

November-2001

[KE 101]

Sub. Code : 9000

M.D. DEGREE EXAMINATION.

(Old/New/Revised Regulations)

Part I — Branch I — General Medicine

Paper I — APPLIED BASIC SCIENCES

(Common to Branch I — General Medicine

Branch VII — Paediatric Medicine and

Branch XVI — Geriatric Medicine)

Time : Three hours

Maximum : 180 marks

Answer each subject in a separate answer book.

Answer any FOUR short notes in each subject

All questions carry equal marks

(ANATOMY)

- 1 (a) Formation and fate of neural tube
- (b) Anatomy and Histopathology of Adrenal gland
- (c) Pterygo-Palatine ganglion.
- (d) Foetal circulation.
- (e) Superior Mediastinum

(PHYSIOLOGY)

- 2 (a) Cushing's syndrome.
(b) Cytokines
(c) Factors affecting myocardial contractility
(d) Pancreatic enzymes.
(e) Hypocalcemic tetany

(BIOCHEMISTRY)

- 3 (a) Leukotrienes
(b) Thyroid function tests
(c) Glucagon
(d) Metabolic acidosis
(e) Composition of extra cellular fluid

(PHARMACOLOGY)

- 4 (a) Heparin.
(b) Calcium channel blockers
(c) Methotrexate
(d) Famotidine
(e) Ketorolac

(PATHOLOGY)

- 5 (a) Multiple Myeloma.
(b) Crohn's disease
(c) Budd-Chiari syndrome.
(d) Acute respiratory distress syndrome
(e) Chromosomal abnormality in Acute Leukemia.

(MICROBIOLOGY)

6. (a) Viral diarrhoea
(b) Infective endocarditis
(c) Candidiasis
(d) Laboratory diagnosis of AIDS
(e) Hydatid cyst

March-2002

[KG 101]

Sub. Code : 9000

M.D. DEGREE EXAMINATION.

(Old/New/Revised Regulations)

Part I — Branch I — General Medicine

Paper I — APPLIED BASIC SCIENCES

**Common to Branch I — General Medicine,
Branch VII — Paediatric Medicine and
Branch XVI — Geriatric Medicine)**

Time : Three hours

Maximum : 180 marks

Answer each subject in a separate Answer Book.

Answer any FOUR short notes in each subject.

All questions carry equal marks.

(ANATOMY)

- (a) Development of arch of Aorta.**
- (b) Cervico-thoracic ganglion.**
- (c) Anatomy and Histopathology of liver.**
- (d) Arterial supply to Brain.**
- (e) Nervous control of bladder.**

(PHYSIOLOGY)

2. (a) Breath Holding.
(b) Calcium Homeostasis.
(c) REM – Rapid Eye Movement Sleep.
(d) Prolactin.
(e) Cytokines.

(BIOCHEMISTRY)

3. (a) Phenylketonuria.
(b) Western Blot technique.
(c) Prostaglandins.
(d) Non-protein Nitrogenous Compounds.
(e) Anion Gap.

(PATHOLOGY)

4. (a) Hodgkin's Disease.
(b) Chronic Active Hepatitis.
(c) Malabsorption Syndrome.
(d) Hypothyroidism.
(e) Renal Osteodystrophy.

(PHARMACOLOGY)

5. (a) Chloroquine.
(b) Benzodiazepines.
(c) Frusemide.
(d) Radio active iodine.
(e) Oral antidiabetic agents.

(MICROBIOLOGY)

6. (a) M.M.R. Vaccine.
(b) Giardiasis.
(c) Coxiella Burnetti.
(d) Weil's disease.
(e) Cultivation of M. leprae.
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September-2002

[KH 101]

Sub. Code : 9000

M.D. DEGREE EXAMINATION.

(All Regulations)

Part I — Branch I General Medicine

Paper I — APPLIED BASIC SCIENCES

**(Common to Branch I — General Medicine,
Branch VII — Paediatric Medicine and Branch XVI -
Geriatric Medicine)**

Time : Three hours

Maximum : 180 marks

Answer each subject in a separate answer book.

Answer any FOUR short notes in each Subject.

All questions carry equal marks.

(ANATOMY)

1. (a) Anatomy and histopathology of thyroid gland.
 (b) Development of right atrium
 (c) Internal capsule, its blood supply and applied anatomy
 (d) Conduction system of heart and its blood supply
 (e) Inguinal canal.

(PHYSIOLOGY)

2. (a) Regulation of cardiac output
(b) Indications for pulmonary function test
(c) Neurogenic bladder
(d) Pancreatic enzymes
(e) Function of Platelets.

(BIOCHEMISTRY)

3. (a) Biological significance of fats
(b) Classification of amino acids
(c) Brief note on enzymes of clinical interest
(d) Brief note on buffer systems of blood
(e) Alkaptonuria.

(PHARMACOLOGY)

4. (a) Loop diuretics
(b) Vasodilators in congestive cardiac failure
(c) Treatment plan in drug resistant tuberculosis
(d) Selective beta blockers
(e) Treatment of Digitoxicity.

(PATHOLOGY)

5. (a) Pancoast tumour
(b) Sarcoidosis
(c) Von-Willibrand Disease
(d) Chromosomal abnormality in Acute Leukemia
(e) Indian childhood cirrhosis.

(MICROBIOLOGY)

6. (a) Infantile diarrhoea
(b) Laboratory diagnosis of AIDS
(c) Leptospirosis
(d) Role of viruses in Rheumatic heart disease
(e) Polio prevention Programme.

[KI 101]

Sub. Code : 9000

(PHYSIOLOGY)

M.D. DEGREE EXAMINATION.

(All Regulations)

Part I — Branch I — General Medicine

Paper I — APPLIED BASIC SCIENCES

(Common to Branch I — General Medicine,
Branch VII — Paediatric Medicine and Branch XVI —
Geriatric Medicine)

Time : Three hours

Maximum : 180 marks

Answer each subject in a separate answer book.

Answer any FOUR short notes in each Subject.

All questions carry equal marks.

(ANATOMY)

1. (a) Nuclear masses of thalamus
- (b) Porto-caval anastomoses and its clinical importance
- (c) Nerve supply of urinary bladder
- (d) Muscles of respiration
- (e) Vascular segments of liver

2. (a) Prostaglandines
- (b) Physiology of Ejaculation
- (c) Cytometrogram
- (d) Pacemakers of the heart
- (e) Mechanism of temperature regulation.

(BIOCHEMISTRY)

3. (a) Balanced diet for adult man (Vegetarian)
- (b) Metabolic actions of parathyroid hormone
- (c) Reducing substances other than glucose
- (d) Renal function test
- (e) Vitamin K.

