(1) COURSE CONTENT

5.1 Must know -

5.1.1 Definition and overview of Pediatrics with special reference to age-related disorders. Population structure, pattern of morbidity and mortality in children.

5.1.2 Maternal, perinatal, neonatal, infant and preschool mortality rates. Definition, causes, present status and measures for attainment of goals.

5.1.3 Current National programs such as ICDS, RCH, Vitamin A prophylaxis, UIP, Pulse polio, ARI, Diarrhea Control Program, etc.
Desirable to know
Other National programs

5.2 Growth and DevelopmentMust know -

5.2.1 Normal growth from conception to maturity.

5.2.2 Anthropometery - measurement and interpretation of weight, length/height, head circumference, mid-arm circum-ference.Use of weighing machines, infantometer.

5.2.3 Interpretation of Growth Charts: Road to Health card and percentile growth curves

5.2.4 Abnormal growth patterns-failure to thrive, short stature.

5.2.5 Growth patterns of different organ systems such as lymphoid, brain and sex organs.

5.2.6 Normal pattern of teeth eruption.

5.2.7 Principles of normal development.

5.2.8 Important milestones in infancy and early childhood in the areas of gross motor, fine motor, language and personal-social development. 3-4 milestones in each of the developmental fields, age of normal appearance and the upper age of normal.

5.2.9 Preventable causes and assessment of developmental retardation.

5.2.10 Psychological and behavioral problems.

Desirable to know:

5.2.11 Measurement and interpretation of sitting height, US:LS ratioand arm span.

5.2.12 Age-independent anthropometric measurement-principlesand application.

5.2.13 Sexual maturity rating.

5.3 Nutrition

Must know

-

5.3.1 Normal requirements of protein, carbohydrates, fat, minerals and vitamins for newborn, children and pregnant and lactating mother. Common food sources.

5.3.2 Breast feeding–physiology of lactation, composition of breast milk, colostrum, initiation and technique of feeding. Exclusive breastfeeding - Definition and benefits. Characteristics and advantages of breast milk. Hazards and demerits of prelacteal feed, top milk and bottle feeding. Feeding of LBW babies.

5.3.3 Infant feeding/weaning foods, method of weaning.

5.3.4 Assessment of nutritional status of a child based on history andphysical examination.

5.3.5 Protein energy malnutrition - Definition, classification according to IAP/Wellcome Trust, acute versus chronic malnutrition. Clinical features of marasmus and kwashiorkar. Causes and management of PEM including that of complications. Planning a diet for PEM.

5.3.6 Vitamins-Recognition of vitamin deficiencies (A, D, K, C, B- Complex). Etiopatho-genesis, clinical features, biochemical and radiological findings, differential diagnosis and management of nutritional rickets and scurvy. Hypervitaminosis A and D.

Desirable to know -

5.3.7 Characteristics of transitional and mature milk (foremilk and hind milk). Prevention and management of lactation failure and feeding problems.

5.3.8 Definition, causes and management of obesity.

5.4 Immunization

Must know -

5.4.1 National Immunization Programme.

5.4.2 Principles of Immunization. Vaccine preservation and cold- chain.

5.4.3 Types, contents, efficacy storage, dose, site, route, contra-indications and adverse reactions of vaccines — BCG, DPT, OPV, Measles, MMR, IPV, Pentavac, J. E. Vaccine and Typhoid: Rationale and methodology of Pulse Polio Immunization.

5.4.4 Investigation and reporting of vaccine preventable diseases. AFP (Acute Flaccid Paralysis) surveillance.

Desirable to know -

Special vaccines like Hepatitis B, H. influenzae b, Pneumococcal, Hepatitis A, Chicken pox, Meningococcal, Rabies, Rotavirus.

5.5 Infectious

Diseases Must

know -

5.5.1 Epidemiology, basic pathology, natural history, symptoms, signs, complica-tions, investigations, differential diagnosis, management and prevention of common bacterial, viral and parasitic infections in the region, with special reference to vaccine-preventable diseases: Tuberculosis, poliomyelitis, diphtheria, whooping cough, tetanus including neonatal tetanus, measles, mumps, rubella, typhoid, viral hepatitis, cholera, chickenpox, giardiasis, amebiasis, intestinal helminthiasis, malaria, dengue fever, AIDS.

