- Control of epidemics and infection prevention
- Safe disposal of infective material
- Safe Injection Practice
- Health advice for travelling
- Immunization- Principles, Schedules, Controversies, Standard and Optional vaccines, Recent advances in Vaccines

Acutely ill child

- Evaluation in emergency
- Control
- Emergency Medical Services
- Emergency care of shock & cardio-respiratory arrest
- NALS
- PALS
- Transportation of sick Children / Neonate
- Post-Operative supportive care
- Pediatrics Sedation and drugs
- Equipment and Organization of PICU / NICU

Emergency & Critical care

- Fluid and electrolyte disturbances and its therapy
- Acid-base disturbances
- Thermoregulation problems
- Hypertensive crisis
- CCF
- Respiratory failure
- Acute renal failure
- Status epilepticus
- Acute severe asthma
- Poisoning
- Accidents
- Scorpion and snake bites
- Endocrine emergencies (DKA, Adrenal Crisis)

- Febrile Seizure
- Status asthmaticus and foreign body aspirations
- Pneumothorax
- Hydrothorax
- Empyema
- Ascites
- Animal Bites
- Near Drowning
- Burns/ Electrocution
- Cardiac Tamponade
- Severe Anemia, Bleeding Child, Neutropenia
- Pain management and drugs
- Sickle Cell Crisis
- Severe Complicated Malaria
- GI Bleeds – Hematemesis, Melena, Hematochezia
- Metabolic Problems – Hyperammonemia, Lactic acidosis, Acid base abnormalities, Hypogycemia
- Physical abuse
- Sexual Abuse

Rheumatology

- Autoimmunity
- Laboratory Evaluation
- Arthritis (acute and chronic)-JIA
- Connective tissue disorders (Including MAS and HLH)-SLE, Vasculitis, Erythema Nodosum, Ankylosing Spondylosis, Neonatal lupus, Scleroderma, MCTD, JDM, Behcet, Sjogren)
- Kawasaki disease
- Pain Syndromes

ENT

- Otitis Externa
- Acute and chronic otitis media
- Deafness/ Hearing Loss
- Post-diphtheritic palatal palsy

- Acute/chronic tonsillitis/adenoids
- Allergic rhinitis/sinusitis
- Foreign body
- Trauma
- Newborn hearning screening
- BAER
- Inner Ear Diseases

Skin Diseases

- Anatomy
- Hypersensitivity
- Exanthematous illnesses
- Vascular lesions
- Pigment disorders
- Vesicobullous disorders
- Infections: pyogenic, viral, fungal and parasitic
- Stevens-Johnson syndrome
- Eczema
- Seborrheic dermatitis
- Drug rash
- Urticaria
- Alopecia
- Ichthyosis

Eye diseases

- Refraction and accommodation
- Evaluation techniques for Vision in infants and childrens
- Partial/total loss of vision
- Cataract
- Night blindness-Vitamin A Deficiency
- Chorioretinitis
- Strabismus
- Conjunctival and corneal disorders
- Retinopathy of prematurity
- Retinoblastoma

- Optic atrophy
- Papilloedema
- VER
- Trauma

Orthopedics

- Major congenital orthopedic deformities
- Bone and joint infections
- Common bone tumors

Miscellaneous

- Arthralgia
- Arthritis
- Multiple congenital anomalies
- SIDS
- POISONING (Pb, OP, Kerosene, Phenobarbitone, Iron, Hg)
- Progeria
- Radiation
- Chronic Fatigue Syndrome
- Chemical and Environmental Pollutants
- General Neoplasams: Includes importants of childhood malignancies, neoplastic and paraneoplastic disorders
- Fluid, Electrolyte and Acid-Base Balance Normal physiology, Disturbances - Recognition and Management
- Preventive Paediatrics Childhood and adolescent immunizations, prevention of communicable diseases, nutritional, adult onset diseases and environmental problems like lead poisoning, fluorosis, endemic goiters etc.
- Clinical Epidemiology, medical biostatistics principles and Research Methodology and Vital Statistics
- Primary Health Care and other levels of health care
- Principles of medical ethics and its application to Pediatrics
- Biostatistics
- Biomedical Waste Management

Paediatric Pharmacology

- Principles of essential and rational drug therapy
- Pharmacokinetics
- Pharmacogenomics and Pharmacoepidemiology