(PHARMACOLOGY)

4. (a) Treatment of accelerated hypertension
- (b) Drug therapy in pulmonary hypertension
- (c) Recent H₂ receptor antagonists
- (d) Treatment of methyl alcohol poisoning
- (e) Choice of anaesthetic agents in coronary patients.

(PATHOLOGY)

5. (a) Non-Hodgkin's Lymphoma
- (b) Haemophilia
- (c) Pathological calcification
- (d) Retinal vascular changes in diabetes mellitus
- (e) Pathology of emphysema in a non-smoker.

(MICROBIOLOGY)

- (a) Pasteurization
- (b) Anaphylactic reaction
- (c) Role of microbiologist in drug resistant infective endocarditis
- (d) Aetiology of pyelonephritis
- (e) Atypical mycobacteria.
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[KJ 101]

Sub. Code : 9000

M.D. DEGREE EXAMINATION.

(All Regulations)

Part I — Branch I — General Medicine

Paper I — APPLIED BASIC SCIENCES

(Common to Branch I — General Medicine, Branch VII
— Paediatric Medicine and Branch XVI
Geriatric Medicine)

Time : Two hours

Maximum : 75 marks

One hour and forty five
minutes for Theory

Theory : 60 marks

M.C.Q. : 15 minutes

M.C.Q. : 15 marks

M.C.Q. must be answered **SEPARATELY** on the
Answer Book provided as per instructions given on the
first page of M.C.Q. Booklet.

Answer each subject in a **SEPARATE** answer book.

Answer any **FOUR** short notes in each subject.

All questions carry equal marks.

SECTION B
(PHARMACOLOGY)

(4 × 5 = 20)

1. (a) Beta-lactamase inhibitors.
- (b) Digoxin.
- (c) Methotrexate.

(d) Phenobarbitone.

(e) Heparin.

(PATHOLOGY)

(4 × 5 = 20)

2. (a) Acute Nephritic Syndrome.
- (b) Inflammatory Bowel Disease.
- (c) Cardiomyopathy.
- (d) Legionner's Pneummonia.
- (e) Leukemoid Reaction.

(MICROBIOLOGY)

(4 × 5 = 20)

3. (a) Acute HIV seroconversion illness.
- (b) Cellular immuno deficiency diseases.
- (c) Post streptococcal sequelae.
- (d) Multi drug resistant salmonellae.
- (e) Laboratory diagnosis of leptospirosis.

[KJ 101]

Sub. Code : 9000

M.D. DEGREE EXAMINATION.

(All Regulations)

Part I — Branch I — General Medicine

Paper I — APPLIED BASIC SCIENCES

Common to Branch I — General Medicine, Branch VII
— Paediatric Medicine and Branch XVI
Geriatric Medicine)

Time : Two hours
One hour and forty five
minutes for Theory
M.C.Q. : 15 minutes
Maximum : 75 marks
Theory : 60 marks
M.C.Q. : 15 marks

M.C.Q. must be answered **SEPARATELY** on the
Answer Book provided as per instructions given on the
first page of M.C.Q. Booklet.

Answer each subject in a **SEPARATE** answer book.
Answer any **FOUR** short notes in each subject.

All questions carry equal marks.

SECTION A

(ANATOMY)

(4 × 5 = 20)

Blood supply of spinal cord.

Development of Inter Atrial Septum.

Structure of supra renal gland.

(d) Bronchopulmonary segments and their
clinical significance.

(e) Median nerve in the hand.

(PHYSIOLOGY)

(4 × 5 = 20)

2. (a) Somatostatin.
(b) Atrial natriuretic factor.
(c) Renal failure indices.
(d) Interferons.
(e) Purpura.

(BIOCHEMISTRY)

(4 × 5 = 20)

3. (a) Prostaglandins
(b) Bile Pigments
(c) Glycolysis
(d) Acid Load Test
(e) Ketone Bodies.

August-2004

[KL 101]

Sub. Code : 9000

M.D. DEGREE EXAMINATION.

(All Regulations)

Part I — Branch I — General Medicine

Paper I — ALLIED CLINICAL SCIENCES
(APPLIED BASIC SCIENCES)

(Common to Branch I — General Medicine,
Branch VII — Paediatric Medicine and
Branch XVI — Geriatric Medicine)

Time : Two hours

Maximum : 75 marks

Theory : One hour and
forty five minutes

Theory : 60 marks

M.C.Q. : Fifteen minutes

M.C.Q. : 15 marks

Answer each subject in a **SEPARATE** answer book.

Answer any **FOUR** Short Notes in each subject.

All questions carry equal marks.

Answer **ALL** questions.

SECTION A

ANATOMY

(4 × 5 = 20)

- (a) Base of Heart.
- (b) Blood supply of spinal cord.
- (c) Histology of liver.
- (d) Bronchopulmonary segments.
- (e) Cavernous sinus.

PHYSIOLOGY

(4 × 5 = 20)

- (a) Thyroid function tests.
- (b) Temperature regulating mechanisms.
- (c) Myocardial contractility.
- (d) Gastric muscosal barrier.
- (e) Functions of cerebellum.

BIOCHEMISTRY

(4 × 5 = 20)

- (a) Inhibitors of Na⁺ – K⁺ ATPase.
- (b) Apoptosis.
- (c) Cholesterol turnover.
- (d) Genetic code.
- (e) Lipoproteins.

March-2006

[KO 136]

Sub. Code : 2033

M.D. DEGREE EXAMINATION.

Branch VII — Paediatrics

APPLIED BASIC SCIENCES IN PAEDIATRICS

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
twenty minutes**

Theory : 60 marks

M.C.Q. : Forty minutes

M.C.Q. : 40 marks

Answer any TWO questions in each subject.

Draw suitable diagrams wherever necessary.

I. Write short notes on : (12 × 5 = 60)

ANATOMY

(2 × 5 = 10)

- 1. Development of Diaphragm and its disorders in children.**
- 2. Anatomy of adrenal gland. Brief congenital adrenal hyperplasia.**
- 3. Bone formation, histology of bone, bone mineral homeostasis.**

PHYSIOLOGY

(2 × 5 = 10)

4. Hemoglobin synthesis. Enumerate its types of hemocytosis.
5. Regulations of respirations and pulmonary functions tests.
6. Hemodynamics of cyanotic spell.

