DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

Syllabus for
III – MBBS
(Part - II)

2014 - 15
(Amended / Revised upto July 2019)

DPU

Dr. D.Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)
(Re-accredited by NAAC with a CGPA of 3.62 on a four point scale at 'A' Grade)
(An ISO 9001 : 2015 Certified University)

Dr. A. N. Suryakar
Registrar

Ref. No. : DPU/875-VII/2019
Date : 11/09/2019

NOTIFICATION

Whereas in pursuance of the following decisions taken by the Board of Management, it is hereby notified to all concerned that the **"Syllabus for III M.B.B.S. Part-I and Part II– 2014-15"** is **revised upto July 2019** and hereby published.

- Changes in syllabus for UG and PG in General Medicine, Pulmonary Medicine and General Surgery vide **Resolution No. BM-07-(iii)-4 dated 28th January, 2014.**
- Updation in UG and PG syllabus of General Medicine, **Obstetrics & Gynecology, Orthopedics, Anaesthesiology, ENT and Ophthalmology** vide **Resolution No. BM-04(i)-15, dated 31st March, 2015.**
- Structure format for evolution of History taking for 3rd Semester in General Medicine vide Resolution No. **BM-26(v)-15, dated 29th December, 2015.**
- Replacement of the term "one line answer by one Sentence answer in the Clinical subjects" vide **Resolution No. BM-26(ix)-15, dated 29th December, 2015**
- Introduction of Bioethical aspects in various chapters of all subjects vide **Resolution No. BM-26(xi)-15, dated 29th December, 2015**
- Modifications in UG Syllabus of Psychiatry **vide Resolution No. BM-17(ix)-16, dated 22nd September, 2016.**
- Consideration of weightage to the journal marks in internal assessment of III MBBS Clinical Subjects as continuous day to day assessment **vide Resolution No. BM-05(ii)-17, dated 7th April, 2017.**
- Conduct of prelim exam of 3rd MBBS only after the end of clinical postings, **vide Resolution No. BM-38(ix)-17, dated 27th December, 2017.**
- Enhancement of UG syllabus of General Medicine subject **vide Resolution No. BM-16(x)-18, dated 21st July, 2018.**
- Conduct of P.B.L. classes in E-library in the Department of Paediatrics **vide Resolution No.BM-35(ii)-18, dated 12th October, 2018.**
- Graduate Attributes, Programme Outcomes (POs), Course Outcomes (Cos) and gap analysis for all courses of UG and PG Programmes for Para-Clinical and **Surgical** Subjects **vide Resolution No. BM-10(vii)-19 dated, 12th April, 2019.**
- Interdisciplinary subjects **(for Surgical Subjects)** of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine **vide Resolution No. BM-10(viii) dated 12th April, 2019.**

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- Graduate Attributes, Programme Outcomes (POs), Course Outcomes (Cos) outcome analysis of Pos and Cos and mapping with objectives for all courses of UG and PG Programmes of Pre-Clinical and **Medicine** Subjects under the Faculty of Medicine **vide Resolution No. BM-27(x)-19 dated 30th July, 2019.**
- Interdisciplinary subjects **(for Medicine Subjects)** of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine **vide Resolution No. BM-27(xi) dated 30th July, 2019.**

The **"Syllabus for III M.B.B.S. Part-I and Part II– 2014-15" Revised upto July 2019** will be useful to all the concerned. This will come into force with immediate effect.

Dr. D. Y. PATIL VIDYAPEETH * PIMPRI, PUNE-18. * Deemed to be University *

(Dr. A. N. Suryakar)
Registrar

Copy to:
1. PS to Chancellor for kind information of Hon'ble Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
2. PS to Vice Chancellor for kind information of Hon'ble Vice Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
3. The Dean, Dr. D. Y. Patil Medical College Hospital & Research Centre, Pimpri, Pune
4. The Controller of Examinations, Dr. D. Y. Patil Vidyapeeth, Pune.
5. Director (IQAC), Dr. D. Y. Patil Vidyapeeth, Pune.
6. Web Master for uploading on Website.

www.dpu.edu.in

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

Course Code	Course Title
MB401	General Medicine & Allied
MB402	General Surgery & Allied
MB403	Obstetrics & Gynaecology
MB404	Paediatrics