Desirable to know -

5.5.2 Kala-azar, chlamydia infection

5.6 Hematology

Must know -

5.6.1 Causes of anemia in childhood. Classification based on etiology and morphology.

5.6.2 Epidemiology, recognition, diagnosis, management and prevention of nutritional anemia-iron deficiency, megaloblastic.

5.6.3 Clinical approach to a child with anemia with lymphadenopathy and/or hepato-splenomegaly.

5.6.4 Epidemiology, clinical features, investi-gations and management of thalassemia.

5.6.5 Approach to a bleeding child.

5.6.6 Diagnosis of acute lymphoblastic leukemia and principles oftreatment .

5.6.7 Clinical features and management of hemophilia, purpura.

5.6.8 Diagnosis and principles of management of lymphomas.

Desirable to know -

5.6.9 Types, clinical features and management of acute hemolyticanemia.

5.7 Respiratory

SystemMust

know -

5.7.1 Clinical approach to a child with cyanosis, respiratory distress,wheezing. Signi-ficance of recession, retraction.

5.7.2 Etiopathogenesis, clinical features, complications, investigations, differential diagnosis and management of acute upper respiratory infections, pneumonia with emphasis on bronchopneumonia, bronchio-litis, bronchitis. Acute and chronic otitis media.

5.7.3 Etiopathogenesis, clinical features, diagnosis, classification and management of bronchial asthma. Treatment of acute severe asthma.

5.7.4 Pulmonary tuberculosis- infection versus disease, difference between primary and post-primary tuberculosis. Etiopatho- genesis, diagnostic criteria in children versus adults. Diagnostic aids - technique and interpretation of Mantoux test and BCG test. Radiological patterns, chemo-prophylaxis and treatment (RNTCP Guildlines).

5.7.5 Diagnosis and management of foreign body aspiration. Differential diagnosis of stridor.

5.7.6 Pathogenesis, clinical features and management ofpneumothorax, pleural effusion and empyema.

Desirable to know -

5.7.7 Multidrug resistant tuberculosis, bronchi-ectasis, pulmonarycysts

5.8 Gastrointestinal tractMust know -

5.8.1 Clinical approach to a child with jaundice, vomiting, abdominal pain, bleeding, hepatosplenomegaly.

5.8.2 Acute diarrhea disease - Etiopathogenesis, clinical differentiation of watery and invasive diarrhea, complications of diarr-heal illness. Assessment of dehydration, treatment at home and in hospital. Fluid and electrolyte management. Oral rehydra-tion, composition of ORS.

5.8.3 Clinical features and management of acute viral hepatitis, causes and diagnosis of chronic liver disease.

5.8.4 Common causes of constipation.

5.8.5 Abdominal tuberculosis

Desirable to know -

5.8.6 Causes, clinical features and management of portal hypertension, Reye's syndrome, Celiac disease.

5.8.7 Drug induced hepatitis

5.9 Central Nervous System

Must know -

5.9.1 Clinical approach to a child with coma, convulsions, mental retardation.

5.9.2 Clinical diagnosis, investigations and treatment of acute pyogenic meningitis, encephalitis and tubercular meningitis.

5.9.3 Seizure disorders - Causes and types of convulsions at different ages. Diagnosis, categorization and management of epi-lepsy (broad outline). Febrile convulsions - definition, types, management.

5.9.4 Causes, diagnosis and management of cerebral palsy.

5.9.5 Acute flaccid paralysis - Differentiation between Polio and Gullain-Barre syndrome.

5.9.6 Microcephaly, hydrocephalus, chorea

Desirable to know -

5.9.7 Infantile tremor syndrome, infantile hemiplegia

5.10 Cardiovascular

systemMust know –

5.10.1 Clinical features, diagnosis, investigation, treatment and prevention of acute rheumatic fever. Common forms of rheumatic heart disease in childhood. Differentiation between rheumatic and rheumatoid arthritis.

5.10.2 Recognition of congenital acyanotic and cyanotic heart disease. Hemodynamics, clinical features and management ofVSD, PDA, ASD and Fallot's tetralogy.

5.10.3 Recognition of congestive cardiac failure in infants and children.

5.10 4 Hypertension in children-recognition, etiology, referral.

Desirable to know -

5.10.5 Diagnosis and management of bacterial endocarditis, pericardial effusion, myo-carditis.

5.11Genitourinary system

Must know –

5.11.1 Etiopathogenesis, clinical features, diagnosis, complications and management of acute post-streptococcal glomeruloneph- ritis and nephrotic syndrome.

