# Pediatrics

## Course Content

(Based on Medical Council of India,
Competency based Undergraduate curriculum for the Indian Medical Graduate, 2018. Vol. 2 / ~~3~~; page nos. 150-201)

1. Total Teaching hours: 105 hours (Lectures + Tutorials);
   15 hours (Self-directed learning);
   174 hours Clinical posting
2. A. Lectures(hours): 40(20 hours each in III MBBS Part I & Part II)
   B. Self-directed learning (hours): 15 (5 hours in III MBBS Part I & 10 hours in III MBBS Part II)

   C. Clinical Postings (hours): 174 (2 weeks/ 4 weeks/ 4 weeks)
   D. Small group teachings/tutorials/Integrated teaching/Practicals (hours)**:**
   65 hours (30 hours in III MBBS Part I and 35 hours in III MBBS Part II)

- 8 symposia will be conducted from theory topics in
  - 15 hours of Self-directed Learning (3 in III MBBS (Part I) and
  - 5 in III MBBS (Part II))
- Two (02) Full day workshops
  - IMNCI
  - NRP
- Module 4.7 AETCOM Module will be covered in III MBBS (Part II) (05 hours)

### Tutorials/ Small Group Discussions III (Part I) MBBS (30 hours)

| S. No | Topic | Hours | Lectures (Competency No.) | SLO | Horizontal Integration |
|---|---|---|---|---|---|
| 1 | Normal Growth and Development | 01 | Developmental milestones (PE 1.5, 1.6) | 1. Definition of Development<br>2. Principals of development<br>3. Factors affecting Development<br>4. Domains of Development<br>5. Milestones in various domains | Psychiatry |

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| | | | | 6. Developmental assessment | |
| 2 | Common problems related to growth | 02 | Failure to thrive (PE 2.1, 2.4) | 1.Definition<br>2. Etiology<br>1. Clinical Features<br>2. Evaluation of a child with Failure to thrive<br>3. Management | |
| | | | Short stature (PE 2.6) | 1. Definition<br>2. Etiology<br>3. Clinical Features<br>4. Evaluation of a child with Short stature<br>5. Management | |
| 3. | Care of the Normal Newborn, and High-risk Newborn | 02 | Care of normal newborn (PE 20.1, 20.2, 20.6,) | 1. Define the common neonatal nomenclatures including the classification<br>2. Describe the characteristics of a Normal Term Neonate and High-Risk Neonates.<br>3. Explain the care of a normal neonate | Obs & Gynae |
| | | | Temperature regulation and Neonatal hypothermia (PE 20.12) | 1. Temperature regulation in neonates<br>2. Disorders of temperature regulation<br>3. Definition of hypothermia<br>4. Prevention of hypothermia<br>5. Clinical features of hypothermia<br>6. Management of hypothermia | |
| 4. | To promote and support optimal Breast feeding for infants | 01 | Breast Feeding (PE 7.1, 7.2, 7.3, 7.4, 7.6) | 1. Awareness on the cultural beliefs and practices of breast feeding.<br>2. Enumerate advantages of breast feeding<br>3. Explain the physiology of lactation.<br>4. Technique of breast feeding<br>5. Problems in breast feeding<br>6. Enumerate the baby friendly hospital initiatives<br>7. Describe the composition and types of breast milk<br>8. Discuss the differences between cow's milk and Human milk.<br>9. Discuss the advantages of breast milk.<br>10. Overview about expressed breast milk | Obs & Gynae |
| 5. | Complementary Feeding | 01 | Complementary feeding and | 1. Define the term Complementary Feeding.<br>2. Discuss the principles, the initiation, | |

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| | | | IYCF (PE 8.1, 8.2, 8.3) | attributes, frequency, techniques and hygiene related to Complementary Feeding<br>3. IYCF<br>4. Enumerate the common complimentary foods | |
| 6. | Provide nutritional support, assessment and monitoring for common nutritional problems | 01 | Protein Energy Malnutrition (PE 10.1, 10.2, 10.4, 10.6) | 1. Define malnutrition<br>2. Classify malnutrition including WHO classification,<br>3. Describe the etio-pathogenesis, clinical features, complication of Severe Acute Malnourishment (SAM) and Moderate Acute Malnutrition (MAM).<br>4. Differentiate between kwashiorkor and marasmus<br>5. Outline the clinical approach to a child with SAM and MAM.<br>6. Management of a child with SAM and MAM.<br>7. Enumerate the role of locally prepared therapeutic diets and ready to use therapeutic diets.<br>8. Strategies to prevent malnutrition | |
| 7. | Obesity in Children | 01 | Obesity (PE 11.1, 11.2, 11.6) | 1. Define obesity<br>2. Describe the common etiology, clinical features and management of obesity in children.<br>3. Discuss the risk approach for obesity and criteria for referral<br>4. Discuss the prevention strategies | |
| 8. | Micronutrients in health and disease 1: (Vitamins A,D,E,K, B Complex and C)<br>Micronutrients in health and disease 2: Iron, Iodine, | 04 | Vitamin A<br>Vitamin E, K (PE 12.1, 12.2, 12.4, 12.5, 12.11, 12.12, 12.13, 12.14) | **Vitamin A**<br>1. RDA, dietary sources of Vitamin A and their role in Health and disease.<br>2. Describe the causes, clinical features, diagnosis and management of Deficiency / excess of Vitamin A.<br>3. Discuss the Vitamin A prophylaxis program and their recommendations<br>**Vitamin E**<br>1. Discuss the RDA, dietary sources of Vitamin E and their role in health and disease. | |

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| | Calcium and Magnesium | | | 2. Describe the causes, clinical features, diagnosis and management of deficiency of Vitamin E.<br>**Vitamin K**<br>1. Discuss the RDA, dietary sources of Vitamin K and their role in health and disease.<br>2. Describe the causes, clinical features, diagnosis management and prevention of deficiency of Vitamin K | |
| | | | Vitamin B, C and Iodine deficiency disorders (PE 12.15, 12.16, 12.18, 12.19, 12.20, 13.7, 13.8, 13.10, 13.10) | **Vitamin B**<br>1. Discuss the RDA, dietary sources of Vitamin B and their role in health and disease<br>2. Describe the causes, clinical features, diagnosis and management of deficiency of B complex Vitamins.<br>**Vitamin C**<br>1. Discuss the RDA , dietary sources of Vitamin C and their role in Health and disease<br>2. Describe the causes, clinical features, diagnosis and management of deficiency of Vitamin C (scurvy)<br>**Iodine deficiency Disorder**<br>1. Discuss the RDA, dietary sources of Iodine and their role in Health and disease.<br>2. Describe the causes, clinical features, diagnosis and management of deficiency of Iodine.<br>3. Discuss the National Goiter Control program and their recommendations. | |
| | | | Iron deficiency anemia (PE 13.1, 13.2, 13.5, 13.6) | 1. Discuss the RDA, dietary sources of Iron and their role in health and disease'<br>2. Describe the causes, clinical features,diagnosis and management of Fe deficiency<br>3. Discuss the National Anemia control program and its recommendations. | |
| | | | Vitamin D and Calcium & Magnesium deficiency (PE 12.6, 12.7, | **Vitamin D/Ca/Mg**<br>1. Discuss the RDA, dietary sources of Vitamin D and their role in health and disease.<br>2. Describe the causes, clinical features, | |

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| | | | 12.9, 12.10, 13.11, 13.12, 13.13, 13.14) | diagnosis and management of Deficiency / excess of Vitamin D (Rickets and Hypervitaminosis D).<br>3. Discuss the role of screening for Vitamin D deficiency<br>4. Discuss the RDA, dietary sources of Calcium and their role in health and disease<br>5. Describe the causes, clinical features, diagnosis and management of Ca Deficiency<br>6. Discuss the RDA, dietary sources of Magnesium and their role in health and disease**.**<br>7. Describe the causes, clinical features, diagnosis and management of Magnesium Deficiency | |
| 29. | Anemia and other Hemato-oncologic disorders in children | 02 | Anemia<br>(PE 29.1) | 1. Definition<br>2. Etiopathogenesis<br>3. Classification<br>4. Approach to a child with anemia | |
| | | | Nutritional anemia<br>(PE 29.2, 29.3, 29.5) | **Iron def anemia/ Megaloblastic anemia**<br>1. Etiopathogenesis<br>2. Clinical features<br>3. Lab investigations<br>4. Management<br>5. Discuss the National Anemia Control Program | |
| 9. | Fluid and electrolyte balance | 01 | Fluid and electrolytes<br>(PE 15.1, 15.2) | 1. Composition of body fluids<br>2. Water balance and Osmolality<br>3. Normal maintenance fluid and electrolyte requirements<br>4. Sodium balance and its disorders<br>5. Potassium balance and its disorders<br>6. Overview of Acid-Base disorders | |
| 10. | National Programs, RCH – Universal Immunizations program | 02 | Vaccines in children<br>(PE 19.1, 19.2, 19.3, 19.4) | 1. Components of the Universal Immunization Program and the National Immunization Program.<br>2. Epidemiology of Vaccine preventable diseases<br>3. Vaccine description with regard to classification of vaccines, strain used, dose, route, schedule, risks, benefits and side effects, indications and | |

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| | | | | contraindications. (BCG, OPV, IPV Hep B, DPT, Hib, MMR)<br>4. Define cold chain and discuss the methods of safe storage and handling of vaccines | |
| | | | Immunization in special situations and newer vaccines (PE 19.5, 19.16) | 1. Immunization in special situations – HIV positive children, immunodeficiency, pre-term, organ transplants, those who received blood and blood products, splenectomised children, adolescents, travelers.<br>2. Enumerate available newer vaccines and their indications including pentavalent pneumococcal, rotavirus, JE, typhoid IPV & HPV.<br>3. Combination vaccines<br>4. AEFI | |
| 11 | Respiratory system | 02 | RTI GEM – I (PE 28.1, 28.2, 28.3, 28.4, 28.5, 28.6, 28.7, 28.8)) | **Naso pharyngitis/ Pharyngo Tonsillitis/ Acute Otitis Media (AOM)**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Management<br>4. Complications | |
| | | | | **Stridor/Epiglottitis/Acute laryngotracheobronchitis/Foreign Body Aspiration**<br>1. Etiopathogenesis<br>2. Clinical features<br>3. Management | |
| | | | RTI GEM -II (PE 28.18) | **Bronchiolitis and wheeze associated LRTI/ Empyema/Lung Abscess**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Diagnosis<br>4. Management<br>5. Prevention | |
| 12. | Vaccine preventable Diseases& Tuberculosis | 02 | Fever &Exanthematous Fever (PE 34.14, 34.15) | 1. Enumerate the common causes of fever<br>2. Etiopathogenesis<br>3. Clinical features<br>4. Complications<br>5. Management<br>6. Approach to a child with Exanthematous Fever | |
| | | | Measles, Mumps, Rubella & | 1. Etiopathogenesis<br>2. Clinical features<br>3. Complications | |

