

GOPAL NARAYAN SINGH UNIVERSITY
JAMUHAR, SASARAM, ROHTAS-821305



NARAYAN MEDICAL COLLEGE & HOSPITAL

**GUIDELINES FOR COMPETENCY BASED
POSTGRADUATE TRAINING PROGRAMME FOR**

**MD IN
PAEDIATRICS**

PREAMBLE

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

A post graduate student after undergoing the required training should be able to deal effectively with the needs of the community and should be competent to handle the problems related to his specialty including recent advances. S/He should also acquire skills in teaching of medical/para- medical students.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of the Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of “domains of learning” under the heading “competencies”.

SUBJECT SPECIFIC OBJECTIVES

The objectives of MD Course in Paediatrics are 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 the National Health Policy and professional ethics
- Has acquired the competencies pertaining to Paediatrics that are required to be practiced in the community and at all levels of health system
- Has acquired skills in effectively communicating with the child, family and the community
- Is aware of 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 able to recognize mental conditions and collaborate with Psychiatrists/Child Psychologists for the treatment of such patients

SUBJECT SPECIFIC COMPETENCIES

A. COGNITIVE DOMAIN

At the end of the MD course in Paediatrics, the students should be able to:

1. Recognize the key importance of child health in the context of the health priority of country
2. Practice the specialty of Paediatrics in keeping with the principles of professional ethics
3. 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
4. Recognize the importance of growth and development as the foundation of Paediatrics and help each child realize her/his optimal potential in this regard
5. Take detailed history; perform full physical examination including neuro- development and behavioral assessment and anthropometric measurements in the child and make clinical diagnosis
6. Perform relevant investigative and therapeutic procedures for the paediatric patient
7. Interpret important imaging and laboratory results
8. Diagnose illness based on the analysis of history, physical examination and investigations

9. Plan and deliver comprehensive treatment for illness using principles of rational drug therapy
10. Plan and advice measures for the prevention of childhood disease and disability
11. Plan rehabilitation of children with chronic illness and handicap and those with special needs
12. Manage childhood emergencies efficiently
13. Provide comprehensive care to normal, 'at risk' and sick neonates
14. Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation
15. Recognize the emotional and behavioral characteristics of children, and keep these fundamental attributes in focus while dealing with them
16. Demonstrate empathy and humane approach towards patients and their families and keep their sensibilities in high esteem
17. Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities
18. Develop skills as a self-directed learner. Recognize continuing educational needs; use appropriate learning resources and critically analyze published literature in order to practice evidence-based Paediatrics
19. Demonstrate competence in basic concepts of research methodology and epidemiology
20. Facilitate learning of medical/nursing students, practicing physicians, paramedical health workers and other providers as a teacher-trainer
21. Implement National Health Programs, effectively and responsibly
22. Organize and supervise the desired managerial and leadership skills
23. Function as a productive member of a team engaged in health care, research and education.
24. Recognize mental conditions, characterized by self absorption, reduced ability to respond, abnormal functioning in social interaction with or without repetitive behavior, poor communication (autism) and collaborate with Psychiatrists/Child Psychologists for the treatment of such patients.

All PG students joining the course should have an orientation session to acquaint them with the requirements and other details. A plan for orientation session has been given at Annexure 1.

B. AFFECTIVE DOMAIN:

1. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
2. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.
3. Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.

C. PSYCHOMOTOR DOMAIN

At the end of the course, the student should have acquired following skills:

I. HISTORY AND EXAMINATION

The student must gain proficiency in eliciting, processing and systemically presenting Paediatrics history and examination with due emphasis of the important and minimization of less important facts. The following skills must be achieved:

- i) Recognition and demonstration of physical findings
- ii) Recording of height, weight, head circumference and mid arm circumference and interpretation of these parameters using growth reference standard assessment of nutritional status and growth
- iii) Assessment of pubertal growth
- iv) Complete development assessment by history and physical examination, and recognizing developmental disabilities, including autism
- v) Systematic examination
- vi) Neonatal examination including gestation assessment by physical neurological criteria
- vii) Examination of the fundus and the ear-drum
- viii) Skills related to IMNCI and IYCF

II. MONITORING SKILLS

Non-invasive monitoring of blood pressure, pulse and respiratory rates, saturation; ECG