General Medicine & allied: (MB401)		
CO No.	**At the end of the course, the learner should be able to:**	**Mapped Programme Outcomes**
401.1	At the end of the course the student shall have adequate knowledge to diagnose common clinical conditions with special reference to infectious diseases, nutritional disorder, metabolic disorders and environmental disorders.	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8, PO9
401.2	Propose diagnostic and investigative procedures and ability to interpret them	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO9
401.3	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
401.4	Provide first level management of acute emergencies promptly and efficiently and decide on the timing and level of referral if required	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8, PO9
401.5	Recognize geriatric disorders and their management	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8, PO9
401.6	Apply clinical skills of history taking, clinical examination to diagnose common medical disorders and medical emergencies	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8
401.7	Perform simple routine investigations like haemogram, stool, urine, sputum and other biological fluids	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8, PO9
401.8	To interpret simple X-Ray, ECG, CT scan and laboratory report findings	PO1,PO2,PO4,PO5, PO6,PO7,PO9
401.9	Assist common bedside medical procedures like pleural tap, lumbar puncture, bone marrow aspiration, catheterization, insertion of Ryle's tube etc.	PO1,PO2,PO3,PO4, PO5,PO6,PO7,PO8, PO9
401.1	sympathetic and compassionate attitude towards patient and their relatives	PO1,PO2,PO3,PO5, PO7
401.11	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 learner should be able to:**	**Mapped Programme Outcomes**
		PO9
401.12	To correctly record case files, medical certificates	PO1,PO2,PO3,PO5, PO7,PO9
401.13	Diagnose and manage common respiratory illness	PO1,PO2,PO4,PO,PO6,PO7,PO8,PO9
401.14	Should be able to diagnose provisionally Psychiatric disorders	PO1,PO2,PO3,PO5, PO6,PO7,PO8,PO9
401.15	Should be able to diagnose and manage common 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 learner should be able to:**	**Mapped Programme Outcomes**
404.1	Assess growth and development during neonatal period, childhood and adolescence and identify deviations from normal .	PO1, PO2, PO3, PO4, PO5, PO7, PO9
404.2	Measure the age appropriate requirement of nutrient and assess the nutritional status of healthy and sick children .	PO1, PO3, PO4, PO5, PO7, PO8, PO9
404.3	Identify and manage malnourishment in children.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9
404.4	Diagnose, manage and prevent common paediatric infectious diseases.	PO1, PO2, PO3, PO4, PO5,PO6,PO7,PO8,PO9
404.5	Plan Diagnosis and management of common systemic illnesses.	PO 1,PO 2,PO 4, PO 5,PO6,PO7,PO9
404.6	Distinguish between normal and sick newborn.	PO 1,PO 2,PO 3, PO 4,PO 5,PO 6,PO 9
404.7	Evaluate and Plan Management of paediatrics and neonatal emergencies.	PO 1,PO 2,PO 3, PO 4,PO 5,PO 6, PO 9
404.8	Identify and plan management of common surgical problems in children.	PO 1,PO 2,PO 3, PO 4,PO 5, PO 6,PO 9
404.9	Counsel parents about nutrition, immunisation, growth and acute and chronic illnesses.	PO 1,PO 3,PO 4, PO 5, PO6, PO7,PO8,PO9

PAEDIATRICS

PAEDIATRICS

These guidelines are based on MCI recommendations.

(1) GOALS :

To produce worthy doctors having sound knowledge of the basics of the pediatrics and with acumen to apply it in the treatment of the patients and to serve the community. The broad goal of the teaching of undergraduate students in Pediatrics is to acquire adequate knowledge and appropriate skills for optimally dealing with major health problems of children neonates and adolescents to ensure their optimal growth and development and to do promotive preventive and curative services.

(2) OBJECTIVES :

The course includes systematic instructions in growth and development, nutritional needs of a child, immunization schedules, management of common diseases of infancy and childhood, scope of Social Pediatrics and Counseling.

2.1 KNOWLEDGE :

At the end of the course, the student shall be able to:

2.1.1 Describe the normal growth and development during fetal life, neonatal period, childhood and adolescence and outline deviations thereof;

2.1.2 Describe the common pediatric disorders and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;

2.1.3. State age related requirements of calories, nutrients, fluids, drugs, *etc.* in health and disease;

2.1.4. Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;

2.1.5. Outline national programs relating to child health including immunization programs.

2.2 Skills

At the end of the course, the student shall be able to:

2.2.1 Take a detailed pediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigations and plan and institute therapy;

2.2.2 Take anthropometric measurements, resuscitate newborn infants with bag and mask at birth, prepare oral rehydration solu- tion, perform tuberculin test, administer vaccines available under current national programs, start an intravenous line and provide nasogastric feeding, observe vene-section and intraosseous infusion, if possible;

2.2.3 Conduct diagnostic procedures such as lumbar puncture, bone marrow aspiration, pleural tap and ascitic tap; observe liver and kidney biopsy;

2.2.4 Distinguish between normal newborn babies and those requiring special care and institute early care to all new born babies including care of preterm and low birth weight babies, provide correct guidance and counseling in breastfeeding;

2.2.5 Provide ambulatory care to sick children, identify indications for specialized/in- patient care and ensure

(3) INTEGRATION :

The training in Pediatrics should be done in an integrated manner with other disciplines, such as Anatomy, Physiology, Forensic Medicine, Community Medicine, Obstetrics and Physical Medicine and Rehabilitation, to prepare the student to deliver preventive, promotive, curative and rehabilitative services for care of children both in the community and at hospital as part of a team.

timely referral of those who require hospitalization.