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| | | | Chicken pox (PE 34.15) | 4. Management<br>5. Prevention<br>6. Measles, Mumps, Rubella & Chicken pox vaccines | |
| 13. | Chromosomal Abnormalities | 01 | Down syndrome, Turner &Klinefelter syndrome (PE 32.1, 32.3, 32.4, 32.5, 32.6, 32.8, 32.9, 32.10, 32.11, 32.13) | 1. Genetic basis<br>2. Risk factors<br>3. Clinical features<br>4. Complications<br>5. Prenatal diagnosis<br>6. Management<br>7. Genetic counselling. | General Medicine – PE 32.3, 32.9<br>Obs& Gynae – PE 32.9 |
| 14. | Diarrheal diseases and Dehydration | 01 | Diarrheal diseases & dehydration incl Persistent diarrhea, Chronic diarrhea and dysentery (PE 24.1, 24.2, 24.3, 24.4, 24.5, 24.6, 24.7, 24.8, 24.14) | 1. Etio-pathogenesis<br>2. Classification<br>3. Clinical presentation<br>4. Management<br>5. Physiological basis of ORT<br>6. Types of ORS<br>7. Composition of various types of ORS<br>8. Classification and clinical presentation of various types of diarrheal dehydration<br>9. Types of fluid used in Pediatric diarrheal diseases and their composition<br>10. Role of antibiotics, antispasmodics, anti-secretory drugs, probiotics, anti-emetics in acute diarrheal diseases | |
| 15. | Pediatric Emergencies – Common Pediatric Emergencies | 02 | Poisoning (PE 27.8, 14.1, 14.2, 14.3, 14.4) | 1. Clinical approach to a child with suspected poisoning<br>2. **Common poisonings – Hydrocarbon/OP/PCM/Lead/Envenomation**<br>3. Etiopathogenesis<br>4. Clinical features<br>5. Lab investigations<br>6. Management | General Medicine |
| | | | Child abuse (PE 27.29) | 1. Causes<br>2. Clinical presentation<br>Medico-legal implications | |
| 16. | Allergic Rhinitis, Atopic Dermatitis, | 01 | Allergy in children (PE 31.1, 31.3, 31.12) | **Allergic Rhinitis/Atopic Dermatitis/Urticaria Angioedema**<br>1. Etiology<br>2. Clinical features | |

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| | Bronchial Asthma , Urticaria Angioedema | | | 3. Management<br>4. Complications<br>5. Prevention | |
| 17. | Adolescent health and common problems related to Adolescent Health. | 01 | Adolescence & Puberty (PE 6.10, 6.11) | 1. Visit to the Adolescent Clinic. Discuss the objectives and functions of AFHS (Adolescent Friendly Health Services) and the referral criteria. | Psychiatry |
| 18. | Common problems related to Development-1 (Developmental delay, Cerebral palsy) | 01 | Developmental delay (PE 3.5, 3.6, 3.7) | 1. Visit a Child Developmental Unit and observe its functioning. Discuss the role of the child developmental unit in management of developmental delay. Discuss the referral criteria for children with developmental delay | |
| 19. | Common problems related to Development-2 (Scholastic backwardness, Learning disabilities, Autism ADHD) | 01 | Scholastic backwardness and Learning Disabilities (LD) (PE 4.5, 4.6, 5.10,5.11) | 1. Visit to child guidance clinic. Discuss the role of Child Guidance clinic in children with Developmental problems& Behavioral problems. | |
| **TOTAL** | | **30** | | | |

## Theory III (Part I) MBBS (20 hours)

| S. No | Topic | Hours | Lectures (Competency No) | SLO | Horizontal Integration |
|---|---|---|---|---|---|
| 1. | Normal Growth and Development | 01 | Growth & Development (PE 1.1, 1.2, 1.3, 1.5) | 1. Definition of Growth<br>2. Definition of Development<br>3. Physiology of Growth & Development<br>4. Normal Growth – Somatic and physical<br>5. Assessment of Growth | Psychiatry |

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| | | | | parameters; Growth charts<br>6. Factors affecting Growth & Development<br>7. Overview of disorders related to Growth & Development | |
| 2. | Common problems related to Development-1 (Developmental delay, Cerebral palsy) | 02 | Developmental delay<br>(PE 3.1, 3.2, 30.10) | 1. Definition<br>2. Developmental delay vs Intellectual disability<br>3. Etiology<br>4. Clinical Features<br>5. Approach to developmental delay and ID<br>6. Prevention and management | |
| | | | Cerebral palsy<br>(PE 3.8, 30.11) | 1. Definition<br>2. Etiopathogenesis<br>3. Types of CP<br>4. Evaluation of a child with CP<br>5. Prevention and management | Physical Medicine & Rehabilitation |
| 3. | Common problems related to Development-2 (Scholastic backwardness, Learning disabilities, Autism ADHD) | 02 | Scholastic backwardness and Learning Disabilities (LD)<br>(PE 4.1, 4.2) | 1. Causes of Scholastic backwardness<br>2. Approach to a child with Scholastic backwardness<br>3. Definition of LD<br>4. Types of LD and clinical features<br>5. Etiology<br>6. Approach to a child with LD and management | |
| | | | ADHD and Autism<br>(PE 4.3, 4.4) | 1. Etiology of ADHD<br>2. Clinical features of ADHD<br>3. Diagnosis and management of ADHD<br>4. Etiology of Autism<br>5. Clinical features of Autism<br>6. Diagnosis and management of Autism | |
| 4. | Common problems related to behavior | 01 | Behavioral problems of children incl Enuresis & Encopresis<br>(PE 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9) | 1. Describe the clinical features, diagnosis and management of common behavioral problems like<br>• Thumb sucking,<br>• Feeding problems,<br>• Nail biting<br>• Breath Holding spells,<br>• Pica, | Psychiatry |

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| | | | | • Fussy infant.<br>2. Definition of enuresis and encopresis<br>3. Differentiate between primary and secondary enuresis<br>4. Maturation of bowel and bladder control<br>5. Etiology of Enuresis and Encopresis<br>6. Clinical features of Enuresis and Encopresis<br>7. Management of Enuresis and Encopresis | |
| 5. | Adolescent health and common problems related to Adolescent Health. | 01 | Adolescence & Puberty<br>(PE 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.12, 6.13) | 1. Define Adolescence<br>2. Stages of adolescence and SMR<br>3. Describe the physical, physiological and psychological changes during adolescence and Puberty.<br>4. Outline the general health problems during adolescence.<br>5. Describe adolescent sexuality and common problems related to it.<br>6. Explain the Adolescent Nutrition and common nutritional problems.<br>7. Outline the common Adolescent eating disorders (Anorexia Nervosa, Bulimia).<br>8. Describe the common mental health problems during adolescence.<br>9. Enumerate the importance of obesity and other NCD in adolescents.<br>10. Enumerate the prevalence and the importance of recognition of sexual drug abuse in adolescents and children. | Psychiatry |
| 6. | Normal nutrition, assessment and monitoring. | 01 | Normal Nutrition<br>(PE 9.1, 9.2, 9.3, 9.7) | 1. Describe the age-related nutritional needs of infants, children and adolescents including micronutrients and | |

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| | | | | vitamins<br>2. Concept of RDA and balanced diet.<br>3. Describe the tools and methods for assessment and classification of nutritional status of infants, children and adolescents.<br>4. Explains the Calorific value of common Indian foods | |
| 7. | Vaccine preventable Diseases& Tuberculosis | 8 | Tuberculosis in children (PE 34.1, 34.2, 34.12, 34.13) | 1. Epidemiology<br>2. Clinical features and clinical types<br>3. Complications of Tuberculosis<br>4. Diagnostic tools for childhood tuberculosis.<br>5. Indications and discuss the limitations of methods of culturing M. Tuberculosis.<br>6. Newer diagnostic tools for Tuberculosis including BACTEC CBNAAT and their indications | Respiratory Medicine |
| | | | Management of tuberculosis (PE 34.3, 34.4) | 1. Various regimens for management of Tuberculosis as per National Guidelines.<br>2. Preventive strategies adopted and the objectives and outcome of the National Tuberculosis Control Programme | Respiratory Medicine |
| | | | Diphtheria, Pertussis, Tetanus (PE 34.16) | 1. Etiopathogenesis<br>2. Clinical features<br>3. Complications<br>4. Management<br>5. Prevention<br>6. Diphtheria, Pertussis, Tetanus vaccines | |
| | | | Enteric fever (PE 34.17) | 1. Etiopathogenesis<br>2. Clinical features<br>3. Complications<br>4. Management<br>5. Prevention<br>6. Typhoid vaccines | |
| | | | Rickettsial diseases (PE 34.20) | 1. Etiopathogenesis<br>2. Clinical features<br>3. Complications<br>4. Management<br>5. Prevention | |
| | | | Parasitic infections | **Common Parasitic infections - leishmaniasis, filariasis, helminthic** | |

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| | | | (PE 34.19) | **infestations, amebiasis, giardiasis**<br>1. Etiopathogenesis<br>2. Clinical features<br>3. Complications<br>4. Management<br>5. Prevention | |
| | | | Malaria<br>(PE 34.19) | 1. Etiopathogenesis<br>2. Clinical features<br>3. Complications<br>4. Management<br>5. Prevention<br>**6.** National Malaria Eradication Programme | |
| | | | Dengue Fever<br>(PE 34.18) | 1. Etiopathogenesis<br>2. Clinical features<br>3. Complications<br>4. Management<br>5. Prevention<br>6. Overview of Chikungunya | |
| 8. | Systemic Pediatrics-Central Nervous system | 01 | Acute Flaccid Paralysis (AFP) and Poliomyelitis<br>(PE 30.13) | 1. Etiology<br>2. Approach to a child with AFP<br>3. Evaluation<br>4. Management<br>5. AFP Surveillance | |
| 9. | Endocrinology | 03 | Hypothyroidism<br>(PE 33.1) | 1. Physiology of thyroid gland<br>2. Thyroid function test<br>3. Etiology<br>4. Congenital vs Acquired<br>5. Clinical features<br>6. Evaluation<br>7. Management<br>8. New-born Screening | |
| | | | Diabetes mellitus in children and DKA<br>(PE 33.4) | 1. Etiopathogenesis<br>2. Diagnostic criteria<br>3. Classification<br>4. Clinical features<br>5. Management<br>6. Complications incl DKA | |
| | | | Disorders of puberty<br>(PE 33.8) | **Precocious and delayed Puberty**<br>1. Definition<br>2. Etiology<br>3. Clinical Features<br>4. Evaluation<br>5. Management | |
| **TOTAL** | | **20** | | | |

## Self-Directed Learning III (Part I) MBBS (05 hours)

| S. No | Topic | Hours | Lectures (Competency No.) | SLO | Horizontal Integration |
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| 1. | The National Health Programs, NHM<br>The National Health Programs, RCH | 02 | National programs pertaining to maternal & child health, child survival & safe motherhood (PE 17.1, 17.2, 18.1, 18.2) | 1. State the vision and outline the goals, strategies and plan of action of NHM and other important national programs pertaining to maternal and child health including RMNCH A+, RBSK, RKSK, JSSK mission Indra Dhanush and ICDS.<br>2. List and explain the components, plan, outcome of Reproductive Child Health (RCH) program and appraise its monitoring and evaluation<br>3. Explain preventive interventions for child survival and safe motherhood | Obs & Gynae |
| **TOTAL** | | **02** | | | |

## Tutorials/ Small Group Discussions III (Part II) MBBS (35 hours)

| S. No | Topic | Hours | Domain (Competency No.) | SLO | Horizontal Integration |
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| 1 | Group Discussions | 01 | Fluids & Electrolytes, Nutrition (PE 15.3, 15.4, 15.5, 9.5) | 1. Calculate fluid and electrolyte imbalance, Interpret electrolyte report,<br>2. Calculate the fluid and electrolyte requirement in health<br>3. Plan an appropriate diet in health & disease | |
| | | 01 | Cardiac Failure (PE 23.11, 23.16, 23.17, 23.18) | 1. Develop a treatment plan and prescribe appropriate drugs including fluids in cardiac diseases, anti -failure drugs, and inotropic agents.<br>2. Discuss the indications and limitations of Cardiac catheterization.<br>3. Enumerate some common cardiac surgeries like BT shunt, Potts and Waterston's and corrective surgeries<br>4. Demonstrate empathy while dealing with cardiac disease. | |
| | | 01 | Oxygen Therapy (PE 27.9, 27.10, 14.5) | 1. Discuss oxygen therapy in Pediatric emergencies and modes of administration.<br>2. Observe the various methods of administering Oxygen.<br>3. Discuss oxygen toxicity and free radical injury | |
| | | 01 | Counselling (PE 2.3, 3.4, 8.5, 27.32, 27.33, 28.20) | 1. Counselling a parent with failing to thrive child<br>2. Counselling a parent with developmental delay<br>3. Counsel & educate mothers on the best practices in complimentary feeding<br>4. Obtain Informed Consent. | |