5.11.2 Etiology, clinical features, diagnosis and management ofurinary tract infection - related problems.

5.11.3 Etiology, diagnosis and principles of management of acuterenal failure.

5.11.4 Causes and diagnosis of obstructive uropathy in children.

5.11.5 Diagnosis and principles of management of chronic renalfailure.

5.11.6 Causes and diagnosis of hematuria.

Desirable to know -

5.11.7 Renal and bladder stones

5.11.8 Hemolytic-uremic syndrome

5.12 Endocrinology /

HypohthyroidismMust know -

5.12.1 Etiology clinical features and diagnosis of diabetes andhypothyroidism, hyper-thyroidism and goiter in children.

5.12.2 Diabetes Mellitus

Desirable to know -

5.12.3 Growth hormone

5.12.4 Delayed and precocious puberty

5.13 Neonatology

Must know -

5.13.1 Definition- live birth, neonatal period, classificationaccording to weight and gestation, mortality rates.

5.13.2 Delivery room management including neonatal resuscitationand temperature control

5.13.3 Etiology, clinical features, principles of management andprevention of birth asphyxia.

5.13.4 Birth injuries - causes and their recognition.

5.13.5 Care of the normal newborn in the first week of life. Normalvariations and clinical signs in the neonate.

5.13.6 Breastfeeding - physiology and its clinical management

5.13.7 Identification of congenital anomalies at birth with special reference to anorectal anomalies, tracheo-esophageal fistula, diaphragmatic hernia, neural tube defects.

5.13.8 Neonatal jaundice: causes, diagnosis and principles of management.

5.13.9 Neonatal infection - etiology, diagnosis, principles of management. Superficial infections, sepsis.

5.13.10 Low birth weight babies - causes of prematurity and small- for-date baby, clinical features and differentiation. Principles of feeding and temperature regulation.

Problems of low birth weight babies.

5.13.11 Identification of sick newborn (i.e., detection of abnormal signs - cyanosis, jaundice, respiratory distress, bleeding, seizures, refusal to feed, abdominal distension, failure to passmeconium and urine).

Desirable to know-

5.13.12 Recognition and management of specific neonatal problems- hypoglycemia, hypo-calcemia, anemia, seizures, necrotizing enterocolitis, hemorrhage.

5.13.13 Common intra-uterine infections.

5.13.14 Transportation of a sick neonate.

5.14 Pediatric Emergencies

Must know -

5.14.1 Status epilepticus.

5.14.2 Status asthmaticus / Acute severe asthma.

5.14.3 Shock and anaphylaxis.

5.14.4 Burns.

5.14.5 Hypertensive emergencies.

5.14.6 Gastrointestinal bleeding.

5.14.7 Comatose child.

5.14.8 Congestive cardiac failure.

5.14.9 Acute renal failure.

5.14.10 Dengue haemorrhagicfever.

5.15 Fluid-

ElectrolyteMust

know

5.15.1 Principles of fluid and electrolyte therapy in children

5.15.2 Pathophysiology of acid-base imbalance and principle ofmanagement

5.16 Genetics

Must know

-

5.16.1 Principles of inheritance and diagnosis of genetic disorders

5.16.2 Down's syndrome.

5.17 Behavioral

ProblemsMust

know -

5.17.1 Breath holding spells, nocturnal enuresis, temper tantrums, pica.

5.18 Pediatric Surgical Problems / Congenital anomaties

Must know -

5.18.1 Diagnosis and timing of surgery of cleft lip/palate, hypospadias, undescended testis, tracheo-esophageal fistula, hydro-cephalus, CTEV, umbilical and inguinal hernia, anorectal malformations, hypertrophic pyloric stenosis

5.19 National Programs related to children & Adolescents

5.20 Therapeuti

csMust

know –

5.20.1 Pediatric doses, drug combinations, drug interactions, Rational drug therapy age specific choice of antibiotics, *etc.*