BIOCHEMISTRY

(2 × 5 = 10)

7. Essential fatty acids.
8. Vitamin E.
9. Biochemical changes in diabetic keto acidosis.

MICROBIOLOGY

(2 × 5 = 10)

10. Leptospirosis.
11. Rotavirus.
12. Life cycle of malaria.

PHARMACOLOGY

(2 × 5 = 10)

13. Raceadotril.
14. Immunotherapy.
15. New anti convulsants.

PATHOLOGY

(2 × 5 = 10)

16. Histopathology of chronic active hepatitis and persistent hepatitis.
17. Pathogenesis of primary complex.
18. Importance of urine examination in paediatric practice.

September-2006

[KP 136]

Sub. Code : 2033

M.D. DEGREE EXAMINATION.

Branch VII — Paediatrics

APPLIED BASIC SCIENCES IN PAEDIATRICS

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
twenty minutes**

Theory : 60 marks

M.C.Q. : Forty minutes

M.C.Q. : 40 marks

Answer any TWO questions in each subject.

Draw suitable diagrams wherever necessary.

(ANATOMY)

(2 × 5 = 10)

(1) CSF circulation, diagram of ventricular system and CSF flow.

(2) Anatomy of urinary bladder, what are the types of vesicourethral deformities.

(3) Development of trachea and esophagus and types of tracheo esophageal fistula.

(PHYSIOLOGY)

(2 × 5 = 10)

- (4) Blood coagulation cascade.
- (5) Calcium and phosphorus regulation in the blood.
- (6) Hemodynamics of ventricular septal defect.

(BIOCHEMISTRY)

(2 × 5 = 10)

- (7) Non essential amino acids
- (8) Riboflavin
- (9) Biochemical changes in respiratory alkalosis.

(MICROBIOLOGY)

(2 × 5 = 10)

- (10) Chikangunya virus
- (11) HIV 1 and 2
- (12) Life cycle of *enerobius vermicularis* (pin worm)

(PHARMACOLOGY)

(2 × 5 =10)

- (13) Antisecretory drugs
- (14) NNRTI
- (15) Newer macrolides.

(PATHOLOGY)

(2 × 5 = 10)

- (16) Histopathology of lobar pneumonia
 - (17) Pathogenesis of active rickets
 - (18) Importance of sputum examination in pediatrics.
-

[KQ 131]

Sub. Code : 2033

M.D. DEGREE EXAMINATION.

Branch VII — Paediatrics

(Candidates admitted from 2004–05 onwards)

APPLIED BASIC SCIENCES IN PAEDIATRICS

Time : Three hours **Maximum : 100 marks**

Theory : Two hours and twenty minutes	Theory : 60 marks
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M.C.Q. : Forty minutes **M.C.Q. : 40 marks**

Answer any TWO questions in each Subject.

Draw suitable diagrams wherever necessary.

(ANATOMY)

(2 × 5 = 10)

1. (a) Describe the rotation of gut and its anomalies.
- (b) Describe the septae of the heart and its development.
- (c) Development of testes and its anomalies.

(PHYSIOLOGY)

(2 × 6 = 10)

2. (a) Digestion and absorption of proteins.
- (b) Neural Regulations of Respiration.
- (c) Functions of platelets and tests for platelets deficiency.

(BIOCHEMISTRY)

(2 x 5 = 10)

3. (a) Type I diabetes Mellitus.
- (b) Compounds formed from Cholesterol.
- (c) Lead poisoning and heme synthesis.

(MICROBIOLOGY)

(2 x 5 = 10)

4. (a) Routes of transmission of HIV infection.
- (b) Negri bodies.
- (c) Universal immunisation schedule.

(PHARMACOLOGY)

(2 x 5 = 10)

5. (a) Amikacin.
- (b) Inhalational steroids.
- (c) Vitamin A.

(PATHOLOGY)

(2 × 5 = 10)

6. (a) Aetiopathogenesis protein calorie malnutrition.
(b) Microscopic findings of skin lesions in Leprosy.
(c) Childhood Acute Leukaemias.

September-2007

[KR 135]

Sub. Code : 2031

M.D. DEGREE EXAMINATION.

Branch VII — Paediatrics

(Candidates admitted from 2004–05 onwards)

**Paper I — APPLIED BASIC SCIENCES IN
PAEDIATRICS**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
twenty minutes**

Theory : 60 marks

M.C.Q. : Forty minutes

M.C.Q. : 40 marks

Answer any TWO questions in each Subject.

Draw suitable diagrams wherever necessary.

(ANATOMY)

(2 × 5 = 10)

1. (a) Pyramidal tract and its clinical implication.
(b) Development of kidney and its anomalies in shape and position.
(c) Development of lung and its anomalies.

(PHYSIOLOGY)

(2 × 5 = 10)

2. (a) Regulation of acid-base balance.
(b) Digestion and absorption of carbohydrate.
(c) Physiology of puberty.

(BIOCHEMISTRY)

(2 × 5 = 10)

3. (a) Surfactant.
(b) Biochemical composition of Human milk and its importance.
(c) Bilirubin metabolism and its clinical importance.

(MICROBIOLOGY)

(2 × 5 = 10)

4. (a) Modes of infection transmission in new born.
(b) Blood culture.
(c) Determinants of immune response to vaccine.

(PHARMACOLOGY)

(2 × 5 = 10)

5. (a) Adverse reactions to drug.
(b) Actions of glucocorticoids.
(c) Inotropic agents.

(PATHOLOGY)

(2 × 5 = 10)

6. (a) Pathogenesis of septic shock.
(b) Pathophysiology of Hyaline membrane disease.
(c) Pathophysiology of Malaria.
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MARCH 2008

WS 11

[KS 135]

Sub. Code : 2030

M.D. DEGREE EXAMINATION.

Branch VII — Paediatrics

(Candidates admitted from 2004–05 onwards)

Paper I — APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time : Three hours

Maximum : 100 marks

Draw suitable diagrams wherever necessary.