Community and Social Pediatrics

- National health nutrition programs
- Nutrition screening of community
- Prevention of blindness
- School health programs
- Prevention of sexually transmitted diseases
- Contraception
- Health legislation
- National policy on children
- Adoption
- Child labor
- Juvenile delinquency
- Government and non-government investigation of adverse events following support services for children immunization in the community
- General principles of prevention and control of infections including food borne waterborne soil born and vector born diseases
- Investigation of an outbreak in a Community
- National health programs related to health of neonates. Children and adolescents, IMNCI,
- Reproductive child health Programme
- Child abuse and neglect, disability and rehabilitation, rights of the child, national policy of child health and population and school health programs

Biostatistics
Biomedical Waste Management

Approach to Important Clinical Problems

Growth and development

- Precocious and delayed puberty
- Short stature
- Developmental delay
- Impaired learning
- Intellectual Delay
- Child with common psychological problems (ASD, ADHD)

Neonatology

- Normal newborn
- Low birth weight newborn
- Sick newborn
- Hypothermia
- Feeding in preterms
- Hyperblirubinemia
- Respiratory Distress
- Severe Birth Asphyxia & Hypoxic Ischemic Encephalopathy
- Neonatal Seizures

Nutrition

- Lactation management and complementary
- Protein energy malnutrition feeding (underweight, wasting, stunting)
- Failure to thrive and micronutrient deficiencies

Cardiovascular

- Chest Pain
- Murmur
- Cyanosis
- Congestive heart failure
- Systemic hypertension
- Arrhythmia
- Shock

GIT and liver

- Acute diarrhea
- Persistent and chronic diarrhea
- Abdominal pain and distension
- Ascites
- Vomiting
- Constipation and Encopresis
- Gastrointestinal bleeding
- Jaundice
- Hepatosplenomegaly
- Hepatic failure and encephalopathy

Respiratory

- Cough/chronic cough
- Noisy breathing
- Wheezy child
- Respiratory distress
- Hemoptysis
- Chest Pain
- Recurrent LRTI

Infections

- Acute onset pyrexia
- Prolonged pyrexia with and recurrent infections- Without localizing signs
- Nosocomial infections
- Pyrexia of Unknown Origin

Renal

- Hematuria/dysuria
- Bladder/bowel incontinence
- Voiding dysfunctions
- Renal failure (acute and chronic)
- Enuresis

Hematoncology

- Lymphadenopathy
- Anemia
- Bleeding
- TLS
- FEBRILE NEUTROPENIA
- MEDIASTINAL SYNDROME
- VENO-OCLUSSIVE SYNDROME

Neurology

- Limping child
- Convulsions
- Abnormality of gait
- Paraplegia, quadriplegia
- Macrocephaly & microcephaly
- Floppy infant
- Acute flaccid paralysis
- Cerebral palsy and other
- Headache including migraine
- Neuromotor disability

Endocrine

- Thyroid swelling
- Ambiguous genitalia
- Obesity
- Short stature and Tall stature
- Precocious & delayed puberty

Skin /ENT/Eye

- Skin rash
- Pigmentary lesions
- Pain/discharge from ear
- Hearing loss

- Delayed speech
- Epistaxis
- Refractory errors
- Blindness
- Cataract
- Eye discharge
- Redness
- Squint
- Proptosis

Biostatistics, Research Methodology and Clinical Epidemiology
Ethics
Medico legal aspects relevant to the discipline
Health Policy issues as may be applicable to the discipline

IV. COMPETENCIES

History and Clinical examination

History taking including psychosocial history; physical examination including newborn examination, including gestation fundus examination assessment; assessment of growth nutritional anthropometry and its assessment

Use of growth chart SMR rating developmental evaluation full systemic examination health functionaries and social communication with children parents support groups genetic counseling

Bedside procedures

Investigative skills

- Blood sampling; venous and arterial lumbar puncture ventricular tap; bone marrow aspiration and biopsy
- Peritoneal, pericardial and subdural tap
- Kidney biopsy
- Liver biopsy

- Muscle and nerve biopsy
- Collection of urine for culture, urethral catheterization suprapubic aspiration

Bedside investigations

- Hemoglobin, TLC, ESR, peripheral smear staining
- Urine: routine and microscopic examination
- Stool microscopy including hanging drop
- Examination of CSF and other preparation body fluids
- Gram stain; ZN stain; shake test on gastric aspirate

Interpretation

- Interpretation of X-rays of chest, abdomen, bone and skull
- ECG
- ABG findings
- Ultrasound and common EEG patterns
- • CT scan, MRI, PET Scan, audiograms, Ultrasonographic abnormalities and isotope studies