(4) LEARNING METHOD :

4.1 Total Teaching hours : 100

4.2 theory lectures : 64 (4^{th}, 6^{th}, 8^{th} & 9^{th} term). Tutorials 36 (8^{th} & 9^{th})

4.3 clinical posting:
Three clinical posting of total 10 weeks -

4.3.1 6^{th} Semester (2 weeks)

4.3.2 8^{th} semester (4 weeks)

4.3.3 9^{th} Semester (4 weeks)
Clinical posting will also include bedside clinics

4.4 **Training During 4th Semester**
Only didactic lectures including essentials of Pediatrics. Topics covered are as follows-

4.4.1 Introduction to Pediatrics.

4.4.2 Normal growth.

4.4.3 Normal development.

4.4.4 Immunization.

4.4.5 Introduction to newborn and normal newborn baby.

4.4.6 Temperature regulation in newborn.

4.4.7 Breastfeeding and lactation management.

4.4.8 Infant and child feeding (include complementary feeding).

CLINICAL TRAINING IN 6TH SEMESTER
Didactic Lectures -

Clinical Practical sessions :
4.5 Specific Learning Objectives (Skills)

4.5.1 Take a detailed Pediatric history.

4.5.2 Conduct physical examination of children.

4.5.3 Perform anthropometry and interpret growth of the child.

4.5.4 Developmental assessment of a child.

4.5.5 Distinguish between normal newborn babies and those requiring special care (including low birth weight andpreterms).

4.5.6 Care of newborn at birth and lying in ward.

4.5.7 Counseling for breastfeeding/infant feeding.

CLINICAL TRAINING IN 8TH AND 9 TH SEMESTERS
Didactic lectures -

Clinical practical sessions

4.6. Specific Learning Objectives (Skills)

4.6.1 Take detailed pediatric history, conduct an appropriate physical and developmental examination of children including neonates, make clinical diagnosis, conduct common bedside procedures (peripheral smear, hemoglobin, urine and stool examination, CSF examination by microscope), interpret common laboratory investigations and plan and institute therapy.

4.6.2 Recognize emergencies including neonatal resuscitation and CPR and care to be instituted and relevant procedures performed.

4.6.3 Prepare oral rehydration solution, perform tuberculin test and administer vaccines.

4.6.4 Observation of diagnostic and therapeutic procedures such as intravenous access, nasogastric feeding, venesection, pleural tap, ascitic tap, bone marrow aspiration, lumbar puncture, liver and kidney biopsy.

(5) 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 Development

Must 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 ratio and arm span.

5.2.12 Age-independent anthropometric measurement-principles and 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 and physical 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 of treatment .

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 hemolytic anemia.

5.7 Respiratory System

Must 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 of pneumothorax, pleural effusion and empyema.

Desirable to know -

5.7.7 Multidrug resistant tuberculosis, bronchi-ectasis, pulmonary cysts

5.8 Gastrointestinal tract

Must 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 system

Must 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 of VSD, 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.

5.11 Genitourinary system

Must know –

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

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

5.11.3 Etiology, diagnosis and principles of management of acute renal failure.

5.11.4 Causes and diagnosis of obstructive uropathy in children.

5.11.5 Diagnosis and principles of management of chronic renal failure.

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 / Hypohthyroidism

Must know -

5.12.1 Etiology clinical features and diagnosis of diabetes and hypothyroidism, 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, classification according to weight and gestation, mortality rates.

5.13.2 Delivery room management including neonatal resuscitation and temperature control

5.13.3 Etiology, clinical features, principles of management and prevention 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. Normal variations 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 pass meconium 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-Electrolyte

Must know

5.15.1 Principles of fluid and electrolyte therapy in children

5.15.2 Pathophysiology of acid-base imbalance and principle of management

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 Problems

Must 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 Therapeutics

Must 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.