- I. ANATOMY (Answer any FOUR questions) (4 × 5 = 20)
 1. Development of heart and its anomalies.
 2. Congenital dislocation of hip.
 3. Brachial plexus injury.
 4. Neural tube defects.
 5. Undescended testis.
 - II. PHYSIOLOGY (Answer any FOUR questions) (4 × 5 = 20)
 1. Renal function tests.
 2. Sex Hormones.
 3. Platelet count and its clinical significance.
 4. Digestion of food in mouth.
 5. Hemophilic factor.
 - III. BIOCHEMISTRY (Answer any THREE questions) (3 × 5 = 15)
 1. Essential amino acids.
 2. Vitamin D metabolism.
 3. Glucose tolerance test.
 4. Glycosylated Hemoglobin.
 - IV. PHARMACOLOGY (Answer any THREE questions) (3 × 5 = 15)
 1. Newer Antimalarial drugs.
 2. Galactogogues.
 3. Calcium channel blockers.
 4. Macrolides.
 - V. PATHOLOGY (Answer any THREE questions) (3 × 5 = 15)
 1. Importance of peripheral smear.
 2. Pathophysiology of AGN.
 3. Aschoff's Nodules.
 4. Hemorrhagic ascites.
 - VI. MICROBIOLOGY (Answer any THREE questions) (3 × 5 = 15)
 1. Screening tests for blood transfusion.
 2. Loeffler's syndrome.
 3. Investigations for enteric fever.
 4. Coomb's test.
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September 2008

[KT 135]

Sub. Code: 2030

M.D. DEGREE EXAMINATION

Branch VII – Paediatrics
(Candidates admitted from 2004-2005 onwards)

Paper I – APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time : Three hours

Maximum : 100 marks

I. ANATOMY - Answer any FOUR questions. (4 X 5=20)

1. Carpal tunnel syndrome.
2. Injury to facial nerve.
3. Optic chiasma.
4. Internal capsule and its clinical significance.
5. Broca's Area.

II. PHYSIOLOGY - Answer any FOUR questions. (4 X 5=20)

1. Lung function. Tests.
2. Hormones of adrenal gland.
3. Decerebrate and decorticate rigidity.
4. GFR (Glomerular Filtration Rate).
5. Polycythemia in children.

III. BIOCHEMISTRY - Answer any THREE questions. (3 X 5=15)

1. BMR and its clinical significance.
2. Reference protein.
3. Phenylketonuria.
4. Thiamine deficiency.

IV. PHARMACOLOGY - Answer any THREE questions. (3 X 5=15)

1. Newer Bronchodilators.
2. Insulin antagonists.
3. Muscle relaxants.
4. Fourth generation cephalosporins.

V. MICROBIOLOGY - Answer any THREE questions. (3 X 5=15)

1. Sepsis screening for Newborn.
2. Hydatid cyst.
3. Cell mediated immunity.
4. Leptospirosis.

VI. PATHOLOGY - Answer any THREE questions. (3 X 5=15)

1. Importance of urine examination.
 2. Transudate and exudate.
 3. Histopathology of Hodgkin's Lymph node.
 4. FNAC (Fine Needle Aspiration cytology).
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M.D. DEGREE EXAMINATION

Branch VII – PAEDIATRICS

**(Candidates admitted from 2004-2005 to 2007-2008
and candidates admitted from 2008-2009 onwards)**

Part I - Paper I – ALLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time : Three hours

Maximum : 100 marks

I. ANATOMY - Answer any FOUR questions. (4 x 5=20)

1. Embryology and pathogenesis of inguinal hernia.
2. CSF circulation and its clinical importance.
3. Development of heart and various congenital abnormalities.
4. Congenital abnormalities of lung with clinical manifestation.
5. Meckel's diverticulum.

II. PHYSIOLOGY - Answer any FOUR questions. (4 x 5=20)

1. Scheme of coagulation.
2. Maintenance of plasma osmolarity.
3. Physiology of lactation.
4. Metabolic functions of liver.
5. Iron metabolism.

III. BIOCHEMISTRY - Answer any THREE questions. (3 x 5=15)

1. Ketotic hypoglycemia.
2. Metabolic acidosis.
3. Role of renal function tests.
4. Anion gap.

IV. PHARMACOLOGY - Answer any THREE questions. (3 x 5=15)

1. Role of desferrioxamine in paediatric practice.
2. Anti retroviral therapy.
3. Macrolides.
4. Anti biotic prophylaxis.

V. MICROBIOLOGY - Answer any THREE questions. (3 x 5=15)

1. Serological markers of hepatitis B.
2. Drug resistance.
3. Specimen collection for urine culture.
4. Bacteriology of pyogenic meningitis in children.

VI. PATHOLOGY - Answer any THREE questions. (3 x 5=15)

1. Lab findings in HVS.
2. Acidham's test.
3. FISH.
4. Tuberculous primary complex.

September 2009

[KV 135]

Sub. Code: 2030

M.D. DEGREE EXAMINATION

Branch VII – PAEDIATRICS

**(Candidates admitted from 2004-2005 to 2007-2008
and candidates admitted from 2008-2009 onwards)**

Part I - Paper I – ALLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time : Three hours

Maximum : 100 marks

I. ANATOMY - Answer any FOUR questions. (4 x 5=20)

1. Embryology of diaphragm and types of congenital diaphragmatic hernias.
2. Foetal circulation and changes after birth.
3. Congenital abnormalities of larynx with clinical manifestations.
4. Neural tube defects.
5. Descent of testes and its abnormalities.

II. PHYSIOLOGY - Answer any FOUR questions. (4 x 5=20)

1. Function of platelets and tests.
2. Physiology of glucose homeostasis.
3. Complement pathway.
4. Glomerular filtration.
5. Physiological anaemia of infancy.

III. BIOCHEMISTRY - Answer any THREE questions. (3 x 5=15)

1. Thyroid function test and screening in newborn period.
2. Cortisone synthesis.
3. Metabolic alkalosis.
4. Regulation of potassium levels.

IV. PHARMACOLOGY - Answer any THREE questions. (3 x 5=15)

1. Diuretics in paediatric practice.
2. Newer anticonvulsants.
3. Anthelmintic drugs – old and new.
4. Meningococcal prophylaxis.

V. MICROBIOLOGY - Answer any THREE questions. (3 x 5=15)

1. Virological and serological diagnosis of dengue fever.
2. Antibiotic resistance.
3. Diagnosis of HIV infection.
4. Bacteriological diagnosis of tuberculosis.

VI. PATHOLOGY - Answer any THREE questions. (3 x 5=15)

1. Peripheral smear findings in Beta thalassemia.
2. Karyo typing.
3. Pathological findings in cystic fibrosis.
4. FAB classification of ALL.

March 2010

[KW 135]

Sub. Code: 2030

M.D. DEGREE EXAMINATION

Branch VII – PAEDIATRICS

Paper I – (for candidates admitted from 2004-2005 to 2007-2008) and

Part I – (for candidates admitted from 2008-2009 onwards)

ALLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary

Answer ALL questions

I. ANATOMY

(4 x 5=20)

1. Grading of splenic size.
2. Types of body build.
3. Erb's and Klumpke's paralysis.
4. Clubbing.

II. PHYSIOLOGY

(4 x 5=20)

1. Physiology of lactation.
2. Benign proteinuria.
3. Cardiac function in malnutrition
4. Extra intestinal steatorrhea.

III. BIOCHEMISTRY

(3 x 5=15)

1. Rehydration solution for malnutrition (ReSo Mal)
2. Hyponatremia.
3. Importance of urine examination.

IV. PHARMACOLOGY

(3 x 5=15)

1. Drug treatment of infective endocarditis.
2. New wormicidal (for protozoa and helminths)
3. Newer antituberculous drugs.