III. Investigative Procedures

- i) Venous, capillary and arterial blood sampling using appropriate precautions
- ii) Pleural, peritoneal, pericardial aspiration; subdural, ventricular and lumbar puncture
- iii) Tuberculin test
- iv) Biopsy of liver and kidney
- v) Urethral catheterization and suprapubic tap
- vi) Gastric content aspiration

IV. Therapeutic Skills

- i) Breast feeding assessment and counseling; management of common problems
- ii) Establishment of central and peripheral vascular access; CVP monitoring
- iii) Administration of injections using safe injection practices
- iv) Determination of volume and composition of intravenous fluids and their administration
- v) Neonatal and Pediatric basic and advanced life support
- vi) Oxygen administration, CPAP and nebulization therapy
- vii) Blood and blood component therapy
- viii) Intraosseous fluid administration
- ix) Phototherapy, umbilical artery and venous catheterization and exchange transfusion
- x) Naso gastric feeding
- xi) Common dressings and abscess drainage; inter costal tube insertion
- xii) Basic principles of rehabilitation
- xiii) Peritoneal dialysis
- xiv) Mechanical ventilation

V. Bed side investigations, including

- i) Complete blood counts, micro ESR, peripheral smear
- ii) Urinalysis
- iii) Stool microscopy and hanging drop
- iv) Examination of CSF and other body fluids
- v) Blood sugar
- vi) Shake test on gastric aspirate
- vii) Gram stain, ZN stain

VI. Patient Management Skills

- i) Proficiency in management of pediatric emergencies, including emergency triaging
- ii) Drawing and executing patient management plan and long term care
- iii) Documenting patient records on day to day basis and problem oriented medical record
- iv) Care of a normal and sick newborn, management of neonatal disorders hypothermia, sepsis, convulsions, jaundice, metabolic problems
- v) Identifying need for timely referral to appropriate departments/health facility and pre-transport stabilization of the sick child

VII. Communication Skills; Attitudes; Professionalism

- i) Communicating with parents/child about nature of illness and management plan prognostication, breaking bad news
- ii) Counseling parents on breast feeding, nutrition, immunization, disease prevention, promoting healthy lifestyle
- iii) Genetic counseling
- iv) Communication and relationship with colleagues, nurses and paramedical workers
- v) Appropriate relation with pharmaceutical industry
- vi) Health economics
- vii) Professional and research ethics

VIII. Interpretation of Investigations

- i. Plan x-ray chest, abdomen, skeletal system
- ii. Contrast radiological studies: Barium swallow, barium meal, barium enema, MCU
- iii. Ultrasound skull and abdomen
- iv. Histopathological, biochemical and microbiological investigations
- v. CT Scan and MRI (skull, abdomen, chest)
- vi. Electrocardiogram, electroencephalogram
- vii. Arterial and venous blood gases
- viii. **Desirable:** Interpretation of radio-isotope studies, audiogram, neuro physiological studies, (BERA, VER, Electromyography [EMG], Nerve Conduction Velocity [NCV]), lung function tests

IX. Academic Skills

- i. Familiarity with basic research methodology, basic IT skills. Planning the protocol of the thesis, its execution and final report
- ii. Review of literature
- iii. Conducting clinical sessions for undergraduates' medical students
- iv. Desirable: writing and presenting a paper. Teaching sessions for nurses and medical workers

SYLLABUS

GUIDELINES

During the training period, effort must be made that adequate time is spent in discussing child health problems of public health importance in the country or particular region.

BASIC SCIENCES

Principles of inheritance, chromosomal disorders, single gene disorders, multifactorial / polygenic disorders, genetic diagnosis and prenatal diagnosis, pedigree drawing.

- Embryogenesis of different organ systems especially heart, genitourinary system, gastro-intestinal tract. Applied anatomy and functions of different organ systems.
- Physiology of micturition and defecation; placental physiology; fetal and neonatal circulation; regulation of temperature, blood pressure, acid base balance, fluid electrolyte balance and calcium metabolism.
- Vitamins and their functions.
- Hematopoiesis, hemostasis, bilirubin metabolism.
- Growth and development at different ages, growth charts; puberty and its regulation.
- Nutrition: requirements and sources of various nutrients.
- Pharmacokinetics of common drugs, microbial agents and their epidemiology.
- Basic immunology, biostatistics, clinical epidemiology, ethical and medico-legal issues.
- Teaching methodology and managerial skills.