(6) TEACHING AND LEARNING METHODS ADOPTED APART FROM 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

(7) EVALUATION PATTERN OF THE INTERNAL ASSESSMENT

Internal assessment examinations in theory are conducted after 6th & 8th and 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 & 9th Semester 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 OBJECTIVES

4TH 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 milestones Growth charts
3	**Normal Growth & Development II**	**Learning Objectives :-** • Variations in normal growth and development • Behavioral disorders • Pervasive developmental disorders • Investigations of a case of developmental delay • 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 in breast feeding • Contents of breast milk • Term and preterm milk • Proper positions & latching • Problems with breast feeding
6	**Weaning and Artificial Feeding**	**Learning Objectives:-** • Definition

Sr. No.	Topic	Learning Objectives
		• Breast Feeding - Importance • Age of starting of weaning • Types of Food • Importance of weaning • Correct Feeding Pattern Faulty 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 • Complications Immunization
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 Clinical features 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 for investigations 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	**Prematurity and 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	**Neonatal sepsis**	**Learning Objectives:-** • Pathophysiology • Etiology • Clinical Features • Early and late onset sepsis • Investigations • Treatment • Long term complications
10	**Neonatal Convulsions and Birth Injuries**	**Learning Objectives:-** • Introduction • Etiology • Types and Clinical Manifestations • Emergency Management • Investigations • Long term management • Prognosis • Birth Injuries:- • Definition • Causative Factors • Management
11	**Hemorrhage in 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	**Hemolytic anemias**	**Learning Objectives:-** • Pathophysiology • Etiology • Classification of hemolytic anemias • Clinical Feature • Investigation Treatment
15	**Leukemia and 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 • Classification Common Causes
2	**Pneumonias & Empyema in Children**	**Learning Objective**:- • Definition • Epidemiology • Etiological Spectrum according to age • Community & hospital acquired Pneumonias • 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 Syndrome**	**Learning Objectives:-** • Diagnosis and Management • Treatment • Management Prognosis
5	**Nephrotic Syndrome**	**Learning Objectives:-** • Diagnosis and Management • Treatment • Management Prognosis
6	**ARF & CRF**	**Learning Objectives:-** • Definition • Genetics • Etiology

Sr. No.	Topic	Learning Objectives
		• C/F • Complications Investigation
7	**Hematuria and AGN**	**Learning Objectives:-** • Definition • Epidemiology • Complications • Investigation
8	**C. C. F. in Infancy in Childhood**	**Learning Objectives** • Definition • Genetics • Etiology • C/F • Complications Investigation
9	**Congenital (Acyanotic) Heart Disease Part - 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 Disease Part 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 different ages. • 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 Theory D] 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 - Anthropometric 1] 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 Management Step 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 to etiology, CF) • Management = 1) Acute Management ABC of Resuscitation 2) According to etiology 3) Nutritional 4) Rehabilitation • Prognosis
2	**Cerebral palsy & mental retardation**	**Learning Objectives:-** • Definition • Clinical approach to mental retardation. • Clinical diagnosis, investigations and treatment. • Causes of cerebral palsy • Diagnosis and management of cerebral palsy.
3	**TORCH Group of infection**	**Learning Objectives:-** • Introduction- What is TORCH? • Transmission- From mother to baby. • Clinical features • Peculiarities of individual infections • Diagnosis- Limitations of TORCH serology • Management Prevention (Rubella Vaccination
4	**Dengue fever and DHF**	**Learning Objectives:-** • Introduction

Sr. No.	Topic	Learning Objectives
		- Agents, Vector - Transmission • Etiology • Pathogenesis • WHO grading • Criteria for DHF • Investigation • WHO & IAP guidelines for management of DF & DHF • Prognosis
5	**Hypo & Hyperthyroidism**	**Learning Objectives:-** • Etiology • Clinical features • Diagnosis of diabetes and hypothyroidism, • Hyperthyroidism and goiter in children.
6	**Diabetic Mellitus and Diabetic Ketoacidosis**	**Learning Objectives:-** • Definition • Cause • Classification • Difference between adult and childhood diabetics • Clinical Feature • Treatment • Manifestation of diabetic ketoacidosis Diagnosis and Management
7	**Behavioral Disorders In 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	**Chromosomal Disorder**	**Learning Objectives:-** • Chromosome Definition & normal patterns • Types Trisomy -21, Turner's syndrome Edward syndrome • Definition • Genetics • Etiology • Clinical features • Complications • Investigation • Treatment and prognosis
12	**Adolescent Medicine**	**Learning Objectives:-** • Introduction-Adolescents • Development in Adolescents SMR staging • Bunning issues in Adolescents

Sr. No.	Topic	Learning Objectives
		• Life skills education • Teens unit
13	**Fulminant Hepatic Failure**	**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