V. MICROBIOLOGY

(3 x 5=15)

1. Bird flu.
2. Nosocomial infections.
3. Widal test.

VI. PATHOLOGY

(3 x 5=15)

1. Tropical sprue.
2. Occult blood in stool.
3. Importance of reticulocyte count.

M.D. DEGREE EXAMINATION

Branch VII – PAEDIATRICS

ALLIED BASIC SCIENCES IN PAEDIATRICS

Paper I - (for candidates admitted from 2004-2005 to 2007-2008) and

Part I - (for candidates admitted from 2008-2009 onwards)

Q.P. Code : 202030

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. ANATOMY

(4 X 5=20)

1. Temporary and permanent teething.
2. Bone age in assessment of growth.
3. Embryological basis of development of Neural Tube Defects (NTDs)
4. Clubbing.

II. PHYSIOLOGY

(4 X 5=20)

1. Cerebrospinal fluid (CSF) circulation and basis of development of hydrocephalus.
2. Gastrointestinal function in Protein-Energy Malnutrition (PEM).
3. Physiology of lactation and basis of lactation failure.
4. Physiological basis of nutritional and refractory rickets.

III. BIOCHEMISTRY

(3 X 5=15)

1. Serum amino-acid pattern in protein-energy malnutrition.
2. Pleural aspirate biochemistry in viral, pyogenic and tuberculous conditions.
3. Foods affecting absorption of iron from the gut.

IV. PHARMACOLOGY

(3 X 5=15)

1. Drugs in treatment of refractory seizures.
2. New wormicidals (for protozoa and helminths)
3. Paracetamol toxicity.

V. MICROBIOLOGY

(3 X 5=15)

1. Life-cycle of *Taenia solium*.
2. Diagnosis of pertussis.
3. Chickenpox vaccine.

VI. PATHOLOGY

(3 X 5=15)

1. Etiopathogenesis of coeliac disease.
2. Etiopathogenesis of typhoid fever.
3. Tropical splenomegaly.

MAY 2011

[KY 135]

Sub. Code: 2030

M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
ALLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

Write notes on

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. ANATOMY			
1. Blood supply of internal capsule.	3	9	5
2. Fetal circulation.	3	9	5
3. Course of facial nerve.	3	9	5
4. Visual (Optic) pathway.	3	9	5
II. PHYSIOLOGY			
1. Extrinsic and Intrinsic coagulation.	3	9	5
2. Erythropoieses at various ages.	3	9	5
3. Counter current hypothesis.	3	9	5
4. Carbohydrate absorption in relation to lactose intolerance.	3	9	5
III. BIOCHEMISTRY			
1. Biochemical changes of cerebrospinal fluid in various meningitis.	3	9	5
2. Exudates and transudates of pleural fluid.	3	9	5
3. Biochemical changes in renal tubular acidosis.	3	9	5
IV. PHARMACOLOGY			
1. Newer antiepileptic drugs.	3	9	5
2. Acute iron toxicity.	3	9	5
3. Newer anti fungal agents.	3	9	5
V. MICROBIOLOGY			
1. Life cycle of Malaria.	3	9	5
2. Diagnosis of enteric fever.	3	9	5
3. ELISA.	3	9	5
VI. PATHOLOGY			
1. Pathogenesis of Reys syndrome.	3	9	5
2. Pathology of bacterial meningitis.	3	9	5
3. Etiopathogenesis of minimal change Nephrotic syndrome.	3	9	5

October 2011

[KZ 135]

Sub. Code: 2030

M.D. DEGREE EXAMINATION

BRANCH VII – PAEDIATRICS

ALLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. ANATOMY			
1. Galen vein malformation.	3	9	5
2. Cleft lip and cleft palate.	3	9	5
3. Developmental Dysplasia of Hip.	3	9	5
4. Endocardial cushion defect.	3	9	5
II. PHYSIOLOGY			
1. Glomerular filtration rate.	3	9	5
2. Consumptive coagulopathy.	3	9	5
3. Calcium and phosphorus metabolism and clinical significance.	3	9	5
4. Functions of Adrenal gland.	3	9	5
III. BIOCHEMISTRY			
1. Urine Screening Tests.	3	9	5
2. Reye syndrome.	3	9	5
3. Essential amino acids.	3	9	5
IV. PHARMACOLOGY			
1. Management of status Asthmaticus.	3	9	5
2. I.V. Immunoglobulins.	3	9	5
3. Betablockers.	3	9	5
V. MICROBIOLOGY			
1. Investigations for leptospirosis.	3	9	5
2. Lab diagnosis of pyogenic meningitis.	3	9	5
3. Adverse reaction to vaccine.	3	9	5
VI. PATHOLOGY			
1. Cerebral malaria.	3	9	5
2. Fulminant hepatic failure.	3	9	5
3. Classification of Acute lymphoblastic leukemia.	3	9	5

M.D. DEGREE EXAMINATION**BRANCH VII – PAEDIATRICS****ALLIED BASIC SCIENCES IN PAEDIATRICS****Q.P. Code : 202030****Time : 3 hours
(180 Min)****Maximum : 100 marks****Answer ALL questions in the same order.****Write notes on**

Pages (Max.)	Time (Max.)	Marks (Max.)
-------------------------	------------------------	-------------------------

I. ANATOMY

1. Circle of Willis.	3	9	5
2. Branchial Arches.	3	9	5
3. Development of Kidneys.	3	9	5
4. Ano-Rectal Anomalies.	3	9	5

II. PHYSIOLOGY

1. Phases of Gastric Acid Secretion.	3	9	5
2. Stretch Reflex.	3	9	5
3. Henle's Loop.	3	9	5
4. Physiology of Thyroid Maturation.	3	9	5

III. BIOCHEMISTRY

1. Bio-Chemical basis of Wilson's disease.	3	9	5
2. Phenylketonuria.	3	9	5
3. Bio-Chemical Role of Vitamin A.	3	9	5

IV. PHARMACOLOGY

1. Mechanism of Drug Action.	3	9	5
2. Side effects of Sodium Valproate.	3	9	5
3. Teratogenicity.	3	9	5

V. MICROBIOLOGY

1. Bacteriophages.	3	9	5
2. Types of Culture Media.	3	9	5
3. Gas Gangrene.	3	9	5

VI. PATHOLOGY

1. Etiopathogenesis of Respiratory Distress Syndrome.	3	9	5
2. Aschoff Nodule.	3	9	5
3. Pathological stages in Pneumonia.	3	9	5

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
ALLIED BASIC SCIENCES IN PAEDIATRICS
Q.P. Code: 202030**

Time: 3 hours(180 Min)

Maximum: 100 marks

Answer ALL questions in the same order.