5.21 Communication skills

5.21.1 Normal Newborn care

5.21.2 Complementary feeding

5.21.3 Procedural consent

5.21.4 ICU Counseling

5.21.5 Counseling Breast Feeding

5.21.6 Death counseling.

(2) TEACHING AND LEARNING METHODS ADOPTED APARTFROM LECTURES AND CLINICS

6.1.1 Problem based learning

6.1.2 Small group case discussion

6.1.3 Research oriented knowledge

6.1.4 Communication Skills

6.1.5 Participation in Quiz and debates

6.1.6 Community outreach services and activities

(3) EVALUATION PATTERN OF THE INTERNAL ASSESSMENT Internal assessment examinations in theory are conducted after 6th & 8thand before final examination (Preliminary).

a) FOR THEORY -

			Marks
Distribution of marks are as follows-	6th	Semester	**50**
	8th	Semester	**50**
Preliminary examination	9th	Semester	**40**

Total marks obtained in the 6th semester examination, 8th semester examination and Preliminary Examination are averaged out of 10.

Pattern of Exam after 6th Semester & 8th Semester is as follow:
a. Theory

Q. A: Answer in one sentence (5/6) Total Marks – (5x2=10)

Q. B: Answer in Brief (5/6) Total Marks – (5x3=15)

Q. C: Short notes (5/6) Total Marks – (5x5=25)

b) FOR PRACTICALS -

Internal assessment examinations are conducted after 6th, 8th & 9thSemester and before final examination (Preliminary). Distribution of marks are as follows-

6th Semester 50
8th Semester 50
9th Semester 50
Preliminary examination – 40

Total marks obtained 2 Best out of 3 in the 6th semester, 8th semester& 9th Semester examination and Preliminary Examination are averaged out of 10.

Pattern of examination for preliminary exam and final University.Examination is as follows:

THIRD M.B.B.S. PART 2 FINAL UNIVERSITY EXAMINATION -
Theory- constitutes 40 marks distributed as follows- Section A:

Q. 1: Answer in one sentence (all 8 Question) (1 Marks x 8 = 8)
Q. 2: Long Answer Questions (2/3) (7 Marks x2 =14)Section B
Q. 3: Short notes (6/8) (3marks x 6= 18)

Total- 40

marks

PRACTICALS

-

Long case	20 marks
Short Case	10 Marks
Table Viva	10 marks

(Includes- Nutrition, Radiology, Vaccines. Drugs, Instruments)
Total - 40 marks

LEARNING

OBJECTIVES4TH

SEMESTER

Sr. No.	Topic	Learning Objectives
1	**Introduction**	**Learning Objectives:-** • Orientation to Department • Syllabus & Curriculum • Teaching program • Reference books & clinical methods • Examination pattern & assessment details.
2	**Normal Growth & Development I**	**Learning Objectives :-** • Principles of growth • Laws of growth • Growth during childhood • Growth milestonesGrowth charts
3	**Normal Growth & Development II**	**Learning Objectives :-** • Variations in normal growth anddevelopment • Behavioral disorders • Pervasive developmental disorders • Investigations of a case of developmentaldelay • Management
4	**Normal Fluid &Electrolyte balance**	**Learning Objectives :-** • Hyponatremia& hypernatremia • Hypokalemia & hyperkalemia • SIADH Hypocalcemia and hypercalcemia
5	**Breast Feeding**	**Learning Objectives:-** • Anatomy & physiology of breast feeding • Reflexes in baby & mother involved inbreast feeding • Contents of breast milk • Term and preterm milk • Proper positions & latching • Problems with breast feeding
6	**Weaning and Artificial**	**Learning Objectives:-** • Definition

	Feeding	

Sr. No.	Topic	Learning Objectives
		• Breast Feeding - Importance • Age of starting of weaning • Types of Food • Importance of weaning • Correct Feeding PatternFaulty feeding practices
7	**Immunization**	**Learning Objectives:-** • Principles of immunization • Natural immunity • National immunization schedule • IAP immunization schedule • Catch up vaccination • Immunization in special situations
8	**Vitamin Deficiencies -I**	**Learning Objectives:-** • Water Soluble Vitamins • Introduction and Function • Classification • Clinical Features • Diagnosis • Investigations • Treatment • Prevention Vitamin supplementation
9	**Vitamin deficiencies – II**	**Learning Objectives:-** • Fat soluble vitamins 'A','D' introduction • Source of vitamins A & D • Metabolism of Vitamins A and D • Clinical Features of vitamin deficiency • Management of deficiency • Rickets

10	**Nutritional Anemia**	**Learning Objectives:-** • Types of anemia • Clinical Features • Diagnosis • Investigations • Treatment • Iron prophylaxis • Prevention