**Understanding the definition, epidemiology, aetiopathogenesis, presentation, complications, differential diagnosis and treatment of the following, but not limited to:
GROWTH AND DEVELOPMENT**

- principles of growth and development
- normal growth and development,
- normal growth and development
- sexual maturation and its disturbances
- failure to thrive and short stature
- Autism (as mentioned in objective 24)

NEONATOLOGY

<ul style="list-style-type: none">• Perinatal care• low birth weight• care in the labor room and resuscitation• new born feeding• prematurity• respiratory distress• common transient phenomena• apnea• infections	<ul style="list-style-type: none">• anemia and bleeding disorders• jaundice• gastrointestinal disorders• neurologic disorders• malformations• renal disorders• understanding of perinatal medicine• thermoregulation and its disorders
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NUTRITION

- maternal nutritional disorders;
- nutrition for the low birth weight impact on fetal outcome
- breastfeeding
- infant feeding including
- vitamin and mineral deficiencies
- complementary feeding
- protein energy malnutrition
- obesity
- adolescent nutrition
- parenteral and enteral nutrition
- nutritional management of systemic illness (GI, hepatic, renal illness)

CARDIOVASCULAR

- congenital heart diseases
- rheumatic fever and rheumatic heart (cyanotic and acyanotic) disease
- infective endocarditis
- arrhythmia
- disease of myocardium
- diseases of pericardium (cardiomyopathy, myocarditis)
- systemic hypertension
- hyperlipidemia in children

RESPIRATORY

- congenital and acquired disorders of nose
- infections of upper respiratory tract tonsils and adenoids
- obstructive sleep apnea
- congenital anomalies of lower respiratory tract
- acute upper airway obstruction
- foreign body in larynx trachea and bronchus
- trauma to larynx
- subglottic stenosis (acute, chronic)
- neoplasm of larynx and trachea
- bronchial asthma
- bronchiolitis
- acute pneumonia, bronchiolitis
- aspiration pneumonia, GER
- recurrent, interstitial pneumonia
- suppurative lung disease
- atelectasis
- lung cysts, mediastinal mass
- pleural effusion

GASTROINTESTINAL AND LIVER DISEASE

- disease of oral cavity
- disorders of deglutition and esophagus
- peptic ulcer disease
- congenital pyloric stenosis
- intestinal obstruction
- acute and chronic pancreatic disorders
- malabsorption syndrome
- acute and chronic diarrhea
- irritable bowel syndrome
- inflammatory bowel disease
- Hirschsprung disease
- Anorectal malformations
- hepatitis
- hepatic failure
- chronic liver disease
- Budd-Chiari syndrome
- metabolic diseases of liver
- cirrhosis and portal hypertension

NEPHROLOGIC AND UROLOGIC DISORDERS

- acute and chronic glomerulonephritis
- xanthoma syndrome
- hemolytic uremic syndrome
- urinary tract infection
- VUR and renal scarring
- involvement in systemic diseases
- Renal tubular disorders
- neurogenic bladder, voiding dysfunction
- congenital and hereditary renal disorders
- renal and bladder stones
- posterior urethral valves
- hydronephrosis
- undescended testis, hernia, hydrocoele
- Wilms tumor

NEUROLOGIC DISORDERS

- seizure and non-seizure paroxysmal events
- epilepsy, epileptic syndromes
- meningitis, encephalitis
- brain abscess
- febrile encephalopathies
- Guillain-Barre syndrome
- neurocysticercosis and other neuro infestations
- HIV encephalopathy
- SSPE
- cerebral palsy
- neurometabolic disorders
- neurodegenerative disorders
- neuromuscular disorders
- mental retardation
- learning disabilities
- muscular dystrophies
- acute flaccid paralysis and AFP surveillance
- malformations
- movement disorders
- Tumors

HEMATOLOGY AND ONCOLOGY

- Deficiency anemias
- Hemolytic anemias
- Aplastic anemia
- pancytopenia
- thrombocytopenia
- disorders of hemostasis
- blood component therapy
- transfusion related infections
- bone marrow transplant/stem cell transplant
- acute and chronic leukemia
- myelodysplastic syndrome
- Lymphoma
- Neuroblastoma
- Hypercoagulable states

ENDOCRINOLOGY

- hypopituitarism/hyperpituitarism
- diabetes insipidus
- pubertal disorders
- hypo – and hyper-thyroidism
- adrenal insufficiency
- Cushing's syndrome
- Adrenogenital syndromes
- diabetes mellitus
- hypoglycemia
- short stature
- gonadal dysfunction and intersexuality
- obesity