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| | | | | 5. Counsel parents of dangerously ill/terminally ill child to break bad news<br>6. Counsel the child with asthma on the correct use of inhalers in a simulated environment | |
| | | 01 | Hemat<br>(PE 29.18, 29.20) | 1. Enumerate the referral criteria for Hematological conditions.<br>2. Enumerate the indications for splenectomy and precautions | |
| 2. | Radiology | 01 | X-Ray/USG/Neuroimaging (PE 21.12, 21.13, 23.12, 26.9, 28.17, 30.21, 30.22, 31.9, 34.8) | 1. Interpret report of Plain X Ray of KUB<br>2. Enumerate the indications for and Interpret the written report of Ultra sonogram of KUB<br>3. Interpret a chest X ray and recognize Cardiomegaly<br>4. Interpret Liver USG<br>5. Interpret X-ray of the paranasal sinuses and mastoid; and /or use written report in case of management<br>6. Interpret CXR in foreign body aspiration and lower respiratory tract infection, understand the significance of thymic shadow in pediatric chest X-rays<br>7. Enumerate the indication and limitations &Interpret the reports of CT, MRI Brain & Spine<br>8. Interpret CX Ray in Asthma<br>9. Interpret a Chest Radiograph in pediatric TB | |
| 3. | Cards (Case Scenario based) | 01 | (PE 21.11, 23.13, 23.14. 24.13, 26.9, 26.11, 28.16, 29.14, 19.15, 29.16, 30.20, 30.21, 30.22, 33.3, 33.6, 33.9, 34.9, 34.10) | 1. Interpret Hemogram and Iron Panel<br>2. interpret the common analytes in a Urine examination<br>3. Interpret Pediatric ECG<br>4. Choose and Interpret blood reports in Cardiac illness<br>5. Interpret RFT and electrolyte report<br>6. Interpret Liver Function Tests, | |

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| | | | | viral markers.<br>7. Enumerate indications of UGI Endoscopy<br>8. Interpret blood tests relevant to upper respiratory problems.<br>9. Interpret CBC, LFT in anemia<br>10. Perform and interpret peripheral smear<br>11. Discuss the indications for Hemoglobin electrophoresis and interpret report<br>12. Interpret and explain the findings in a CSF analysis<br>13. Interpret and explain neonatal thyroid screening report<br>14. Perform and interpret Urine Dip Stick for Sugar. Interpret Blood sugar reports and explain the diagnostic criteria for Type 1 Diabetes<br>15. Interpret the reports of EEG<br>16. Perform Sexual Maturity Rating (SMR) and interpret<br>17. Interpret blood tests in the context of laboratory evidence for tuberculosis. Discuss the various samples for demonstrating the organism e.g. Gastric Aspirate, Sputum, CSF, FNAC. | |
| 4. | Skills Lab | 02 | (PE 15.6, 15.7, 19.9, 19.13, 20.3, 24.15, 24.16, 24.17, 26.10, 27.20, 29.17, 30.23) | 1. Demonstrate the steps of inserting an IV cannula in a model<br>2. Demonstrate the steps of inserting an interosseous line in a mannequin<br>3. Demonstrate the correct administration of different vaccines in a mannequin.<br>4. Describe the components of safe vaccine practice – Patient education/ counselling; adverse events following immunization, safe injection practices, documentation and Medico-legal implications<br>5. Perform Neonatal resuscitation | AETCOM – PE 19.9 |

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| | | | | in a manikin<br>6. Perform NG tube insertion in a manikin<br>7. Perform IV cannulation in a model<br>8. Demonstrate the technique of liver biopsy or perform Liver Biopsy in a simulated environment.<br>9. Demonstrate performance of bone marrow aspiration in manikin<br>10. Perform in a mannequin lumbar puncture. Discuss the indications, contraindication of the procedure | |
| 5. | Genito-Urinary system | 02 | Hypertension in children<br>(PE 21.17) | 1. Definition<br>2. Etiopathogenesis<br>3. Grading<br>4. Clinical features<br>5. Management<br>6. Complications<br>7. Acute severe hypertension | |
| | | | Voiding Disorders<br>(PE 21.15) | 1. Discuss & Enumerate the referral criteria for children with genitourinary disorder<br>2. Counsel & educate patients regarding referral | |
| 6. | Cardiovascular system: Heart disease | 04 | Congestive cardiac failure in infants and children<br>(PE 23.3) | 1. Etiology<br>2. Pathogenesis<br>3. Clinical presentation<br>4. Management | |
| | | | Acyanotic congenital heart diseases<br>(PE 23.1) | **VSD, ASD and PDA**<br>1. Etiology<br>2. Hemodynamic changes<br>3. Clinical features<br>4. Investigations<br>5. Management | |
| | | | Cyanotic congenital heart diseases<br>(PE 23.2) | 1. Classify Cyanotic congenital heart disease<br>**Fallot's Physiology**<br>2. Etiology<br>3. Hemodynamic changes<br>4. Clinical features<br>5. Investigations | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | 6. Management | |
| | | | Acquired Heart Disease<br>(PE 23.4, 23.5, 23.6) | **Infective endocarditis**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Diagnosis<br>4. Management<br>**Acute rheumatic fever**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Diagnosis<br>4. Management and prevention<br>5. Complications | |
| 7. | Pediatric Emergencies – Common Pediatric Emergencies | 03 | Shock in children<br>(PE 27.5) | 1. Definition<br>2. BP regulation<br>3. Pathophysiology<br>4. Classification<br>5. Monitoring<br>6. Management | |
| | | | Status epilepticus<br>(PE 27.6, 30.9) | 1. Definition<br>2. Etiology<br>3. Approach to a child with status epilepticus<br>4. Evaluation<br>5. Management | |
| | | | Unconscious child and Coma<br>(PE 27.8) | 1. Definition<br>2. Etiopathogenesis<br>3. Evaluation<br>4. Management<br>5. Brain death | |
| 8. | Care of the Normal Newborn, and High-risk Newborn | 04 | Care of low birth weight (LBW) babies<br>(PE 20.11) | 1. Definition<br>2. Etiology<br>3. Explain the terminologies – IUGR/SGA<br>4. Clinical features<br>5. Issues in LBW care<br>6. Feeding in LBW babies<br>7. Management of LBW babies<br>8. Growth monitoring of LBW babies | |
| | | | Neonatal hypoglycemia & hypocalcemia<br>(PE 20.13, 20.14) | **Hypoglycemia and hypocalcemia**<br>1. Definition<br>2. Etiology<br>3. Clinical features<br>4. Management | |
| | | | Neonatal Seizures<br>(PE 20.15) | 1. Etiology<br>2. Clinical features<br>3. Management | |

| | | | | | |
|---|---|---|---|---|---|
| | | | Perinatal infections<br>(PE 20.17) | TORCH/Tuberculosis/Hep B/Varicella<br>1. Etiology<br>2. Transmission<br>3. Clinical features<br>4. Management | |
| 9. | Anemia and other Hemato-oncologic disorders in children | 02 | Hemolytic anemia<br>(PE 29.4) | 1. Etiology<br>2. Classification<br>3. Approach to a child with hemolytic anemia<br>4. Management<br>5. Overview of HS, AIHA and HUS | |
| | | | Thalassemia and Sickle Cell Anemia<br>(PE 29.4) | 1. Etiology<br>2. Clinical features<br>3. Lab investigations<br>4. Management incl Iron Chelation therapy<br>5. Complications | |
| 10. | Acute and chronic liver disorders | 02 | Acute liver disease & Fulminant hepatic failure<br>(PE 26.1, 26.2) | **Acute hepatitis in children – Viral (Hep A,B,C), Autoimmune and Wilsons disease**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Management<br>**Fulminant Hepatic Failure in children**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Management | |
| | | | Chronic liver disease & Portal hypertension<br>(PE 26.3, 26.4, 26.11, 26.12) | **Chronic liver diseases in children**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Evaluation<br>4. Complications – hepatic encephalopathy and ascites<br>5. management<br>**Portal Hypertension in children**<br>1. Etio-pathogenesis<br>2. Clinical features<br>3. Management<br>4. Complications | |
| 11. | Respiratory system | 01 | Pneumonia and ARDS<br>(PE 27.3, 27.4) | 1. Etio-pathogenesis<br>2. Clinical features<br>3. Diagnosis<br>4. Management | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | 5. Prevention | |
| 4. | Malabsorption | 01 | Malabsorption<br>(PE 25.1) | 1. Etio-pathogenesis<br>2. Clinical presentation<br>3. Management<br>4. Overview of celiac disease | |
| **TOTAL** | | **28** | | | |

## Theory III (Part II) MBBS (20 hours)

| S. No | Topic | Hours | Lectures (Competency No.) | SLO | Horizontal Integration |
|---|---|---|---|---|---|
| **1.** | Care of the Normal Newborn, and High-risk Newborn | 05 | Birth asphyxia<br>(PE 20.7) | 1. Definition<br>2. Etiology<br>3. Clinical features<br>4. Management<br>**5.** Prevention | |
| | | | Respiratory distress in newborn<br>(PE 20.8) | **RDS/TTNB/MAS**<br>1. Etiology<br>2. Clinical features incl scoring systems<br>3. Management | |
| | | | Birth injuries &Hemorrhagic disease of newborn (HDN)<br>(PE 20.9, 20.10) | **Birth Injuries**<br>1. Etiology<br>2. Clinical features<br>3. Management<br>**HDN**<br>1. Definition and classification<br>2. Etiology<br>3. Clinical features<br>4. Management<br>5. Prevention | |
| | | | Neonatal Sepsis<br>(PE 20.16) | 1. Classification<br>2. Etiology<br>3. Clinical features<br>4. Investigations<br>**5.** Management | |
| | | | Surgical conditions in newborn<br>(PE 20.20) | TEF, esophageal atresia, anal atresia, cleft lip and palate, congenital diaphragmatic hernia<br>1. Etiology<br>2. Clinical presentation<br>3. Management<br>4. Causes of acute abdomen in | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | neonates | |
| 2. | Genito-Urinary system | 03 | UTI<br>(PE 21.1) | 1. Etiology and predisposing factors<br>2. Clinical features<br>3. Diagnosis<br>4. Management<br>5. VUR | |
| | | | Approach to hematuria& Acute glomerulonephritis<br>(PE 21.2, 21.4) | Hematuria<br>1. Definition<br>2. Diagnostic evaluation<br>3. Referral criteria<br>Acute Glomerulonephritis<br>1. Definition<br>2. Etiology<br>3. Clinical features of PSGN<br>4. Management of PSGN<br>5. Complications | |
| | | | Acute kidney injury (AKI) and Chronic kidney disease (CKD)<br>(PE 21.5, 21.6) | 1. Definition and classification<br>2. Etiology and pathophysiology<br>3. Approach to a child with AKI<br>4. Management<br>5. Complications<br>6. Renal replacement therapy | |
| 3. | Approach to and recognition of a child with possible rheumatologic problem | 02 | Approach to Rheumatological Problems incl JIA and SLE<br>(PE 22.1) | 1. Enumerate the common Rheumatological problems in children.<br>2. Approach to a child with arthritis<br>3. Referral criteria for a child with possible rheumatologic problem<br>**JIA/SLE**<br>1. Definition<br>2. Etiopathogenesis<br>3. Clinical subtypes/Clinical features<br>4. Diagnosis<br>5. Management | |
| | | | Vasculitic disorders in children<br>(PE 22.3) | Enumerate common Vasculitic disorders in children and its classification<br>**Kawasaki disease/HSP**<br>1. Etiology<br>2. Clinical features<br>3. Diagnosis<br>4. Management | |
| 4. | Anemia and other Hemato- | 02 | Thrombocytopenia and Hemophilia<br>(PE 29.6, 29.7) | **Thrombocytopenia**<br>**1.** Causes of thrombocytopenia<br>**2.** Etiology of ITP | |