Sr. No.	Topic	Learning Objectives
11	**Diphtheria &Pertussis**	**Learning Objectives:** • Pathophysiology • Etiology • Clinical Features • Investigations • Treatment • Complicatio nsImmunization
12	**Measles & Varicella**	**Learning Objectives:-** • Measles and Varicella virus • Epidemiology • Clinical features • Investigations • Management • Complications • SSPE
13	**Polio & AFP**	**Learning Objectives:-** • History • Polio virus • Epidemiology • Clinical Features • Differential diagnosis • Reverse cold chain • AFP Surveillance
14	**Childhood TB**	**Learning Objectives:** • Etiopathogenesis • Types of childhood tuberculosis • Pulmonary tuberculosis • Clinical features • Investigations Management • Abdominal tuberculosis Clinical features Investigations Management • Joint and bone tuberculosis Clinicalfeatures Investigations Management

15	**Gastroenteritis and management**	**Learning Objectives:** • Causative agents

Sr. No.	Topic	Learning Objectives
		• Epidemiology • Clinical features • Severity and grading of dehydration • Investigations • Plans for management • Prevention and Immunization
16	**Newer vaccines**	**Learning Objectives:-** • Vaccinology • Influenza vaccine • Need for newer vaccines • NTAGI Recommendations

6TH SEMESTER

Sr. No.	Topic	Learning Objectives
1	**Malaria & enteric fever**	**Learning Objectives:-** • Etiology • Life cycle of P.falciparum and P.vivax • Investigations • Management of Malaria and Enteric fever • Prognosis and Immunization
2	**Hepatitis**	**Learning Objectives:-** • Definition • Etiology • Types of Hepatitis • Chronic hepatitis • Clinical features • Lab diagnosis • Treatment • Immunization
3	**HIV & AIDS**	**Learning Objectives:-** • Definition • Natural history of disease • Transmission • WHO Clinical & immunological Classification • Opportunistic infections • NACO & WHO based guidelines forinvestigations and management • Prevention of parent to child transmission • Treatment guidelines of anti-retroviral therapy & follow up.
4	**Newborn, Definition,Care, andTemp Regulation**	**Learning Objectives:-** • Introduction • Definitions • Common neonatal problems • Care of normal newborn • Maintaining temperature of newborn

Sr. No.	Topic	Learning Objectives
5	**Prematurityand LBW (IUGR)**	**Learning Objectives:-** - Definition of LBW - LBW - 1) Premature 2) IUGR - Etiological Factor of Premature baby - Clinical Features of premature baby - Management 1) Supportive 2) Medical - Complication 1) Acute 2) Chronic - Prognosis - Defintion of IUGR - Etiological Factor - Clinical Features - Management 1) Supportive 2) Medical - Complication 1) Acute 2) Chronic - Prognosis
6	**Neonatal (Birth) Asphyxia**	**Learning Objectives:-** • First Cry • NALS • Definition • Criteria • APGAR Scope • Pathophysiology • Etiology • Sarnat and Sarnat staging • Multiorgan Dysfunction in HIE • Investigation • Management Prognosis

7	**RDS**	**Learning Objectives:-** • Definition • Diagnosis • Clinical features • Incidence and antenatal interventions • Management of RDS • Long term complications, Chronic lung disease • Management

Sr. No.	Topic	Learning Objectives
8	**Neonatal Hyperbilirubinemia**	**Learning Objectives:-** • Definition • Causative Factors • Physiological and pathological jaundice • Breast milk jaundice • Management • Exchange transfusion
9	**Neonatalsepsis**	**Learning Objectives:-** • Pathophysiology • Etiology • Clinical Features • Early and late onset sepsis • Investigations • Treatment • Long term complications
10	**Neonatal Convulsionsand Birth Injuries**	**Learning Objectives:-** • Introduction • Etiology • Types and Clinical Manifestations • Emergency Management • Investigations • Long term management • Prognosis • Birth Injuries:- • Definition • Causative Factors • Management
11	**Hemorrhagein the newborn**	**Learning Objectives:-** • Etiology • Classification • GI bleeding in newborns • Hemolytic disease of newborn • Management of HDN

12	**Congenital Anomalies GIT**	**Learning Objectives:-** • Definition • Epidemiology • Development of GIT • Etiology