INFECTIONS

- bacterial (including tuberculosis)
- viral (including HIV)
- fungal
- parasitic
- rickettsial
- mycoplasma
- protozoal and parasitic
- nosocomial infections
- control of epidemics and infection prevention
- safe disposal of infective material

EMERGENCY AND CRITICAL CARE

- emergency care of shock
- cardio-respiratory arrest
- respiratory failure
- acute renal failure
- status epilepticus
- acute severe asthma
- fluid and electrolyte disturbances
- acid-base disturbances
- poisoning
- accidents
- scorpion and snake bites

IMMUNOLOGY AND RHEUMATOLOGY

- arthritis (acute and chronic)
- vasculitides
- immune deficiency syndromes
- systemic lupus erythematosus

ENT

- acute and chronic otitis media
- hearing loss
- post-diphtheritic palatal palsy
- acute/chronic tonsillitis/adenoids
- allergic rhinitis/sinusitis
- foreign body

SKIN DISEASES

- Exanthematous illnesses
- vascular lesions
- pigment disorders
- vesicobullous disorders
- infections
- Steven-Johnson syndrome
- atopic, seborrheic dermatitis
- drug rash
- alopecia
- ichthyosis

EYE PROBLEMS

- Refraction and accommodation
- partial/total loss of vision
- cataract
- night blindness
- strabismus
- conjunctival and corneal disorders
- disorders of retina, including tumors

BEHAVIORAL AND DEVELOPMENTAL DISORDERS

- rumination, pica
- enuresis, encopresis
- sleep disorders
- habit disorders
- breath-holding spells
- anxiety disorders
- mood disorders
- temper tantrums
- attention deficit hyperactivity disorders
- autism (as mentioned in objective 24)

SOCIAL/COMMUNITY PAEDIATRICS

- national health programs related to child health
- IMNCI
- Vaccines: constituents, efficacy, storage, contraindications and adverse reactions
- rationale and methodology of pulse polio immunization
- child labor, abuse, neglect
- adoption
- disability and rehabilitation
- rights of the child
- National policy of child health and population
- Juvenile delinquency
- Principles of prevention, control of infections (food, water, soil, vectorborne)
- Investigation of an epidemic

ORTHOPAEDICS

- major congenital orthopedic deformities
- bone and joint infections
- common bone tumors

APPROACH TO CLINICAL PROBLEMS GROWTH AND DEVELOPMENT

- precocious and delayed puberty
- developmental delay
- impaired learning

NEONATOLOGY

- low birth weight newborn
- sick newborn

NUTRITION

- lactation management and complementary
- protein energy malnutrition feeding (underweight, wasting, stunting)
- failure to thrive and micro nutrient deficiencies

CARDIOVASCULAR

- 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
- gastrointestinal bleeding
- jaundice
- hepatosplenomegaly
- hepatic failure and encephalopathy

RESPIRATORY

- Cough/chronic cough
- hemoptysis
- wheezy child
- respiratory distress

INFECTIONS

- Acute onset pyrexia
- prolonged pyrexia with and without localizing signs
- Recurrent infections
- Nosocomial infections
- fever with xanthema

RENAL

- Hematuria/dysuria
- bladder/bowel incontinence
- voiding dysfunction
- renal failure (acute and chronic)
- hypertension

HEMATOLOGY AND ONCOLOGY

- anemia
- bleeding

NEUROLOGY

- Limping child
- convulsions
- paraplegia, quadriplegia
- cerebral palsy
- macrocephaly and microcephaly
- floppy infant
- acute flaccid paralysis
- headache

ENDOCRINE

- Thyroid swelling
- ambiguous genitalia
- obesity
- short stature

Miscellaneous

- Skin rash
- lymphadenopathy
- epistaxis
- proptosis
- arthralgia, arthritis

TEACHING AND LEARNING METHODS

GENERAL PRINCIPLES

Acquisition of practical competencies being the keystone of PG medical education, PG training should be skills oriented. Learning in PG program should be essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

TEACHING METHODOLOGY

This should include regular bedside case presentations and demonstrations, didactic lectures, seminars, journal clubs, clinical meetings, and combined conferences with allied

departments. The post graduate student should be given the responsibility of managing and caring for patients in a gradual manner under supervision. Department should encourage e-learning activities.