| | | | | | |
|---|---|---|---|---|---|
| | oncologic disorders in children | | | **3.** Clinical features and management of ITP<br>**Hemophilia**<br>**1.** Approach to a child with bleeding disorder<br>**2.** Etiology and types of hemophilia<br>3. Clinical features and management of hemophilia | |
| | | | Leukemia, Lymphomas and Solid Tumors in children (PE 29.8, 29.9, 21.17) | **ALL/Lymphoma/Wilm'sTumor**<br>1. Etiology<br>2. Clinical features<br>**3.** Management | |
| 5. | Systemic Pediatrics-Central Nervous system | 08 | Meningitis in children (PE 30.1, 30.2) | 1. Etio pathogenesis<br>2. Clinical features<br>3. Lab investigations<br>4. Management<br>5. Prevention<br>6. Differentiate between Bacterial, Viral and TB Meningitis<br>**7.** Approach to a child with acute febrile encephalopathy | |
| | | | Hydrocephalus (PE 30.3) | 1. Etio pathogenesis<br>2. Clinical features<br>3. Investigations<br>4. Complications<br>5. Management<br>6. Overview of IIH | |
| | | | Microcephaly and Neural tube defects (PE 30.4, 30.5) | 1. Etio pathogenesis<br>2. Classification/Types<br>3. Clinical features<br>4. Complications<br>5. Management | |
| | | | Infantile hemiplegia/ Stroke (PE 30.6) | 1. Etio pathogenesis<br>2. Clinical features<br>3. Investigations<br>4. Management | |
| | | | Epilepsy in children (PE 30.8) | 1. Definition<br>2. Pathogenesis<br>3. Types of Epilepsy<br>4. Clinical presentation<br>5. Management<br>6. Overview of status epilepticus | |
| | | | Muscular | **DMD/BMD** | |

| | | | | | |
|---|---|---|---|---|---|
| | | | dystrophy<br>(PE 30.14) | 1. Etiology<br>2. Clinical features<br>3. Differential diagnosis<br>4. Evaluation<br>5. Management | |
| | | | Ataxia in children<br>(PE 30.15) | 1. Definition<br>2. Etiology<br>3. Clinical features<br>4. Differential Diagnosis<br>5. Management | |
| | | | Approach to headache in children<br>(PE 30.16) | 1. Pathophysiology of headache<br>2. Approach to a child with headache<br>3. Types of Headache<br>4. Management | |
| **TOTAL** | | **20** | | | |

## Self-Directed Learning III (Part II) MBBS (10 hours)

| S. No | Topic | Hours | Lectures (Competency No.) | SLO | Horizontal Integration |
|---|---|---|---|---|---|
| 1. | Systemic Pediatrics-Central Nervous system | 04 | Floppy infant<br>(PE 30.12) | 1. Etiology<br>2. Clinical features<br>3. Differential diagnosis<br>4. Evaluation<br>**5.** Management | |
| | | | Febrile seizures<br>(PE 30.7) | 1. Definition<br>2. Types<br>3. Etio pathogenesis<br>4. Clinical features<br>5. Investigations<br>6. Complications<br>7. Management | |
| 2. | Care of the Normal Newborn, and High-risk Newborn | 02 | Neonatal hyperbilirubinemia<br>(PE 20.19) | 1. Physiological vs pathological jaundice<br>2. Etiology<br>3. Clinical features<br>4. Approach to a neonate with jaundice<br>5. Management<br>6. Follow-up | |
| 3. | Genito-Urinary system | 02 | Approach to Proteinuria &Nephrotic | Proteinuria<br>1. Definition<br>2. Diagnostic evaluation | |

| | | | | | |
|---|---|---|---|---|---|
| | | | syndrome<br>(PE 21.3) | 3. Referral criteria<br>Nephrotic Syndrome<br>1. Definition<br>2. Etiology<br>3. Terminologies – Remission/Relapse/Steroid dependence/Steroid resistance<br>4. Clinical features<br>5. Management<br>6. Complications<br>7. SDNS/SRNS/Congenital nephrotic syndrome | |
| 4. | Respiratory system | 02 | Asthma in children<br>(PE 28.19, 28.20, 31.5, 31.7, 31.8, 31.10) | 1. Pathophysiology incl Triggers<br>2. Clinical features<br>3. Diagnosis and differential diagnosis<br>4. Management<br>5. Inhalational therapy<br>6. Monitoring and modification of treatment<br>8. Management of acute exacerbation of bronchial asthma | |
| **TOTAL** | | **10** | | | |

## Internal Assessment

## Subject – Pediatrics

## Applicable w.e.f October 2020 onwards examination for batches admitted from June 2019 onwards

| Phase | | |
|---|---|---|
| | Theory | Practical |
| Second MBBS | - | EOP Practical Examination may be conducted. However, these marks shall not be added to the Internal Assessment. |

**3rd Year (III MBBS, PART I)**

| Phase | I-Exam (January) | | | II-Exam (April) | | |
|---|---|---|---|---|---|---|
| | Theory | Practical | Total Marks | Theory | Practical | Total Marks |
| III/I MBBS | 50 | 50 | 100 | 50 | 50 | 100 |

**4th Year (III MBBS, PART II)**

**Clinical posting- 4 weeks**

**Theory- lectures- 20, tutorials- 35, self-directed learning-10. Total 65 hrs**

| Phase | III-Exam (May) | | | IV-Exam (Preliminary examination) (November) | | |
|---|---|---|---|---|---|---|
| | Theory | Practical | Total Marks | Theory | Practical | Total Marks |
| III/II MBBS | 50 | 50 | 100 | 100 | 100 | 200 |

Assessment in CBME is ONGOING PRCESS,

No Preparatory leave is permitted.

1. There shall be 4 internal assessment examinations in Pediatrics including Prelim.

2. The suggested pattern of question paper for internal assessment examinations, except prelim examination is attached at the end. Pattern of the prelims examinations should be similar to the University examinations.

3. Internal assessment marks for theory and practical will be converted to out of 25 (theory) + 25 (practical). Internal assessment marks, after conversion, should be submitted to university within the stipulated time as per directives from the University. **Conversion Formula for calculation of marks in internal assessment examinations.**

| | **Theory** | **Practical** |
|---|---|---|
| **Phase II** | **-** | **-** |
| **Phase III/I** | **100** | **100** |
| **Phase III/II** | **150** | **150** |
| **Total** | **250** | **250** |
| **Conversion out of** | **25** | **25** |
| **Conversion formula** | **Total marks in 4 IA theory examinations /10** | **Total marks in 4 IA Practical examinations /10** |
| **Eligibility criteria after conversion** | **10** | **10** |
| | **Combined theory + Practical = 25** | |

**1.** While preparing Final Marks of Internal Assessment, the rounding-off marks shall done as illustrated in following table.

| Total Internal Assessment Marks | Final rounded marks |
|---|---|
| 13.01 to 13.49 | 13 |
| 13.50 to 13.99 | 14 |

**2.** Students must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in order to be eligible for appearing at the final University examination of that subject.

**3.** Internal assessment marks will not to be added to marks of the University examinations and will be shown separately in mark list.

4. Remedial measures

**A. Remedial measures for non-eligible students**

i) At the end of each internal assessment examination, students securing less than 50% marks shall be identified. Such students should be counseled at the earliest and periodically. Extra classes for such students may be arranged.

ii) If majority of the students found to be weak in a particular area then extra classes must be scheduled for all such students. Even after these measures, if a student is failed to secure 50% marks combined in theory and practical (40% separately in theory and practical) after prelim examination, the student shall not be eligible for final examination.

iii) Non eligible candidates are offered to reappear for repeat internal assessment examination/s, which must be conducted 2 months before next University examination. The pattern for this repeat internal assessment examination shall be similar to the final University examination. The marks in this examination shall be considered for deciding the eligibility criteria. Following conversion formula shall be used for converting the marks.

| | Theory | Practical |
|---|---|---|
| **Remedial examination** | **100** | **100** |
| **Conversion out of** | **25** | **25** |
| **Conversion formula** | **Marks in remedial theory examinations /4** | **Marks in remedial Practical examinations /4** |
| **Eligibility criteria after conversion** | **10** | **10** |
| | **Combined theory + Practical = 25** | |

**B. <u>Remedial measures for absent students:</u>**

If any of the students is absent for any of the 4 IA examinations due to any reasons, following measures shall be taken.

i. The student is asked to apply to the academic committee of the college for reexamination, through HOD, to ascertain the genuineness of the reason for absentee.

ii. If permitted by academic committee, an additional examination for such students is to be conducted after prelims examination. Marks for such additional examination shall be equal to the missed examination.

iii. Even if a student has missed more than one IA examination, he/she can appear for only one additional IA examination. In such scenario, eligibility should be determined by marks obtained in internal assessment examinations for which the candidate has appeared, without changing the denominator.

# Internal Assessment Practical Examinations

## Pediatrics

### Internal Assessment Practical – I, II and III

| Subject: Pediatrics Practical (IA – I, II and III) | | | | |
|---|---|---|---|---|
| Case | OSCE 1 | OSCE 2 | Journal & log book | Practical Total marks |
| 20 | 10 | 10 | 10 | 50 |
| | | | | |

# OSCE Stations to include Signs of General examinations, Local examinations, Psychomotor skills and Communication skills., history taking of a particular symptom; nutrition history, developmental history, immunization history.

### Prelim Practical

| Subject: Pediatrics Practical (Prelims) | | | | | |
|---|---|---|---|---|---|
| Long Case (Including clinical skills demonstration) | Short Case (Including communication skills) | OSCE (4 stations x 10 marks each) | Viva | Journal & log book | Practical Total marks |
| 25 | 15 | 40 | 10 | 10 | 100 |
| | | | | | |

OSCE 1 – Clinical Skills , OSCE 2 – Anthropometry assessment, OSCE 3 – Certifiable procedural skills , OSCE 4 – AETCOM related skills

### MUHS Final Practical

| Subject: Pediatrics Practical (Prelims) | | | | |
|---|---|---|---|---|
| Long Case (Including clinical skills demonstration) | Short Case (Including communication skills) | OSCE (4 stations x 10 marks each) | Viva | Practical Total marks |
| 30 | 20 | 40 | 10 | 100 |
| | | | | |

OSCE 1 – Clinical Skills , OSCE 2 – Anthropometry assessment, OSCE 3 – Certifiable procedural skills , OSCE 4 – AETCOM related skills

# Internal Assessment Examination (I, II and III) Pediatrics

**SECTION "A" MCQ**

***Instructions:***

1) *Put ☐ in the appropriate box below the question number once only.*
2) *Use blue ball point pen only.*
3) *Each question carries **One mark.***
4) *Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.*

**SECTION "A" MCQ (10 Marks)**

1. Multiple Choice Questions (Total 10 MCQ of One mark each) (_10_x_1_=_10__)

a) b) c) d) e) f) g) h) i) j)

**SECTION "B" & "C"**

***Instructions:***

1) *Use **blue/black** ball point pen only.*
2) ***Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
3) ***All** questions are **compulsory**.*
4) *The number to the **right** indicates **full** marks.*
5) *Draw diagrams **wherever** necessary.*
6) *Use a common answerbook for all sections.*

**SECTION "B" (20 Marks)**

2 Short Answer Questions (Five marks each) (Any 5 out of 6) (5x5= 25)

a) b) c) d) e) f)

3 Long Answer Questions (15x1=15)

a)

# MUHS Final Theory Examination

## Paediatrics

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

**FORMAT / SKELETON OF QUESTION PAPER**

**SECTION "A" MCQ**

***Instructions:***

*5) Put ☐ in the appropriate box below the question number once only.*
*6) Use blue ball point pen only.*
*7) Each question carries **One mark.***
*8) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.*

**SECTION "A" MCQ (20 Marks)**

1. Multiple Choice Questions (Total 20 MCQ of One mark each) (1x20=20)

a) b) c) d) e) f) g) h) i) j)

k) l) m) n) o) p) q) r) s) t)