Sr. No.	Topic	Learning Objectives
		• Clinical Manifestation • Investigations
13	**Congenital Anomalies CNS & other**	**Learning Objectives:-** • Embryology of CNS • Anomalies in the development of CNS • Acute and long term management • Neural tube defects • Prophylaxis • Prognosis
14	**Hemolyti canemias**	**Learning Objectives:-** • Pathophysiology • Etiology • Classification of hemolytic anemias • Clinical Feature • Investigati onTreatment
15	**Leukemi aand ITP**	**Learning Objectives:-** • Definition • Classification of AML and ALL • Etiology • Clinical Feature, • Different Diagnosis. • Investigation • Treatment of different types of leukemia's **ITP** • Definition • Acute and chrome • Pathophysiology • Etiology • Clinical Feature • Investigation and management

8TH SEMESTER

Sr. No.	Topic	Learning Objectives
1	**Stridor in Children & wheezy baby**	**Learning Objectives:-** • Introduction • Definition • Classificati onCommon Causes
2	**Pneumonias &Empyema in Children**	**Learning Objective**:- • Definition • Epidemiology • Etiological Spectrum according to age • Community & hospital acquiredPneumonias • Investigation • Treatment • ARI & IMNCI Programme for control &treatment Preventive Strategies
3	**Microcephaly & Hydrocephalus**	**Learning Objectives:-** • Definition of microcephaly & hydrocephalus • Classification of microcephaly & hydrocephalus • Etiology • Clinical feature
4	**Nephrotic Syndrom e**	**Learning Objectives:-** • Diagnosis and Management • Treatment • Manageme ntPrognosis
5	**Nephrotic Syndrom e**	**Learning Objectives:-** • Diagnosis and Management • Treatment • Manageme ntPrognosis

6	**ARF & CRF**	**Learning Objectives:-** • Definition • Genetics • Etiology

Sr. No.	Topic	Learning Objectives
		• C/F • Complicatio nsInvestigation
7	**Hematuria andAGN**	**Learning Objectives:-** • Definition • Epidemiology • Complications • Investigation
8	**C. C. F. in Infancy in Childhoo d**	**Learning Objectives** • Definition • Genetics • Etiology • C/F • Complicatio nsInvestigation
9	**Congenital (Acyanotic) Heart DiseasePart - I**	**Learning Objectives:-** • Development of Heart • Fetal Circulation • Changes in Circulation at birth • A etiology, classification • A Cyanotic Heart Disease - Various Types - Clinical Feature - Investigations - Treatment

10	**Congenital (Cyanotic) Heart DiseasePart 2**	**Learning Objectives:-** • Definition ,Peripheral and central cyanosis • How to diagnose Cyanotic heart disease • Important cyanotic heart disease • Complications • Treatment **23] Topic :- Acute Rheumatic Fever** **Learning Objective:-** • Definition • Etiology • Clinical features • Modified Jones criteria • Lab diagnosis • Treatment • Prevention

Sr. No.	Topic	Learning Objectives
		• Prophylaxis • Prognosis • Complications
11	**Epilepsy in Children**	**Learning Objective**:- • Definition & classification of epilepsy • Pathophysiology of childhood epilepsy • Investigation in epilepsy • Management of childhood epilepsy
12	**Febrile seizure & status epilepticus**	**Learning Objective**:- • Causes and types of convulsions at differentages. • Diagnosis • Categorization and management • Febrile convulsions - definition, types, management
13	**Pyogenic Meningitis**	**Learning Objective**:-Etiopathogenesis • Investigations • Management of Pyogenic meningitis • Prevention and vaccination
14	**Tuberculous Meningitis**	**Learning Objectives:-** • Etiopathogenesis • Lab diagnosis • Treatment of Tuberculous meningitis • Prevention • Prophylaxis • Prognosis • Complications
15	**Bronchial Asthma**	**Learning Objectives:-** • Definition • Epidemiology • Etiology • Clinical Manifestation • Investigations • Management of Acute Server Asthma • Long Term Management • Prevention

Sr. No.	Topic	Learning Objectives
16	**Protein Energy Malnutrition**	**Learning Objectives:-** o Introduction o Prevalence o Ecology o Pathogenesis A] Dietary theory B] Duration theory C] Gopalan's TheoryD] Role of infections E] Golden theory of free radicals o Clinical Spectrum o Differences between kwashiorkor &marasmus o Diagnosis- A] Assessment of dietary intake B] Assessment of Nutritional status - Anthropometri c1] Age dependent 2] Age independent 3] Screening Parameters - Morphological - Biochemical C] Classification of severity o Investigation o Management Step 1- Emergency phase Step 2 - Dietary ManagementStep 3 - Consolidation phase • Discharge criteria Prevention