Practical

Bedside procedures

Monitoring skills: Temperature recording, capillary blood sampling, arterial blood sampling

Therapeutic skills: Hydrotherapy, nasogastric feeding, endotracheal intubation, cardiopulmonary resuscitation (pediatric and neonatal), administration of oxygen, venepuncture and establishment of vascular access, administration of fluids, blood, blood components, parenteral nutrition, intraosseous fluid administration, intrathecal administration of drugs, common dressings, abscess drainage and basic principles of rehabilitation

Investigative skills: Lumbar puncture, ventricular tap, bone marrow aspiration and biopsy, pleural, peritoneal, pericardial and subdural tap biopsy of liver and kidney, collection of urine for culture, urethral catheterization, suprapubic aspiration

V. LOG BOOK

A candidate shall maintain a log book of operations (assisted / performed) during the training period, certified by the concerned post graduate teacher / Head of the department / senior consultant.

This log book shall be made available to the board of examiners for their perusal at the time of the final examination.

The log book should show evidence that the before mentioned subjects were covered (with dates and the name of teacher(s) The candidate will maintain the record of all academic activities undertaken by him/her in log book.

1. Personal profile of the candidate
2. Educational qualification/Professional data
3. Record of case histories
4. Procedures learnt
5. Record of case Demonstration/Presentations
6. Every candidate, at the time of practical examination, will be required to produce performance record (log book) containing details of the work done by him/her during the entire period of training as per requirements of the log book. It should be duly certified by the supervisor as work done by the candidate and countersigned by the administrative Head of the Institution.
7. In the absence of production of log book, the result will not be declared.

VI. RECOMMENDED BOOKS & JOURNALS

The Latest Edition of the following Books:

1. Nelson Text Book of Pediatrics Vol.1 and 2.
2. Forfar & Arneil's Text Book of Pediatrics – Campbell, Mc.Intosh
3. IAP Text Book of Pediatrics – A. Parthasarathy.
4. Medical Emergencies in Pediatrics – Meharban Singh/
5. Manual of Neonatal Care – John P. Cloherty.
6. The Development of Infant and Young Child – (Normal and Abnormal) - Illingworth.

7. Drug Dosage in Children – Meharban Singh.
8. Nutrition and Child Development – K.E. Elizabeth.
9. Practical Approach to Pediatric Intensive Care – Praveen Kilnani.
10. Current Pediatric Diagnosis and Tretment – Hay, Hayward, Levin.
11. Pediatric Clinical Examintion – Santhosh Kumar.

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3. Indian Paediatrics
4. Paeadtrics
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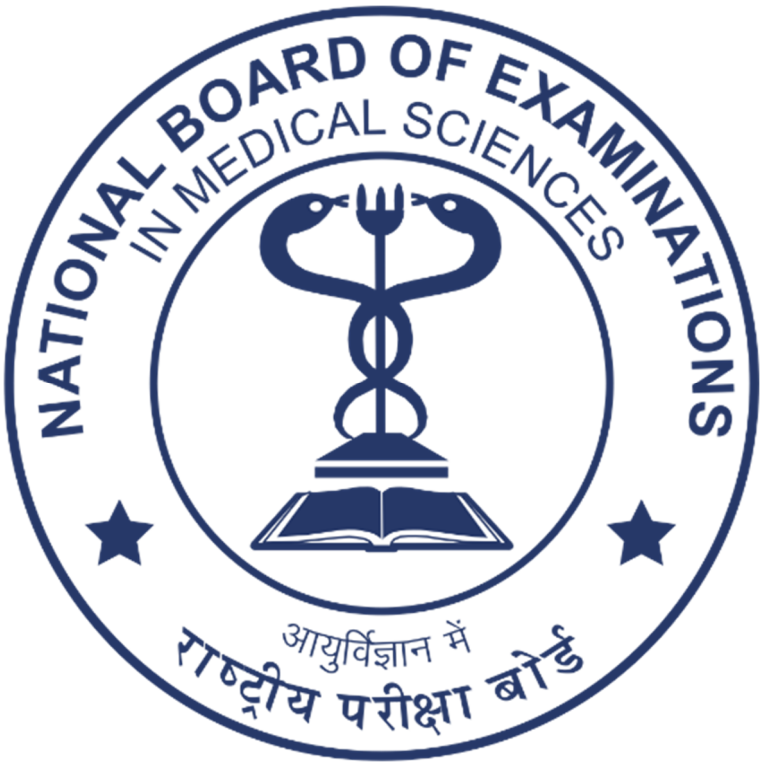

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