**SECTION "B" & "C"**

***Instructions:***

*1) Use **blue/black** ball point pen only.*
*2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
*3) **All** questions are **compulsory**.*
*4) The number to the **right** indicates **full** marks.*
*5) Draw diagrams **wherever** necessary.*
*6) Use a common answer book for all sections.*

**SECTION "B" (40 Marks)**

2. Long Answer Questions (Any 2 out of 3) structured clinical questions (15 x 2=30)

a) b) c)

3.Short Answer Questions (All 3),(including 1 on AETCOM) (5 x 3=15)

a) b) c)

SECTION C (40 Marks )

4 Long answer questions (15x1=15)

a)

5 Short answer questions( any 4 out of 5) (Clinical Reasoning) (5x4=20)

a) b) c) d) e)

# Journal of Paediatrics

| College Logo | NAME OF THE COLLEGE<br>**DEPARTMENT OF PAEDIATRICS** | MUHS,Nasik Logo |
|---|---|---|

# Journal of Paediatrics

Name of the Student: - _____

Batch Year: - _____

Roll No. :- _____

Phase: II (Year- )

Phase: III-I (Year- )

Phase: III-II (Year- )

| College Logo | NAME OF THE COLLEGE<br>**DEPARTMENT OF PAEDIATRICS** | MUHS,Nasik Logo |
|---|---|---|

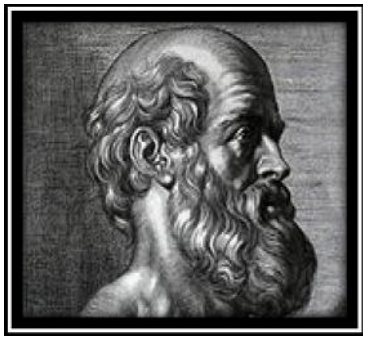
# POSTING CERTIFICATE

Date- / /

| Term | From | To | Absent days | Case- Histories Written | Skills achieved | Remark | Signatureof Unit Head |
|---|---|---|---|---|---|---|---|
| Phase: II<br>(2 weeks) | | | | | | | |
| Phase:III-I<br>( 4 weeks) | | | | | | | |
| Phase: III-II<br>(4 weeks) | | | | | | | |
| Date-<br>Name of college-<br>Seal- | | | | - Signature-<br>Professor and Head<br>Department of Paediatrics. | | | |

**Note-**

- Students must get the signature of the Unit In charge when posting is completed.
- This certificate must be submitted before every Internal assessment and Preliminary examination.
- Completed Record is Mandatory for appearing for the Final Examination.



# HIPPOCRATIC OATH

"I swear by Apollo, the healer, Asclepius, Hygieia, and Panacea, and I take to witness all the gods, all the goddesses, to keep according to my ability and my judgment, the following Oath and agreement:

To consider dear to me, as my parents, him who taught me this art; to live in common with him and, if necessary, to share my goods with him; To look upon his children as my own brothers, to teach them this art; and that by my teaching, I will impart a knowledge of this art to my own sons, and to my teacher's sons, and to disciples bound by an indenture and oath according to the medical laws, and no others.

I will prescribe regimens for the good of my patients according to my ability and my judgment and never do harm to anyone.

I will give no deadly medicine to any one if asked, nor suggest any such counsel; and similarly I will not give a woman a pessary to cause an abortion.

But I will preserve the purity of my life and my arts.

I will not cut for stone, even for patients in whom the disease is manifest; I will leave this operation to be performed by practitioners, specialists in this art.

In every house where I come I will enter only for the good of my patients, keeping myself far from all intentional ill-doing and all seduction and especially from the pleasures of love with women or men, be they free or slaves.

All that may come to my knowledge in the exercise of my profession or in daily commerce with men, whom ought not to be spread abroad, I will keep secret and will never reveal.

If I keep this oath faithfully, may I enjoy my life and practice my art, respected by all humanity and in all times; but if I swerve from it or violate it, may the reverse be my life.

# MEDICAL STUDENT

"The medical student must exhibit a calm and generous disposition, besides being virtuous and of noble mind.

He must be tolerant of others and exhibit patience and perseverance in his academic pursuits.

Although of sharp intellect, he must be both rotational and modest.

He should possess a pleasant appearance and good looks, well-proportioned body which should free from physical defect or obvious diseases.

Above all, he must be compassionate.

He must exhibit deep interest in the art and science of healing.

He must use his intelligence to discuss facts about the disease and to understand the clinical significance of symptoms.

Such knowledge he must use not only for his own intellectual enrichment, but also for acquiring requisite skills in practical management.

He must be humble and loyal to his teachers and instructors.

He should be free from any addictions, greed, arrogance, and intolerance."

**- Charaka Samhita (1000 BC)**

## Sequence of workbook

## GENERAL INSTRUCTIONS

1. This Journal is a record of the academic activities of the designated student, who would be responsible for maintaining his/her Journal.

2. The student is responsible for getting the entries in the Journal verified by the Faculty in charge regularly.

3. Entries in the Journal will reflect the activities undertaken in the department and have to be scrutinized by the Head of the concerned department.

4. The Journal is a record of various activities by the student like:

   - Overall participation and performance
   - Attendance
   - Participation in sessions
   - Record of completion of pre-determined activities.
   - Acquisition of selected competencies.

5. The Journal is the record of work done by the candidate in that department / specialty and should be verified by the college before submitting the application of the students for the Universityexamination.

6. Proposednumberofcaserecordsshouldbementionedinthejournal-:

   Phase: II- first clinical posting (Two weeks)-
   Phase: III-I-second clinical posting in Third Minor (Fourweeks)-
   Phase: III-II Third Clinical postingin Third Major (Four weeks)-

# INDEX

## 1. Long Cases:

| Sr. No. | Date | Name of Patient | Diagnosis | Page No. | Sign of Teacher |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |

## 2. Short Cases:

| Sr. No. | Date | Name of Patient | Diagnosis | Page No. | Sign of Teacher |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |

## 3. New Born Cases:

| Sr. No. | Date | Name of Patient / New Born | Diagnosis | Page No. | Sign of Teacher |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |

### 4. Immunization O.P.D. attended:

| Sr. No. | Date | Immunization Attended | Sign of Teacher |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

### 5. Procedures observed:

| Sr. No. | Date | Name of Procedure Observed | Sign of Teacher |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

### 6. Emergencies attended:

| Sr. No. | Date | Name of Patient | Diagnosis | Sign of Teacher |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

### 7. Drug information:

| Sr. No. | Date | Name of Drugs | Sign of Teacher |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

8. **Nutrition-**

| Sr. No. | Date | Name of food item | Sign of Teacher |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

9. **X-Ray**

| Sr. No. | Date | Diagnosis of X-Ray | Sign of Teacher |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

10. **Instruments-**

| Sr. No. | Date | Name of Drugs | Sign of Teacher |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

# Template for Clinical Cases of Paediatrics

## A. LONG CASE-

Informant-

Reliability – Good/Bad, consistent/ non consistent

OPD/IPD no.-

Name of the child-

Birth date- / /

Age -

Gender - M/F

Religion and caste.

Address-

Date of admission- / /

Date of examination- / /

- **Chief Complaints** – (in chronological order)
  1)
  2)
- **History of Present Illness –**
- **Past History –**
- **Personal History** -

  Bladder- Bowel-

  Sleep- Appetite-

  Addictions- Habits-

  Menstrual cycle-

  Relation with friends- Sports participation-

- **Family history- Pedigree chart:**
- **Birth History-**

➢ Antenatal history -

- Age of mother at marriage-
- Age of mother at pregnancy-
- Registration of pregnancy.
- Medication taken like iron, folic acid and calcium-
- Drug intake during pregnancy -
- Immunization of mother –
- History of trauma.
- Any illness or infection-
- Radiation exposure-
- Hospitals stay during pregnancy.
- History of smoking, drinking alcohol, any other-

➢ Natal history –

- Gestational age-
- Duration of Labor-

- Place of delivery- Home/ Hospital
- Person conducting the delivery-
- Mode of delivery-
- Babies cry immediately after birth-
- Birth weight of the baby-
- Date and time of birth-
- Any congenital malformation noted

➢ Post-natal history

➢ Neonatal history -

- Time of first breast feeding-
- Top feeds given-
- Any feeding difficulty-
- Prelacteal feeds given-
- NICU stay-
- Time of passage of first meconium- urine-
- History of neonatal convulsions or jaundice-

- **Developmental history-**

1) Motor milestones-
   - ✓ Grossmotormilestones
   - ✓ Finemotormilestones

2)Adoptivemilestones-

3)Socialmilestones

4)Languagemilestones-

- **Immunization History –**

| | |
|---|---|
| BCG- given/ not, Scar- present/absent | OPV 0, 1,2, 3, booster |
| DPT- 1,2 3, booster | Measles |
| Vitamin-A | MMR- |
| Other vaccines- | |

- **Dietary History-**

Protein intake– Actual----------Expected----------

Calorie intake- Actual----------Expected----------

- **Socioeconomic History -**

Total no. of members in the family-

Floor space area-

Per capita income-

Education of the Father ---------- Mother----------

Occupation of the Father ---------- Mother----------

Housing type- kaccha/pakka

Ventilation- Water supply-

Sanitation – toilet facilities / open air defecation.

Socio economic status.-

**General Examination:**

- **Anthropometry:**

| No. | **Parameter** | **Actual** | **Expected** |
|---|---|---|---|
| 1 | Weight | | |
| 2 | Height / Length: | | |
| 3 | Head circumference: | | |
| 4 | Chest circumference: | | |
| 5 | Mid arm circumference: | | |
| 6 | Upper segment: lower segment ratio: | | |
| 7 | Body mass index: | | |
| 8 | Arm span: | | |
| 9 | Midpoint of stature: | | |

- **Vital Parameters: -**

**1. Temperature**: ----------F/ ----------C

**2. Pulse –**

- Rate- beats/min. Rhythm-Regular /Irregular
- Character- Volume-
- Radio femoral Delay- Capillary refill-

**3. Respiration-** Rate---- - cycles/min

**4. Blood pressure** -

- Right upper limb- / mmHg Left upper limb- / mmHg
- Right upper limb- / mmHg Left upper limb- / mmHg

**5. Jugular venous pressure-**

**Head to Toe Examination-**

**a. Head-**

- Size- normal/ microcephaly/macrocephaly
- Shape-
- Cephalic index-
- Craniosynostosis-
- Bossing / prominence-
- Fontanel- anterior- open (size- )/closed
- Post. Fontanels- (size- )/closed
- Scalp swelling -
- Transillumination of skull

**b. Hair-**

Colour- Texture Pigmentation-
Luster - Hair line –Low/normal/high

**c. Face-**

**d. Eyes-**

- Eyelids- Intercanthal distance-
- Eyebrows- Eyelashes-
- Conjunctiva- Cornea –
- Lens- Sclera-
- Fundus Conjunctiva -

**e. Ear-**

- Setting of ears –Low/normal Ear tag –
- Large prominent ear- Pinna –
- External auditory canal- Tympanic membrane

**f. Mouth-**

- Oral cavity- Buccal mucosa-
- Dentition: Gums:
- Tongue : Examination of throat-
- Lips : Cyanosis- Philthrum- other-
- Tonsil- Uvula-
- Posterior pharyngeal wall-

**g. Neck-**

- Swelling of neck : Webbing of neck
- Enlarged distended neck veins- Short neck
- cervical group of lymph nodes- Thyroid gland-
- Position of trachea - Neck stiffness

**h. Skin-**

- Colour- Turgor- Infections - Rash
- Subcutaneous nodules- Xanthoma and xanthelasma- Stria-

**i. Hand-**

- Congenital malformation -
- Single Palmar crease -
- Finger – Clubbing- Nails-

**j. External gentile –**

- Tanner staging sexual maturity score-
- Penile length:

**k. Bones, Joints, Spine and Back-**

**l. Any Obvious Congenital Anomalies:**

**Systemic Examination:**
**Provisional Diagnosis-**

1)
2)
3)
4)