9TH SEMESTER

Sr. No.	Topic	Learning Objectives
1	**Coma in Children**	**Learning Objectives:-** • Definition of coma • Grading of coma • Stages of coma • Basic Mechanism • Etiological factors • Clinical Features • lab (Investigations) • Differential Diagnosis (According toetiology, CF) • Management = 1) Acute Management ABC ofResuscitation 2) According to etiology 3) Nutritional 4) Rehabilitation • Prognosis
2	**Cerebral palsy & mental retardation**	**Learning Objectives:-** • Definition • Clinical approach to mentalretardation. • Clinical diagnosis, investigations andtreatment. • Causes of cerebral palsy • Diagnosis and management ofcerebral palsy.
3	**TORCH Group ofinfection**	**Learning Objectives:-** • Introduction- What is TORCH? • Transmission- From mother to baby. • Clinical features • Peculiarities of individual infections • Diagnosis- Limitations of TORCHserology

		• Management Prevention (RubellaVaccination
4	**Dengue fever andDHF**	**Learning Objectives:-** • Introduction

Sr. No.	Topic	Learning Objectives
		- Agents, Vector - Transmission • Etiology • Pathogenesis • WHO grading • Criteria for DHF • Investigation • WHO & IAP guidelines formanagement of DF & DHF • Prognosis
5	**Hypo & Hyperthyroidism**	**Learning Objectives:-** • Etiology • Clinical features • Diagnosis of diabetes andhypothyroidism, • Hyperthyroidism and goiter in children.
6	**Diabetic Mellitus andDiabetic Ketoacidosis**	**Learning Objectives:-** • Definition • Cause • Classification • Difference between adult andchildhood diabetics • Clinical Feature • Treatment • Manifestation of diabeticketoacidosis Diagnosis and Management
7	**Behavioral DisordersIn Children**	**Learning Objectives:-** • Introduction • Types of Behavioral Disorder • Etiology • Clinical Feature • Investigation • Management • Prognosis

8	**Shock**	**Learning Objectives:-** • Definition • Classification • Common Causes

Sr. No.	Topic	Learning Objectives
		• Clinical staging • Management of Shock • Resistant shock
9	**Short stature**	**Learning Objectives:-** • Definition, • A etiology, • Growth pattern • assessment of growth • Diagnostic approach • Treatment options & management
10	**Common Childhood Poisoning**	**Learning Objectives:-** • Definition • Cause • Classification • Kerosene poisoning • Snake poisoning • Diagnosis and Management • Prognosis
11	**Chromosom alDisorder**	**Learning Objectives:-** • Chromosome Definition & normalpatterns • Types Trisomy - 21, Turner's syndromeEdward syndrome • Definition • Genetics • Etiology • Clinical features • Complications • Investigation • Treatment and prognosis

12	**Adolescent Medicine**	**Learning Objectives:-** • Introduction-Adolescents • Development in Adolescents SMRstaging • Bunning issues in Adolescents

Sr. No.	Topic	Learning Objectives
		• Life skills education • Teens unit
13	**Fulminant HepaticFailure**	**Learning Objectives:-** • Introduction • Definition • Classification • Common Causes • Pathogenesis • Clinical staging • Laboratory Investigation • Management • Prognosis

TUTORIALS PROGRAMME VIII SEMESTER

Sr. No.	Topic
1	Vaccine
2	Lab Collection (Bulb, Side Lab)
3	Cereals & Pulses
4	Drug I
5	Neonatal Resuscitation (Catheters, Tubes)
6	Oxygen Therapy
7	Drug II
8	Instruments I (L.P. Aspirations)
9	Instruments II (Biopsy)
10	X – Rays
11	ORS &I.V.Fluids
12	Vitamins & Iron Preparation

TUTORIALS PROGRAMME IX SEMESTER

Sr. No.	Topic
1	Vitamins & Iron Preparations
2	Lab Collection (Bulb, Side Lab)
3	Cereals & Pulses
4	Oxygen Therapy
5	Neonatal resuscitation (Catheters, Tubes)
6	Drugs I
7	Drugs II
8	Instruments I (L.P.Aspirations)
9	Instruments II (Biopsy)
10	X-Rays
11	ORS & I.V.Fluids
12	Vaccine
13	Revision