Write notes on

**Pages Time Marks
(Max.) (Max.) (Max.)**

I. ANATOMY

- | | | | |
|--|---|---|---|
| 1. Development of interatrial septum and its defect. | 3 | 9 | 5 |
| 2. Porto systemic anastomoses and its application | 3 | 9 | 5 |
| 3. Nerve supply of urinary bladder and applied anatomy | 3 | 9 | 5 |
| 4. Course and applied anatomy of abducent nerve | 3 | 9 | 5 |

II. PHYSIOLOGY

- | | | | |
|--|---|---|---|
| 1. Intracranial Pressure monitoring | 3 | 9 | 5 |
| 2. Physiology of Fetal circulation | 3 | 9 | 5 |
| 3. Functions of Pancreatic enzymes | 3 | 9 | 5 |
| 4. Coagulation pathway and its relevance | 3 | 9 | 5 |

III. BIOCHEMISTRY

- | | | | |
|--|---|---|---|
| 1. Hemoglobin A,C and its importance | 3 | 9 | 5 |
| 2. Thyroid function tests and its interpretation | 3 | 9 | 5 |
| 3. Etiological diagnosis of Hyper kalemia | 3 | 9 | 5 |

IV. PHARMACOLOGY

- | | | | |
|---|---|---|---|
| 1. Low molecular Heparin and its uses | 3 | 9 | 5 |
| 2. 3 rd generation cephalosporins and its uses | 3 | 9 | 5 |
| 3. Insulin analogs and its advantages | 3 | 9 | 5 |

V. MICROBIOLOGY

- | | | | |
|---|---|---|---|
| 1. Helicobacter pylori infection and its clinical presentation. | 3 | 9 | 5 |
| 2. Cryptoccal Meningitis in HIV infected children | 3 | 9 | 5 |
| 3. Diagnosis of Dengue infection | 3 | 9 | 5 |

VI. PATHOLOGY

- | | | | |
|--|---|---|---|
| 1. Extra intestinal manifestations of Amoebiasis | 3 | 9 | 5 |
| 2. Pathology of Tuberculosis lymphadenitis | 3 | 9 | 5 |
| 3. CSF findings in Pyogenic meningitis | 3 | 9 | 5 |

(LC 135)

APRIL 2013

Sub. Code: 2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS**

**ALLIED BASIC SCIENCES IN PAEDIATRICS
Q.P. Code : 202030**

Time: Three Hours

Maximum: 100 marks

Write notes on:

I. ANATOMY (4X5=20)

1. Outline the development of Diaphragm.
2. Lingual Thyroid.
3. Spinal Dysraphisms.
4. Testicular Descent.

II. PHYSIOLOGY (4X5=20)

1. Pain Reflex.
2. Starling's Hypothesis.
3. Pavlov's Experiments on sham feeding.
4. Micturition Reflexes.

III. BIO-CHEMISTRY (3X5=15)

1. Galactosemia.
2. Cascade Pathway of Coagulation.
3. Methaemoglobinaemia.

IV. PHARMACOLOGY (3X5=15)

1. Insulin Resistance in disease states.
2. Spironolactone- Indications and mode of Action.
3. Parenteral Iron Therapy.

V. MICROBIOLOGY (3X5=15)

1. Polymerase Chain Reaction.
2. Coomb's Test (Anti globulin Test)
3. Atypical mycobacteria.

VI. PATHOLOGY (3X5=15)

1. Histopathology of Hodgkin's Lymphoma.
2. Pathophysiology of Necrotizing Enterocolitis.
3. Fat Embolism in disease states.

[LD 135]

OCTOBER 2013

Sub. Code: 2030

M.D. DEGREE EXAMINATION

BRANCH VII – PAEDIATRICS

ALLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time: Three Hours

Maximum: 100 marks

Write notes on:

I. ANATOMY

(4 x 5 = 20)

1. CSF circulation, diagram of ventricular system and CSF flow.
2. Development of trachea and esophagus and types of Tracheo-esophageal fistula.
3. Development of Testes and its anomalies.
4. Describe the septae of heart and its development.

II. PHYSIOLOGY

(4 x 5 = 20)

1. Functions of Platelets and tests for platelet deficiency.
2. Digestion and absorption of proteins.
3. Renal function tests.
4. Physiology of Lactation.

III. BIO-CHEMISTRY

(3 x 5 = 15)

1. Essential amino acids.
2. Glucose tolerance tests.
3. Surfactant.

IV. PHARMACOLOGY

(3 x 5 = 15)

1. Inotropic agents.
2. Amikacin.
3. Inhalational steroids.

V. MICROBIOLOGY

(3 x 5 = 15)

1. Negri Bodies.
2. Dengue virus.
3. Screening tests for Blood transfusion.

VI. PATHOLOGY

(3 x 5 = 15)

1. Hemorrhagic ascites.
2. Pathophysiology of Hyaline Membrane Disease.
3. Pathogenesis of active rickets.

[LG 135]

APRIL 2015

Sub. Code: 2030

M.D. DEGREE EXAMINATION

BRANCH VII – PAEDIATRICS

PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code : 202030

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

Write notes on:

I. ANATOMY

(4 x 5 = 20)

1. Neural tube defects.
2. Pyramidal tract.
3. Development of kidney.
4. Branchial arches.

II. PHYSIOLOGY

(4 x 5 = 20)

1. Role of kidney and lung in maintenance of acid base balance.
2. Erythropoietin.
3. Fetal circulation and its clinical significance.
4. Physiology of lactation.