**Investigations-**

**Final Diagnosis-**

**Treatment-**

**Case Summary-**

**Date-** **Signature of Teacher**

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## B. SHORT CASE

- Informant-
- Reliability –
- Consistent/ non consistent
- OPD/IPD no.-
- Name of the child-
- Birth date- / / Age -
- Gender - M/F Religion and caste.
- Address –
- Date of admission- / / Date of examination- / /

**Chief Complaints** – (in chronological order)

1)
2)
3)

**General Examination:**

- **Anthropometry:**

| No. | Parameter | Actual | Expected |
|---|---|---|---|
| **1** | Weight | | |
| **2** | Height / Length: | | |
| **3** | Head circumference: | | |
| **4** | Chest circumference: | | |
| **5** | Mid arm circumference: | | |
| **6** | Upper segment: lower segment ratio: | | |
| **7** | Body mass index- | | |
| **8** | Arm span- | | |
| **9** | Midpoint of stature- | | |

- **Vital Parameters: -**

**1. Temperature**: ----------F/ ----------C

**2. Pulse –**

- Rate- beats/min. Rhythm-Regular /Irregular
- Character- Volume-
- Radiofemoral Delay- Capillary refill-

**3. Respiration-** Rate---- - cycles/min

**4. Blood pressure** -

- Right upper limb- / mmHg Left upper limb- / mmHg
- Right upper limb- / mmHg Left upper limb- / mmHg

**5. Jugular Venous Pressure-**

**Head to Toe Examination-**

a) **Head-**
   - Size- normal/ microcephaly/macrocephaly Shape-
   - Cephalic index-
   - Craniosynostosis- Bossing / prominence-
   - Fontanel- anterior- open (size- )/closed
   - Post. Frontanelle- (size- )/closed
   - Scalp swelling -
   - Transillumination of skull

b) **Hair-**
   Colour- Texture Pigmentation-
   Luster - Hair line –Low/normal/high

c) **Face-**

d) **Eyes-**
   - Eyelids- Intercanthal distance-
   - Eyebrows- Eyelashes-
   - Conjunctiva- Cornea –
   - Lens- Sclera-
   - Fundus Conjuctiva -

e) **Ear-**
   - Setting of ears –Low/normal Ear tag –
   - Large prominent ear- Pinna –
   - External auditory canal- Tymphanic membrane

f) **Mouth-**
   - Oral cavity- Buccal mucosa-
   - Dentition: Gums:
   - Tongue : Examination of throat-
   - Lips : Cyanosis- Philthrum- other-
   - Tonsil- Uvula-
   - Posterior pharyngeal wall-

g) **Neck-**
   - Swelling of neck : Webbing of neck
   - Enlarged distended neck veins- Short neck
   - cervical group of lymph nodes- Thyroid gland-
   - Position of trachea - Neck stiffness

h) **Skin-**
   - Colour- Turgor- Infections - Rash
   - Subcutaneous nodules- Xanthoma and xanthelasma- Stria-

i) **Hand-**
   - Congenital malformation -
   - Single Palmar crease -

- Finger –Clubbing- Nails

**j. External Gentile –**
Tanner staging sexual maturity score-
Penile length:

**k. Bones, Joints, Spine and Back-**

**l. Any Obvious Congenital Anomalies:**

**Systemic Examination-**

**Provisional Diagnosis-**
1)
2)
3)
4)
5)

**Investigations-**

**Final Diagnosis-**

**Treatment-**

**Case Summary-**

**Date-** **Signature of Teacher**

## C. NEONATAL CASE

OPD/IPD NO. - Date-
Name of mother-
Name of father-
Date of delivery-
Sex of baby- m/f caste /religion-
Place of delivery- date of examination-

**Maternal History**-
Antenatal history -

- Age at marriage- Age at pregnancy-
- Registration of pregnancy- P- , G- , L- ,A-
- Family history-
- Consanguity- yes/no grade-
- Medication taken like iron, folic acid and calcium supplements-
- Drug intake during pregnancy –
- Immunization status of mother –
- Any illness or infection during pregnancy –
- Radiation exposure- Hospitals stay during pregnancy-
- History of smoking, drinking alcohol, any other.-
- History of trauma-

Natal history –

- Apgar score-
- Gestational age- Duration of Labor-
- Place of delivery- Home/ Hospital
- Person conducting the delivery-Mode of delivery-
- Babies cried immediately after birth-
- Birth weight of the baby-
- Date and time of birth-
- Any congenital malformation noted-

Postnatal history –
Neonatal history -

- Time of first breast feeding-
- Top feeds given-
- Any feeding difficulty-
- Prelacteal feeds given-
- NICU stay-
- Time of passage of first meconium- first urine-
- History of convulsions or jaundice-
- Inj. Vit. K given/not-
- Anyotherproblems-

**Feeding History** -

**Immunization History –**

- BCG- OPV '0' dose Any Other vaccines-

**General Examination:**

- **Anthropometry:**

| No. | Parameter | Actual | Expected |
|---|---|---|---|
| 1 | Weight | | |
| 2 | Length | | |
| 3 | Head circumference: | | |
| 4 | Chest circumference: | | |

- **Vital Parameters: -**

**1. Temperature**: ----------F/ ----------C

**2. Pulse –**

- Rate- beats/min.
- Rhythm-Regular /Irregular
- Character-
- Volume-
- Radio-femoral Delay-
- Capillary refill-

**3. Respiration**-Rate---- - cycles/min

**4. Blood Pressure** -

- Right upper limb- / mmHg
- Left upper limb- / mmHg
- Right upper limb- / mmHg
- Left upper limb- / mmHg

**5.Pulse Oximetry- (Pre and Post Ductal Saturation)**

- **Head to Toe Examination-**

**a) Head-**

- Size- normal/ microcephaly/macrocephaly Shape-
- Cephalic index-
- Craniosynostosis- Bossing / prominence-
- Fontanel- anterior- open (size- )/closed
- Post. Frontanelle- (size- )/closed
- Scalp swelling - Transillumination of skull

**b) Hair-**

Colour- Texture Pigmentation-

Luster - Hair line –Low/normal/high

**c) Face-**

**d) Eyes-**

- Eyelids- Intercanthal distance-
- Eyebrows- Eyelashes-

- Conjunctiva- Cornea –
- Lens- Sclera-
- Fundus Conjuctiva -

**e) Ear-**

- Setting of ears –Low/normal Ear tag –
- Large prominent ear- Pinna –
- External auditory canal- Tymphanic membrane

**f) Mouth-**

- Oral cavity- Buccal mucosa-
- Dentition: Gums:
- Tongue : Examination of throat-
- Lips : Cyanosis- Philthrum- other-
- Tonsil- Uvula-
- Posterior pharyngeal wall-

**g) Neck-**

- Swelling of neck : Webbing of neck
- Enlarged distended neck veins- Short neck
- cervical group of lymph nodes- Thyroid gland-
- Position of trachea - Neck stiffness

**h) Skin-**

- Colour- Turgor- Infections - Rash
- Subcutaneous nodules- Xanthoma and xanthelasma- Stria-

**i) Hand-**

- Congenital malformation -
- Single Palmar crease -
- Finger – Clubbing- Nails-

j. **External Gentile –**
Tanner staging sexual maturity score-
Penile length:

k. **Bones, Joints, Spine And Back**

l. **Any Obvious Congenital Anomalies:**

**Neonatal Reflexes-**

1) Rooting reflex:
2) Suckling reflex:
3) Doll's eye response:
4) Light reflex:
5) Glabellar tap:
6) McCarthy's reflex:
7) Gallant's reflex:
8) Perez reflex:
9) Landau's reflex:
10) Moro's reflex-
11) Stepping reflex
12) Placing reflex-
13) Prone crawl reflex :

14) Plantar & palmar grasp:
15) Crossed adductor reflex: :
16) Magnet reflex:
17) Asymmetric tonic neck reflex:-
18) Symmetric tonic neck reflex:-
19) Pull-to-sit-
20) Babinski or plantar reflex :-
21) Righting reflexes-

**Systemic Examination—**

**Provisional Diagnosis-**
1)
2)
**Investigations-**
**Final Diagnosis-**
**Treatment-**

**Case Summary-**

**DateSignature of Teacher**

---

## D. IMMUNIZATION O.P.D. ATTENDED

**Date-**

Paste picture of vaccine

**Name of vaccine –**

**Dose-**

**Route-**

**Special precautions-**

**Indications-**

**Contraindications-**

**Side effects-**

**Storage-**

**Any other Details of vaccine-**

**Sign of vaccinator-**

## E. EMERGENCY CASES OBSERVED-

**Common Paediatrics Emergencies-**

1. Basic Paediatrics and Neonatal Life Support and Advanced Cardiac Life Support.
2. Organophosphorous Poisoning
3. Kerosene Poisoning
4. Iron Poisoning
5. Dhatura Poisoning
6. Snake Bite
7. Scorpion Bite
8. Anaphylactic Shock
9. Hematemesis
10. Shock
11. Severe Dehydration
12. Acute Respiratory Failure
13. Acute Renal Failure
14. Status Asthamaticus
15. Severe Hypokalemia
16. Status Epilepticus
17. Hepatic Encephalopathy
18. Diabetic Ketoacidosis
19. Coma
20. Hypoglycemia

**Template-**

- OPD/IPD no.-
- Name of the child-
- Birth date- / / Age -
- Gender - M/F
- Date of admission- / /
- Date of examination- / /

**Chief Complaints** – (in chronological order)

1)
2)
3)
4)

**History of Present Illness –**

**Vital Parameters: -**

**1. Temperature**: ----------F/ ----------C

**2. Pulse –**

- Rate- beats/min. Rhythm-Regular /Irregular
- Character- Volume-
- Radio femoral Delay- Capillary refill-

**3. Respiration**-Rate---- - cycles/min

**4. Blood Pressure** -

- Right upper limb- / mmHg Left upper limb- / mmHg
- Right upper limb- / mmHg Left upper limb- / mmHg

**5. Jugular Venous Pressure-**

**Head to Toe Examination- Any positive findings**

**Systemic Examination- positive findings only**

**Details of emergency attended**

**Final Diagnosis-**

**Treatment-**

**Case Summary-**

**Date-** **Signature of Teacher**

## F. PAEDIATRIC PROCEDURES OBSERVED

**Requires certification-**

- Anthropometry
- Development assessment
- Breast feeding, observation and counseling
- BMI calculation
- Prescription of Immunizations schedule
- Naso-gastric tube passage in manikin
- IV line in manikin
- Interosseous insertion in manikin
- Airway management
- Oxygen administration
- Bag ventilation
- Monitoring of shock
- IV access
- Calculation of fluid requirements
- Monitoring of unconscious
- Dehydration assessment
- BLS in manikin
- Urine dipstick
- Identification of BCG scar
- Interpret Mantoux

**Following procedures to be only observed-**

- Lumbar Puncture
- Liver biopsy
- Renal biopsy
- Bone marrow
- Bladder Catheterization
- Peripheral IV Insertion
- Insertion of Umbilical Venous and Arterial Lines
- Insertion of Naso -Gastric Feeding Tubes/Ryles tube
- Neonatal Intubation
- Neonatal Resuscitation
- Pediatric Resuscitation
- Intramuscular, intra-dermal, subcutaneous injections
- Bag and mask use

**Template-**

**Name of Procedure**

- OPD/IPD no.-
- Name of the child-

- AGE- SEX-
- Address –
- Date of admission- / /
- Date of procedure- / /

**Chief Complaints** – (in chronological order)

1)
2)
3)
4)

**History of Present Illness –**

**Prerequisites-**

**Preparation-**

**Procedure details-**
**Post Procedure Care-**

**Complications Known-**

**Any Other-**

**Date-** **Signature of Teacher**

---

## G. COMMON DRUGS USED IN PAEDIATRICS

- **Name of drug-**
- **Class/ Group of Drug-**
- **Doses-**
- **Mechanism of action-**
- **Uses-**
- **Side effects-**
- **Contraindications-**
- **Any other-**

Paste picture of drug here

**Date-** **Signature of Teacher**

## H. INSTRUMENTS USED IN PAEDIATRICS

**Name of instrument-**

Photograph of Instrument

**Uses-**

**Precautions-**

**Describe procedure where it is used-**

**Any other –**

**Sign of Teacher**

# I. NUTRITION RELATED TO PAEDIATRICS

**Name of food item-**

**Class-**

Photograph

**Nutritive contents –**

**Nutritive values-**

**Medicinal use-**

**Contraindications**

**Any other details-**

**Sign of Teacher-**

# Annexure- 1.--

**Course Content Phase II( October 2020)**

**Subject: PAEDIATRICS**

**Theory / Practical**

(Based on National Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate, 2018. Vol. 2 / 3.)