FORMAL TEACHING SESSIONS

In addition to bedside teaching rounds, at least 5-hr of formal teaching per week are necessary. The departments may select a mix of the following sessions:

- Journal club Once a week
- Seminar Once a fortnight
- Case discussions once a month
- Interdepartmental case or seminar Once a month
[Cardiology, Pediatric Surgery]
- Attend accredited scientific meetings (CME, symposia, and conferences).
- Additional sessions on resuscitation, basic sciences, biostatistics, research methodology, teaching methodology, hospital waste management, health economics, medical ethics and legal issues related to pediatric practice are suggested.
- There should be a training program on Research methodology for existing faculty to build capacity to guide research.
- The postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.
- A postgraduate student of a postgraduate degree course in broad specialities/super specialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
- **LOG BOOK:** During the training period, the post graduate student should maintain a Log Book indicating the duration of the postings/work done in Pediatric Wards, OPDs and Casualty. This should indicate the procedures assisted and performed, and the teaching sessions attended. The purpose of the Log Book is to:
 - a) Help maintain a record of the work done during training,
 - b) Enable Consultants to have direct information about the work; intervene if necessary,
 - c) Use it to assess the experience gained periodically.

The log book shall be used to aid the internal evaluation of the student. The Log books shall be checked and assessed periodically by the faculty members imparting the training.

ROTATIONS

The postgraduate student should rotate through all the clinical units in the department. In addition, following special rotations should be undertaken:

MANDATORY

Neonatology, perinatology Intensive care, emergency *Desirable*

Posting in Out Patient Services of the following specialties is recommended Skin

Pediatric Surgery

Physical Medicine and Rehabilitation Community

Note:

Additionally, the PG students may be sent to allied specialties (Cardiology, Neurology,

nephrology *etc.*) depending on facilities available. It should be ensured that the training conforms to the curriculum.

- **THESIS –**
- **OBJECTIVES**

By carrying out a research project and presenting his work in the form of thesis, the student shall be able to:

- identify a relevant research question
- conduct a critical review of literature
- formulate a hypothesis
- determine the most suitable study design
- state the objectives of the study
- prepare a study protocol
- undertake a study according to the protocol
- analyze and interpret research data, and draw conclusions
- write a research paper

GUIDELINES

While selecting the topic, following should be kept in mind:

- the scope of study is limited to enable its conduct within the resources and time available
- the study must be ethically appropriate
- the emphasis should be on the process of research rather than the results
- the protocol, interim progress and final presentation is made formally to the department
- only one student per teacher/thesis guide

There should be periodic department review of the thesis work, as per following schedule:

End of 6 months	Submission of protocol
During 2 nd yr	Mid-term presentation
6 months prior to examination	Final presentation; submission

During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently. For this purpose, provision of skills laboratories in medical colleges is mandatory.

ASSESSMENT

FORMATIVE ASSESSMENT, ie., assessment to improve learning

Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.

GENERAL PRINCIPLES

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and

communication skills. The Internal Assessment should be conducted in theory and practical/clinical examination.

QUARTERLY ASSESSMENT DURING THE MD TRAINING SHOULD BE BASED ON:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self-directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities /CME

The student to be assessed periodically as per categories listed in postgraduate student appraisal form (Annexure I).

INTERNAL ASSESSMENT

The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

S. No	Items	Marks
1	Personal Attributes	20
2	Clinical Work	20
3	Academic activities	20
4	End of term theory examination	20
5	End of term practical examination	20

1. Personal attributes:

- **Behavior and Emotional Stability:** Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
- **Motivation and Initiative:** Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- **Honesty and Integrity:** Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.
- **Interpersonal Skills and Leadership Quality:** Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Clinical Work:

- **Availability:** Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- **Diligence:** Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- **Academic ability:** Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- **Clinical Performance:** Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3. **Academic Activity:** Performance during presentation at Journal club/ Seminar/Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.
4. **End of term theory examination** conducted at end of 1st, 2nd year and after 2 years 9 months
5. **End of term practical/oral examinations** after 2 years 9 months.
 - ◆ Marks for personal attributes and clinical work should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.
 - ◆ Marks for academic activity should be given by the all consultants who have attended the session presented by the resident.
 - ◆ The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

SUMMATIVE ASSESSMENT, i.e., at the end of training

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

- Ratio of marks in theory and practical will be equal.
- The pass percentage will be 50%.
- Candidate will have to pass theory and practical examination separately