III. BIO-CHEMISTRY

(3 x 5 = 15)

1. Hyperkalemia.
2. Thyroid function tests and screening in newborn period.
3. Functions of platelets.

IV. PHARMACOLOGY

(3 x 5 = 15)

1. Newer bronchodilators.
2. IV immunoglobulins.
3. Paracetamol toxicity.

V. MICROBIOLOGY

(3 x 5 = 15)

1. Atypical mycobacteria.
2. Chikungunya virus infection.
3. Blood culture.

VI. PATHOLOGY

(3 x 5 = 15)

1. Chronic active hepatitis.
2. Von Willibrand disease.
3. Autoimmune thyroiditis.

(LI 135)

APRIL 2016

Sub. Code:2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P.Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY:

(4 x 5 = 20)

1. Development of Thyroid gland.
2. Anatomy of facial nerve and its applied anatomy.
3. Development of great arteries of heart and embryological development of Tetralogy of Fallot.
4. Development of spleen and its significance.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Physiological importance of exocrine pancreas.
2. Complement cascade and its significance.
3. Physiology of respiratory failure.
4. Prostaglandins and their uses in children.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Hypokalemia and its clinical significance.
2. Ketone bodies and their significance.
3. Essential amino acids.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Inotropes in Pediatric practice.
2. Newer anticonvulsants.
3. Steroid sparing drugs in Nephrotic syndrome.

V. MICROBIOLOGY:

(3 x 5 = 15)

1. Diagnosis of leptospirosis.
2. ELISA and its applications.
3. H1N1 infection in children.

VI. PATHOLOGY:

(3 x 5 = 15)

1. Chromosomal abnormalities in Acute Lymphoblastic Leukemia.
2. Peripheral smear in Thalassemia major.
3. Disseminated intravascular coagulation.

(LJ 135)

OCTOBER 2016

Sub. Code:2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P.Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Muscles of respiration.
2. Describe the rotation of gut and its anomalies.
3. CSF circulation and its clinical importance.
4. Development of kidneys.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Calcium Homeostasis.
2. Neurogenic bladder.
3. Thyroid function tests.
4. Regulation of acid-base balance.

III.BIO-CHEMISTRY: (3 x 5 = 15)

1. Leukotrienes.
2. Surfactant.
3. Biochemical changes of cerebro spinal fluid in various meningitis.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Newer antimalarial drugs.
2. Diuretics in Paediatric practice.
3. Inotropic agents.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Leptospirosis.
2. Routes of transmission of HIV infection.
3. Negri Bodies.

VI. PATHOLOGY: (3 x 5 = 15)

1. Hodgkin's disease.
2. Importance of peripheral smear.
3. Lab findings in HUS (Hemolytic-Uremic Syndrome).

(LK 135)

MAY 2017

Sub. Code:2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P.Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Development of Adrenal gland.
2. Anatomy of Sciatic nerve and its applied anatomy.
3. Development of Diaphragm and embryological development of diaphragmatic hernia.
4. Development of pancreas and its significance.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Physiological importance of endocrine pancreas.
2. Coagulation cascade and its significance.
3. Physiology of Supraventricular tachycardia and normal cardiac cycle.
4. Acid Base balance and its significance in children.

III.BIO-CHEMISTRY: (3 x 5 = 15)

1. Hypernatremia and its clinical significance.
2. Uremia
3. Non essential amino acids.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Use of diuretics in Pediatric practice.
2. Disease modifying drugs in Nephrotic Syndrome.
3. Insulin antagonists.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Diagnosis of tuberculous meningitis.
2. PCR and its application
3. Group B streptococcal infection.

VI. PATHOLOGY: (3 x 5 = 15)

1. Bone marrow aspiration picture in Acute Myeloid Leukemia.
2. Pathology in Minimal change nephrotic syndrome.
3. Histopathology of liver in fulminant hepatic failure.

(LL 135)

OCTOBER 2017

Sub. Code:2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P.Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Development of testis and male external genitalia.
2. Blood supply of internal capsule.
3. Persistent vitellointestinal duct.
4. Chromosomal translocation.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Hormones of lactation.
2. Visual pathway.
3. Clinical importance of second heart sound.
4. Plasma osmolality.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Liver function tests.
2. Phenylketonuria.
3. Vitamin A- functions and requirements.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Fifth generation cephalosporins.
2. Systemic antifungal drugs.
3. Levetiracetam.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Ebola virus infection.
2. Newer diagnostic tests for malaria.
3. Stool examination for parasites.

VI. PATHOLOGY: (3 x 5 = 15)

1. Renal biopsy in nephrotic syndrome.
2. Red cell distribution width.
3. Pathology in Hirschsprung's disease.

(LM 135)

MAY 2018

Sub. Code: 2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P.Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Embryology of Atrial Septal Defect.
2. Changes that occur in Fetal circulation at birth.
3. Portosystemic anastomosis.
4. Brachial plexus injuries.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Thyroid hormone synthesis and regulation.
2. Principle behind oral rehydration therapy.
3. Regulation of serum calcium.
4. Jugular venous pulsation.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Albuminocytochemical dissociation in CSF analysis.
2. Bilirubin metabolism.
3. Urine protein estimation.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Methylxanthines.
2. Mechanisms of antibiotic resistance in bacteria.
3. Probiotics and prebiotics.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Gene Xpert.
2. Recent advances in diagnosis of typhoid fever.
3. Pneumocystis jiroveci.

VI. PATHOLOGY: (3 x 5 = 15)

1. Urine microscopic examination.
2. Pathophysiology of Rotavirus diarrhoea.
3. Macrocytic anaemia.

(LN 135)

OCTOBER 2018

Sub. Code: 2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY:

(4 x 5 = 20)

1. Haemodynamics of Ventricular septal defect.
2. Bell's Palsy.
3. Development of Thyroid and its developmental anomalies.
4. Little's area.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Regulation of respiration and types of abnormal breathing.
2. CSF circulation and types of cerebral edema.
3. Innocent murmurs.
4. Neuromuscular junction.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Methemoglobinemia.
2. G6PD Deficiency.
3. Serum Electrophoresis.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Teratogenicity.
2. TNF inhibitors.
3. Statins.

V. MICROBIOLOGY:

(3 x 5 = 15)

1. Coomb's Test.
2. Serological test for Rickettsial infection.
3. Infectious mononucleosis.

VI. PATHOLOGY:

(3 x 5 = 15)

1. Myeloproliferative disorder.
2. Tropical Splenomegaly.
3. Disseminated Intravascular Coagulation.

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. CSF circulation and its clinical importance and diagram of Ventricular system.
2. Bronchopulmonary Segments.
3. Cavernous Sinus.
4. Muscles of Respiration.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Outline Pain Pathway.
2. Physiology of Puberty in Boys and Girls.
3. Oxygenation Index.
4. Pathophysiology of Cyanotic Spell.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Neonatal Thyroid Screening.
2. Define Anion Gap and its Utility.
3. Vitamin E.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Recombinant Human Erythropoietin.
2. Treatment of Persistent Constipation.
3. Biologicals in pediatric clinical practice.