1. Total Teaching hours:
   A. Lectures(hours): **No**
   B. Self-directed learning (hours):
   C. Clinical Postings(hours):
      - Weeks- 2 wks
      - Hours per week-15
      - Monday to Friday- 3 hours per day.
   D. Small group teachings/tutorials/Integrated teaching/Practical(hours)**:**No

**Tentative Clinical posting schedule-**

| Day | Topic | Day | Topic |
|---|---|---|---|
| 1 | Round to Paediatric ward, Maternal ward, Kangaroo Mother Care, PICU, NICU, Labour room, OPD, Immunisation room etc. | 6 | Systemic examination of child- CVS |
| 2 | History taking in Paediatrics | 7 | Systemic examination of child- RS and PA |
| 3 | Assessment of growth and development | 8 | Neonatal examination |
| 4 | General examination of child. | 9 | Elicitation of neonatal reflexes |
| 5 | Systemic examination of child- CNS | 10 | Posting ending exam |

| Competency Nos. | Topics, Subtopics and Lectures |
|---|---|
| | |

# Annexure- 2.

**Course Content Phase III-I( October 2020)**

**Subject: PAEDIATRICS (Theory / Practical )**

(Based on National Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate, 2018. Vol. 2 / 3.)

Total Teaching hours:

A. Lectures (hours): 20
B. Self-directed learning (hours): 5
C. Clinical Postings (hours):
- Weeks- 4
- Hours per week- 15
- Monday to Friday- 3 hours per day.

D. Small group teachings/tutorials/Integrated teaching/Practical (hours)**: 30**

**Tentative Clinical posting schedule-**

| Day | Topic | Day | Topic |
|---|---|---|---|
| 1 | Round to Paediatric ward, Maternal ward, Kangaroo Mother Care, PICU, NICU, Labour room, OPD, Immunisation room etc. | 11 | Elicitation of neonatal reflexes |
| 2 | History taking in Paediatrics | 12 | Immunisation clinic |
| 3 | Assessment of growth and development | 13 | Immunisation clinic |
| 4 | General examination of child. | 14 | Immunisation clinic |
| 5 | Systemic examination of child- CNS | 15 | Immunisation clinic |
| 6 | Systemic examination of child- CNS | 16 | Paediatric Emergencies |
| 7 | Systemic examination of child- RS | 17 | Paediatric Emergencies |
| 8 | Systemic examination of child- Per Abdomen | 18 | Paediatric Emergencies |
| 9 | Systemic examination of child- CVS | 19 | Paediatric Emergencies |
| 10 | Neonatal case taking and examination. | 20 | Posting ending exam |

| **Competency Nos.** | **Topics, Subtopics and Lectures** |
|---|---|
| | |

# Annexure- 3.

**Course Content Phase: III-II( October 2020)**

**Subject: PAEDIATRICS (Theory / Practical )**

(Based on National Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate, 2018. Vol. 2 / 3.)

Total Teaching hours:

A. Lectures (hours): 20
B. Self-directed learning (hours): 10
C. Clinical Postings (hours):
- Weeks- 4
- Hours per week- 15
- Monday to Friday- 3 hours per day.

D. Seminars/Small group teachings/tutorials/Integrated teaching/Practical (hours)**:** 35

**Tentative Clinical posting schedule-**

| Day | Topic | Day | Topic |
|---|---|---|---|
| 1 | History taking and General examination of child. | 11 | Neonatal case taking, examination and Elicitation of neonatal reflexes |
| 2 | Systemic examination of child- CNS | 12 | Demonstration of Common procedures related to Paediatrics |
| 3 | Systemic examination of child- CNS | 13 | Demonstration of Common procedures related to Paediatrics |
| 4 | Systemic examination of child- RS | 14 | Common Drugs used in Paediatrics |
| 5 | Systemic examination of child- Per Abdomen | 15 | Common Drugs used in Paediatrics |
| 6 | Systemic examination of child- CVS | 16 | Common Instruments used in Paediatrics |
| 7 | Systemic examination of child- CVS | 17 | X-Ray film reading related to Paediatrics. |
| 8 | Short case discussion | 18 | Nutrition |
| 9 | Neonatal case taking, examination and Elicitation of neonatal reflexes | 19 | Nutrition |
| 10 | Neonatal case taking, examination and Elicitation of neonatal reflexes | 20 | Posting ending exam |

| **Competency Nos.** | **Topics, Subtopics and Lectures** |
|---|---|

# Annexure- 4.

## Exam Pattern – Paediatrics

**Theory Paper (100 marks)**

- Section A- MCQ-:
- Section B-
- Section C-

**Practical exam (100 marks)**

- Long case-
- Short case/ New born-
- Table viva- (Drugs, Instruments, Nutrition, Vaccines and X-Rays-
- OSCE-

**Internal Assessment:**

- 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for University

**University Examination**

- Mandatory 50% marks separately in theory and practical (practical = practical/ clinical + viva)

# Annexure- 5
# Distribution of journal marks
## Total- 10 marks

| Parameter | Total | Marks | Phase |
|---|---|---|---|
| Long cases | - | - | Phase: II (Second year) |
| | 6 (CNS-2, RS-1, PA-1, CVS-2) | 1 | Phase: III-1 (Third Minor) |
| | 66 (CNS-2, RS-1, PA-1, CVS-2) | 1 | Phase: III-II (Third Major) |
| Short cases | 3 | 1/2 | Phase: II (Second year) |
| | 3 | 1/2 | Phase: III-1 (Third Minor) |
| | 3 | 1/2 | Phase: III-II (Third Major) |
| Newborns | 3 | 1/2 | Phase: II (Second year) |
| | 3 | 1/2 | Phase: III-1 (Third Minor) |
| | 3 | 1/2 | Phase: III-II (Third Major) |
| Emergencies | 5 | 1 | Phase: III-1 (Third Minor) |
| Procedures | 5 | 1 | Phase: III-II (Third Major) |
| Vaccines | All vaccines as per Government of India. | 1 | Phase: III-I |
| Drugs | 10 | 1 | Phase: III-II |
| Instruments | 10 | 1/2 | Phase: III-II |
| Nutrition | 10 | 1/2 | Phase: III-II |
| Total- 10 marks | | | |

## Recommended books

| Sr.no. | Author | Title of book/ Material | Publisher |
|---|---|---|---|
| **1.** | Vinod Paul,<br>Arvind Bagga | Ghai Essential Pediatrics | CBS Publishers |
| **2.** | Meherban Singh | Pediatric Clinical Methods | CBS Publishers |
| **3.** | Michael Glynn<br>William M Drake | Hutchison's Clinical Methods | Elsevier |
| **4.** | A Parthasarathy | IAP Colour Atlas of Pediatrics | Jaypee |
| **5.** | Tom Lissauer<br>Will Carroll | Illustrated Textbook of Pediatrics | Elsevier |
| **6.** | Meherban Singh | Care of newborn | CBS Publishers |
| | | | |

# PEDIATRICS (CODE: PE) IN GENERAL

**Competencies:** The student must demonstrate:

1. Ability to assess and promote optimal growth, development and nutrition of children and adolescents andidentify deviations from normal,
2. Ability to recognize and provide emergency and routine ambulatory and First Level Referral Unit care forneonates, infants, children and adolescents and refer as may be appropriate,
3. Ability to perform procedures as indicated for children of all ages in the primary care setting,
4. Ability to recognize children with special needs and refer appropriately,
5. Ability to promote health and prevent diseases in children,
6. Ability to participate in National Programmes related to child health and in conformation with the IntegratedManagement of Neonatal and Childhood Illnesses (IMNCI) Strategy,
7. Ability to communicate appropriately and effectively.

**Integration:** The teaching should be aligned and integrated horizontally and vertically in order to provide comprehensive care for neonates, infants, children and adolescents based on a sound knowledge of growth, development, disease and their clinical, social, emotional, psychological correlates in the context of national health priorities.

**Table 1: Time distribution of MBBS Programme & Examination Schedule**

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Foundation Course | I MBBS | | | |
| I MBBS | | | | | | | | Exam I MBBS | II MBBS | | |
| II MBBS | | | | | | | | Exam II MBBS | III MBBS | | |
| III MBBS Part I | | | | | | | | | Exam III MBBS Part I | Electives & Skills | |
| III MBBS Part II | | | | | | | | | | | |
| Exam III MBBS Part II | | Internship | | | | | | | | | |
| Internship | | | | | | | | | | | |

- One month is provided at the end of every professional year for completion of examination and declaration of results.

**Table 2: Distribution of subjects by Professional Phase**

| Phase & year of MBBS training | Subjects & New Teaching Elements | Duration# | University examination |
|---|---|---|---|
| First Professional MBBS | • Foundation Course (1 month)<br>• Human Anatomy, Physiology & Biochemistry, introduction to Community Medicine, Humanities<br>• Early Clinical Exposure | 1 + 13 months | I Professional |
| | • Attitude, Ethics, and Communication Module (AETCOM) | | |
| Second Professional MBBS | • Pathology, Microbiology, Pharmacology, Forensic Medicine and Toxicology,<br>• Introduction to clinical subjects including Community Medicine<br>• Clinical postings<br>• Attitude, Ethics & Communication Module (AETCOM) | 12 months | II Professional |
| Third Professional MBBS Part I | • General Medicine, General Surgery, Obstetrics & Gynecology, Pediatrics, Orthopedics, Dermatology, Psychiatry, Otorhinolaryngology, Ophthalmology, Community Medicine, Forensic Medicine and Toxicology, Respiratory medicine, Radiodiagnosis & Radiotherapy, Anesthesiology<br>• Clinical subjects /postings<br>• Attitude, Ethics & Communication Module (AETCOM) | 13 months | III Professional (Part I) |
| Electives | • Electives, Skills and assessment* | 2 months | |
| Third Professional MBBS Part II | • General Medicine, Pediatrics, General Surgery, Orthopedics, Obstetrics and Gynecology including Family welfare and allied specialties<br>• Clinical postings/subjects<br>• Attitude, Ethics & Communication Module (AETCOM) | 13 months | III Professional (Part II) |

*Assessment of electives shall be included in Internal Assessment.