THE EXAMINATION SHALL BE IN THREE PARTS:

1. Thesis

Thesis shall be submitted at least six months before the Theory and Clinical/Practical examination. The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical examination. A post graduate student shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

2. Theory Examination:

There shall be four papers each of three hours duration. These are:

Paper I	Basic Science as applied to Paediatrics	100 marks*
Paper II	Neonatology and Community Paediatrics	100 marks*
Paper III	General Paediatrics including advances in Paediatrics relating to Cluster I specialties	100 marks*
Paper IV	Paediatric medicine including advances in Paediatrics relating to Cluster II specialties	100 marks*

***10 question carrying 10 marks each**

Cluster I: Nutrition, Growth and Development, Immunization, Infectious disease, Genetics, Immunology, Rheumatology, Psychiatry and Behavioral Sciences, Skin, Eye, ENT, Adolescent Health, Critical Care, Accidents and Poisoning

Cluster II: Neurology and Disabilities, Nephrology, Hematology and Oncology, Endocrinology, Gastroenterology and Hematology, Respiratory and Cardiovascular disorders

3. Clinical / Practical and viva voce Examination

Practical examination should be taken to assess competence and skills of techniques and procedures and should consist of two long cases, two short cases and 10 spots.

2 Long cases (1 should be newborn case)	100 marks each	200
2 Short cases	50 marks each	100
Total		300

*OSCE may be used

Oral/Viva voce Examination shall be comprehensive enough to test the post graduate student's overall knowledge of the subject.

Grand Viva	50 marks
Spotter	25 marks
X ray	15 marks
Log book record	10 marks
Total	100 marks

Recommended Reading:

Books (latest edition)

1. Nelson's Textbook of Pediatrics, Kliegman et al(Editor)
2. Manual of Neonatal care, Cloherty
3. Nada's Pediatric Cardiology, Kaene
4. PG Textbook of Pediatrics, IAP P Gupta et al(Editor)
5. Clinical Methods in Pediatrics, PGupta
6. Care of the newborn, Meharban Singh

Journals

03-05 international Journals and 02 national (all indexed)journals

SENT UP CRITERIA

- ◆ The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

S. No	Items	Marks
1	Personal Attributes	20
2	Clinical Work	20
3	Academic activities	20
4	End of term theory examination	20
5	End of term practical examination	20

Note: MINIMUM 75% MARKS WILL BE COMPULSORY

- ◆ Postgraduate student appraisal form (Annexure II) duly signed by HOD of Department.

ANNEXURE-I

Orientation sessions for PG students joining MD in Paediatrics

This could be spread over 4-5 sessions once or twice a week depending on departmental routine and feasibility

For all PG students

Orientation to the Hospital: Various Departments and facilities available

- Communication skills: Patients and colleagues
- Literature search
- Basic research methodology
- Protocol writing and thesis

Pediatric PGs

Introduction to Residency in Paediatrics

- Universal precautions and appropriate disposal of hospital waste
- Management of shock
- Congestive cardiac failure
- Normal fluid and electrolyte requirement and their disorders
- Interpretation and management of disorders of acid-base balance
- Evaluation of a sick newborn
- Management of seizures, hypothermia and hypoglycemia in the newborn
- Management of seizures and status epilepticus
- Management of comatose patients
- Hospital management of severe PEM
- Acute kidney injury
- Fulminant hepatic failure
- Management of respiratory distress
- Management of acute diarrhea
- Approach to a bleeding child and its management
- Rational antibiotic therapy

ANNEXURE-II

Postgraduate Students Appraisal Form Pre / Para /Clinical Disciplines

Name of the Department/Unit :

Name of the PG Student :

Period of Training : FROM.....TO.....

S. No.	PARTICULARS	Not Satisfactory	Satisfactory	More Than Satisfactory	Remarks
		1 2 3	4 5 6	7 8 9	
1.	Journal based / recent advances learning				
2.	Patient based /Laboratory or Skill based learning				
3.	Self directed learning and teaching				
4.	Departmental and interdepartmental learning activity				
5.	External and Outreach Activities / CMEs				
6.	Thesis / Research work				
7.	Log Book Maintenance				

Publications : Yes/No

Remarks*- _____

***REMARKS:**

- ❖ Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested.
- ❖ Individual feedback to postgraduate student is strongly recommended.

.....
Signature of Assessee

.....
Signature of Consultant

.....
Signature of HOD



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