MAPPING OF PROGRAMME OUTCOMES [POs] AND COURSEOUTCOMES [COs] OF MBBS PROGRAMMES

Course Code	Course Title
01010402	General Medicine & Allied
01010401	General Surgery & Allied
01010403	Obstetrics & Gynaecology
01010404	Paediatrics

General Medicine & allied: (01010404)		
CO No.	**At the end of the course, the learnershould be able to:**	**Mapped Programme Outcomes**
CO 1	At the end of the course the student shallhave adequate knowledge to diagnose common clinical conditions with specialreference to infectious diseases, nutritional disorder, metabolic disordersand environmental disorders.	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8,PO9
CO 2	Propose diagnostic and investigative procedures and ability to interpret them	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO9
CO 3	Outline various modes of management including drug therapy especially doses,side effects, toxicity, indications, contraindications and interaction	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8,PO9
CO 4	Provide first level management of acute emergencies promptly and efficiently anddecide on the timing and level of referral if required	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8,PO9
CO 5	Recognize geriatric disorders and theirmanagement	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8,PO9
CO 6	Apply clinical skills of history taking, clinical examination to diagnose commonmedical disorders and medical emergencies	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8
CO 7	Perform simple routine investigations likehaemogram, stool, urine, sputum and other biological fluids	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8,PO9
CO 8	To interpret simple X-Ray, ECG, CT scanand laboratory report findings	PO1,PO2,PO4,PO5,PO6,PO7,PO9
CO 9	Assist common bedside medical procedures like pleural tap, lumbarpuncture, bone marrow aspiration, catheterization, insertion of Ryle's tubeetc.	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8,PO9
CO 10	sympathetic and compassionate attitudetowards patient and their	PO1,PO2,PO3,PO5,PO7

	relatives	
CO 11	A curiosity to learn about medical research	PO1,PO2,PO4, PO5,PO6,PO7,PO8,

General Medicine & allied: (MB401)		
CO No.	**At the end of the course, the learnershould be able to:**	**Mapped Programme Outcomes**
		PO9
CO 12	To correctly record case files, medicalcertificates	PO1,PO2,PO3,PO5,PO7,PO9
CO 13	Diagnose and manage commonrespiratory illness	PO1,PO2,PO4,PO,PO6,PO7,PO8,PO9
CO 14	Should be able to diagnose provisionallyPsychiatric disorders	PO1,PO2,PO3,PO5, PO6,PO7,PO8,PO9
CO 15	Should be able to diagnose and managecommon dermatology problems as physician of first contact	PO1,PO2,PO4,PO, PO6,PO7,PO8,PO9

Paediatrics: (MB404)		
CO No.	**At the end of the course, the learnershould be able to:**	**Mapped Programme Outcomes**
CO 1	Assess growth and development duringneonatal period, childhood and adolescence and identify deviationsfrom normal .	PO1, PO2, PO3, PO4,PO5, PO7, PO9
CO 2	Measure the age appropriate requirement of nutrient and assess thenutritional status of healthy and sick children .	PO1, PO3, PO4, PO5, PO7, PO8, PO9
CO 3	Identify and manage malnourishment inchildren.	PO1, PO2, PO3, PO4,PO5, PO6, PO7, PO9
CO 4	Diagnose, manage and prevent common paediatric infectious diseases.	PO1, PO2, PO3, PO4, PO5,PO6,PO7,PO8,PO9
CO 5	Plan Diagnosis and management ofcommon systemic illnesses.	PO 1,PO 2,PO 4, PO 5,PO6,PO7,PO9
CO.6	Distinguish between normal and sicknewborn.	PO 1,PO 2,PO 3, PO4,PO 5,PO 6,PO 9
CO 7	Evaluate and Plan Management of paediatrics and neonatal emergencies.	PO 1,PO 2,PO 3, PO4,PO 5,PO 6, PO 9
CO 8	Identify and plan management of common surgical problems in children.	PO 1,PO 2,PO 3, PO4,PO 5, PO 6,PO 9
CO 9	Counsel parents about nutrition, immunisation, growth and acute andchronic illnesses.	PO 1,PO 3,PO 4, PO 5,PO6, PO7,PO8,PO9