**Table 6: Third Professional Part I teaching hours**

| Subjects | Teaching Hours | Tutorials/ Seminars /Integrated Teaching (hours) | Self- Directed Learning (hours) | Total (hours) |
|---|---|---|---|---|
| General Medicine | 25 | 35 | 5 | 65 |
| General Surgery | 25 | 35 | 5 | 65 |
| Obstetrics and Gynecology | 25 | 35 | 5 | 65 |
| Pediatrics | 20 | 30 | 5 | 55 |
| Orthopaedics | 15 | 20 | 5 | 40 |
| Forensic Medicine and Toxicology | 25 | 45 | 5 | 75 |
| Community Medicine | 40 | 60 | 5 | 105 |
| Dermatology | 20 | 5 | 5 | 30 |
| Psychiatry | 25 | 10 | 5 | 40 |
| Respiratory Medicine | 10 | 8 | 2 | 20 |
| Otorhinolaryngology | 25 | 40 | 5 | 70 |
| Ophthalmology | 30 | 60 | 10 | 100 |
| Radiodiagnosis and Radiotherapy | 10 | 8 | 2 | 20 |
| Anesthesiology | 8 | 10 | 2 | 20 |
| Clinical Postings* | - | - | - | 756 |
| Attitude, Ethics & Communication Module (AETCOM) | | 19 | 06 | 25 |
| Total | 303 | 401 | 66 | 1551 |

** The clinical postings in the third professional part I shall be 18 hours per week (3 hrs per day from Monday to Saturday).*

**Table 7: Third Professional Part II teaching hours**

| Subjects | Teaching Hours | Tutorials/Seminars / Integrated Teaching (hours) | Self - Directed Learning (hours) | Total* (hours) |
|---|---|---|---|---|
| General Medicine | 70 | 125 | 15 | 210 |
| General Surgery | 70 | 125 | 15 | 210 |
| Obstetrics and Gynecology | 70 | 125 | 15 | 210 |
| Pediatrics | 20 | 35 | 10 | 65 |
| Orthopaedics | 20 | 25 | 5 | 50 |
| Clinical Postings** | | | | 792 |
| Attitude, Ethics & Communication Module (AETCOM)*** | 28 | | 16 | 43 |
| Electives | | | | 200 |
| Total | 250 | 435 | 60 | 1780 |

* 25% of allotted time of third professional shall be utilized for integrated learning with pre- and para- clinical subjects and shall be assessed during the clinical subjects examination. This allotted time will be utilized as integrated teaching by para-clinical subjects with clinical subjects (as Clinical Pathology, Clinical Pharmacology and Clinical Microbiology).

**Table 8: Clinical postings**

| Subjects | Period of training in weeks | | | Total weeks |
|---|---|---|---|---|
| | II MBBS | III MBBS Part I | III MBBS Part II | |
| Electives | - | - | 8* (4 regular clinical posting) | 4 |
| General Medicine[1] | 4 | 4 | 8+4 | 20 |
| General Surgery | 4 | 4 | 8+4 | 20 |
| Obstetrics &Gynaecology[2] | 4 | 4 | 8 +4 | 20 |
| Pediatrics | 2 | 4 | 4 | 10 |
| Community Medicine | 4 | 6 | - | 10 |
| Orthopedics - including Trauma[3] | 2 | 4 | 2 | 8 |
| Otorhinolaryngology | 4 | 4 | - | 8 |
| Ophthalmology | 4 | 4 | - | 8 |
| Respiratory Medicine | 2 | - | - | 2 |
| Psychiatry | 2 | 2 | - | 4 |
| Radiodiagnosis[4] | 2 | - | - | 2 |
| Dermatology, Venereology & Leprosy | 2 | 2 | 2 | 6 |
| Dentistry & Anesthesia | - | 2 | - | 2 |
| Casualty | - | 2 | - | 2 |
| | 36 | 42 | 48 | 126 |

* In four of the eight weeks of electives, regular clinical postings shall be accommodated.

Clinical postings may be adjusted within the time framework.

[1] This posting includes Laboratory Medicine (Para-clinical) & Infectious Diseases (Phase III Part I).

[2] This includes maternity training and family welfare (including Family Planning).

[3] This posting includes Physical Medicine and Rehabilitation.

[4] This posting includes Radiotherapy, wherever available.

# List of abbreviations

| | |
|---|---|
| A | Attitude |
| AETCOM | Attitude Ethics and Communication |
| Anat | Anatomy |
| Biochem | Biochemistry |
| Cardio | Cardiology |
| Com Med | Community Medicine |
| Derm | Dermatology |
| DOAP | Demonstrate Observe Assist Perform |
| ENT | ENT |
| Forensic | Forensic Medicine |
| Gastro | Gastroenterology |
| K | Knows |
| KH | Know How |
| S | Shows |
| C | Communication |
| Med | Gen Medicine |
| Micro | Microbiology |
| N | No |
| OBG | Obstetrics & Gynecology |
| Ophthal | Ophthalmology |
| OSCE | Objective Structured Clinical Examination |
| OSPE | Objective Structured Practical Examination |
| Psych | Psychiatry |
| PMR | Physical Medicine Rehabilitation |
| Path | Pathology |
| Physio | Physiology |
| Pharm | Pharmacology |
| SAQ | Short Answer Question |
| SGD | Small Group Discussion |
| Surg | Gen Surgery |
| RadioD | Radio diagnosis |
| Resp Med | Respiratory Medicine |
| Y | Yes |

- Pages for all the phases will be added and color coded as follows-
  Phase II : yellow
  Phase III-I: Green
  Phase III-II: Brown.

# PAEDIATRIC LOGBOOK for MBBS STUDENTS AS PER COMPETENCY BASED CURRICULUM

## PHASE II to PHASE III/II MBBS

## Preface

The Medical Council of India has revised the undergraduate medical education curriculum so that the Indian Medical Graduate (IMG) is able to recognize **"Health for all"** as a national goal. He/she should also be able to fulfil his/her societal obligations. The revised curriculum has specified the competencies that a student must attain and clearly defined teaching learning strategies for the same. With this goal in mind, integrated teaching, skill development, AETCOM and self-directed learning have been introduced. There would be emphasis on communication skills, basic clinical skills and professionalism. There is a paradigm shift from the traditional didactic classroom-based teaching to learning environments where there is emphasis on learning by exploring, questioning, applying, discussing, analysing, reflecting, collaborating and doing. The recognition of this need is enshrined by a greatly enhanced allocation of time to these methods and also the assessment techniques. With this view in mind the log book has been designed as per the guidelines of competency Based curriculum.

**Name of the College**

_____

_____

**Admission Year: _____**

## CERTIFICATE

This is to certify that,

Mr/Ms._____

Roll No. _____ has satisfactorily attended/completed all assignments mentioned in this logbook as per the guidelines prescribed by Medical Council of India, for MBBS Competency Based Curriculum in the subject of PAEDIATRICS

Date: ___/___/_____

Place: _____

**Teacher In charge** **Professor and Head**

**Department of PAEDIATRICS**

## Instructions

1) This logbook is prepared as per the guidelines of MCI for implementation of Competency based curriculum for MBBS students in the subject of Paediatrics.

2) Students are instructed to keep their logbook entries up to date.

3) Students are expected to write minimum 2 reflections on any two activities each of Clinical Paediatrics skills & Self-Directed Learning (SDL).

4) Students also have to write reflections on AETCOM Module. Reflections should be structured using the following guiding questions:

- What happened? (What did you learn from this experience)
- So what? (What are the applications of this learning)
- What next? (What knowledge or skills do you need to develop so that you can handle this type of situation?)

5) The logbook assessment will be based on multiple factors like

- Attendance
- Active participation in the sessions
- Timely completions
- Quality of write up of reflections
- Overall presentation

# INDEX

| Sr. No | Description | Page No's | REMARK | Signature of Teacher |
|---|---|---|---|---|
| 1 | Clinical Paediatrics Skills | | | |
| 2 | Self-Directed Learning, Seminars, Projects, Quizzes | | | |
| 3 | AETCOM Module | | | |
| 4 | Attendance Records | | | |
| 5 | Records of Internal Assessment | | | |

* AETCOM – Competencies for IMG, 2018, Medical Council of India.

## Record of Clinical PediatricsSkills

Clinical skills can be assessed by case presentation, case based discussion, objective structured clinical assessment the checklist, MiniCex, as per the institutional preference.

### I) SECOND PHASE MBBS

| **Competency # addressed** | **Name of activity** | **Site WARD, skill lab, OPD , Casualty ,** | **Date completed** | Attempt at activity First (F) Repeat (R) | Sign of faculty | Sign of Learner | **Method of assessment** | **SCORE** |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

## II) THIRD PHASE MBBS PART I

| **Competency # addressed** | **Name of activity** | **Site WARD, skill lab, opd casualty,** | **Date completed** | Attempt at activity First (F) Repeat (R) | Sign of faculty | Sign of Learner | **Method of assessment** | **SCORE** |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

## II) THIRD PHASE MBBS PART II

| **Competency # addressed** | **Name of activity** | **Site WARD, skill lab, OPD , casualty ,** | **Date completed** | Attempt at activity First (F) Repeat (R) | Sign of faculty | Sign of Learner | **Method of assessment** | **SCORE** |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

## Reflection on Clinical Paediatrics Skills

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## Reflection on Clinical Paediatrics Skills

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## Reflection on Clinical PAEDIATRICS Skills

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## 2. Self Directed Learning, Seminars, Tutorials, Projects, Quizzes

| S.No | PHASE | Self Directed Learning, Seminars, Tutorials, Projects, Quizzes | Date | Signature of Teacher |
|---|---|---|---|---|
| | | | | |
| | | | | |
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| | | | | |

## Reflection on self directed learning activities

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## Reflection on self directed learning activities

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## Reflection on self directed learning activities

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## 3: AETCOM Module

Counselling for Investigation, Treatment, Prognosis, Blood donation, Breaking Bad news. All types of consent. Medicolegal aspects and Ethics, Empathy and professionalism as per the Phase of the MBBS. Include cases of Allied branches also.

Competency to be assessed during Clinical postings and /or small group discussions.

AetCom skills can be assessed by use of Kalamazoo consensus.

| Criteria | Phase II Score | Phase III/I Score | Phase III/II Score | |
|---|---|---|---|---|
| | | | | |
| Builds relationship | | | | |
| Opens the discussion | | | | |
| Gathers information | | | | |
| Understands the parent's perspective | | | | |
| Shares information | | | | |
| Manages flow | | | | |
| Overall rating | | | | |
| Signature of teacher | | | | |

Communication skills rating scale adapted from Kalamazoo consensus statement

Rating 1-3 - Poor, 4 -6 Satisfactory, 6 -10 Superior

## PHASE II- AETCOM (Two assessments)

| **Competency # addressed** | **Name of competency** | **Site WARD, skill lab, opd , casualty,** | **Date completed** | Attempt at activity First (F) Repeat (R) | Sign of faculty | Sign of Learner | **Method of assessment** | **SCORE** |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |

## PHASE III PART 1 (TWO ASSESSMENTS)

| Competency # addressed | Name of Competency | Site WARD, skill lab, opd , casualty, | Date completed | Attempt at activity First (F) Repeat (R) | Sign of faculty | Sign of Learner | Method of assessment | SCORE |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |

## PHASE III PART 2 (TWO ASSESSMENTS)

| **Competency # addressed** | **Name of Competency** | **Site**<br><br>**WARD, skill lab, opd , casualty,** | **Date completed** | Attempt at activity First (F) Repeat (R) | Sign of faculty | Sign of Learner | **Method of assessment** | **Score** |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |

## Reflection on AETCOM module

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## Reflection on AETCOM module

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## Reflection on AETCOM module

**Topic:** **Date:**

**Signature of Teacher-in- charge**

## 4A: Attendance Record of the Student

| S. No | Term | Theory (%) | Practical (%) | Signature of the Student | Signature of the Teacher |
|---|---|---|---|---|---|
| A | II PHASE | | | | |
| B | III PHASE PART 1 | | | | |
| C | III PHASE PART 2 | | | | |
| E | OVER ALL ATTENDANCE | | | | |

**Note: Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.**

## SECTION 4B: Details of attending extra classes [For poor attendance (if any)]

| S.No | Date | Period | Total hrs | Signature of student | Signature of Teacher |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **Total hours** | | | | | |

**Note: Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.**

## Section 5. Records of Internal Assessment Examinations

**Records of Internal Assessment examinations**

| S.No | Exam | Theory | Practical including log book | Signature of student | Signature of Teacher |
|---|---|---|---|---|---|
| 1 | I Internal Assessment | /50 | / 50 | | |
| 2 | II Internal Assessment | / 50 | / 50 | | |
| 3 | III Internal Assessment | / 50 | / 50 | | |
| 4 | IV Internal Assessment (Prelim) | /100 | /100 | | |
| 4 | Internal Assessment marks | / 250 | / 250 | | |
| 5 | Converted marks | /25 | /25 | | |
| | Total Converted marks | /50 | | | |

**Note: Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.**