V. MICROBIOLOGY: (3 x 5 = 15)

1. How to investigate a child suspected to have T Cell Immunity Disorder?
2. Herd Immunity.
3. Laboratory Diagnosis of AIDS.

VI. PATHOLOGY: (3 x 5 = 15)

1. Pathophysiology of Bronchial Asthma.
2. Peripheral Smear Study In a) Thalassemia Major, b) Lead Poisoning, c) Megaloblastic Anaemia, d) Chronic Renal Failure, e) Malaria.
3. Aschoff's Nodules.

(LP 135)

OCTOBER 2019

Sub. Code: 2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Cleft lip and palate.
2. Neural tube defect.
3. Applied Anatomy of facial nerve.
4. Chromosomal translocation.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Hormones of lactation.
2. Coagulation cascade.
3. Normal cardiac cycle and supraventricular tachycardia.
4. Calcium phosphorus metabolism and clinical significance.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Phenylketonuria.
2. Thyroid function tests.
3. Galactosemia.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Inhalation steroids.
2. IV Immunoglobulin.
3. Newer anticonvulsants.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Zika virus infection.
2. Rapid diagnostic test for malaria.
3. Investigations for Leptospirosis.

VI. PATHOLOGY: (3 x 5 = 15)

1. Lab findings in Hemolytic Uremic Syndrome.
2. Pathophysiology of Necrotising Enterocolitis.
3. Von Willebrand Disease.

M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Development of Urogenital System.
2. Fetal circulation.
3. Cervical Lymph nodes.
4. Brachial Plexus.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Surfactant.
2. Physiology of thrombogenesis.
3. Physiology of sleep and sleep disorders.
4. ABO incompatibility.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Organic acidemia.
2. Metabolic alkalosis.
3. Congenital adrenal hyperplasia.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Treatment of Resistant TB.
2. Never antiviral drugs.
3. Monoclonal Antibodies.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Opportunistic infections in HIV.
2. Lab diagnosis.
3. PCR and its applications.

VI. PATHOLOGY: (3 x 5 = 15)

1. Genetic basis of Acute Lymphatic Leukemia.
2. Flowcytometry.
3. Pathophysiology of Acute graft Versus Host Disease.

M.D. DEGREE EXAMINATION

BRANCH VII – PAEDIATRICS

PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY:

(4 x 5 = 20)

1. Visual pathway
2. Brachial plexus anatomy and injuries
3. Development of external genitalia with reference to disorders of sexual differentiation
4. Embryology of Tetralogy of Fallot and atrial septal defect

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Cardiac conduction system with reference to ECG
2. Thyroid hormone synthesis and defects
3. Erythrocyte sedimentation rate
4. Pulmonary function tests

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. CSF biochemical changes in various CNS infections
2. Bilirubin metabolism
3. Homocystinuria

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Fifth generation cephalosporins
2. Bedaquiline
3. 3% saline

V. MICROBIOLOGY:

(3 x 5 = 15)

1. Novel Corona virus
2. Stool examination for worm infestations
3. Mechanisms of antibiotic resistance

VI. PATHOLOGY:

(3 x 5 = 15)

1. Neuroblastoma
2. Red cell indices
3. Procalcitonin

[MD 0721]

JULY 2021
(MAY 2021 SESSION)

Sub. Code: 2030

M.D. DEGREE EXAMINATION

BRANCH VII – PAEDIATRICS

PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Innervation of urinary bladder and discuss the effect of lesions at different levels.
2. Changes occurring at birth in fetal circulation.
3. Porto-caval anastomosis.
4. Structure and blood supply of internal capsule.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Jugular venous pulsation.
2. Thyroid function tests.
3. Role of kidney in acid base balance.
4. Complement system.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Liver enzymes and their importance.
2. Biotin.
3. Familial hypercholesterolemia.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Beta-lactamases and their inhibitors.
2. Teicoplanin.
3. Levetiracetam.

V. MICROBIOLOGY: (3 x 5 = 15)

1. Nipah virus.
2. Cytokines and inflammatory mediators.
3. Larva migrans.

VI. PATHOLOGY: (3 x 5 = 15)

1. Liver biopsy in neonatal cholestasis.
2. Urine microscopic examination.
3. Lupus nephritis.

[MD 1121]

NOVEMBER 2021
(OCTOBER 2021 SESSION)

Sub. Code: 2030

M.D. DEGREE EXAMINATION

BRANCH VII – PAEDIATRICS

PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Embryology of Inter ventricular Septum formation and anatomical types of VSD
2. Portal vein
3. Para nasal air sinuses
4. Abducent nerve

II. PHYSIOLOGY: (4 x 5 = 20)

1. Plantar Reflex
2. Ventilation perfusion ratio
3. Blood Buffers
4. Synthesis and excretion of Bile pigments

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Dry Blood Sampling for Lysosomal storage disorders
2. Hyper Ammonemia
3. Lactic acidosis

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Extended spectrum penicillins
2. Water soluble vitamins
3. Toxic Epidermal Necrolysis

V. MICROBIOLOGY: (3 x 5 = 15)

1. Anti microbial stewardship
2. Innate Immunity
3. Real time PCR

VI. PATHOLOGY: (3 x 5 = 15)

1. Pancytopenia
2. SIRS
3. Apoptosis

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MD 05222]

MAY 2022

Sub. Code: 2030

M.D. DEGREE EXAMINATION

BRANCH VII – PAEDIATRICS

PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY:

(4 x 5 = 20)

1. Erb's and Klumpke's paralysis.
2. Embryology of Fallot's Tetralogy.
3. CSF Circulation and its Clinical importance.
4. Muscles of Respiration.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Respiratory function test.
2. Iron Metabolism.
3. Regulation of Acid Base Balance.
4. Scheme of coagulation.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Pompe's disease.
2. Metabolic acidosis.
3. Non-essential aminoacids.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Macrolides.
2. Galactogogues.
3. Newer anti tuberculous Drugs.

V. MICROBIOLOGY:

(3 x 5 = 15)

1. Serological markers of Hepatitis- B.
2. Life cycle of Malaria.
3. Blood culture.

VI. PATHOLOGY:

(3 x 5 = 15)

1. VonWillbrand disease.
2. Leukemoid reaction.
3. Pathogenesis of Septic shock.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

[MD 1022]

OCTOBER 2022

Sub. Code: 2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY:

(4 x 5 = 20)

1. Boundaries and the applied anatomy of Middle ear.
2. Veins for vascular access in the neck.
3. Circle of Willis.
4. Foramen of Morgagni.

II. PHYSIOLOGY:

(4 x 5 = 20)

1. Neural control of respiration.
2. Starling's forces.
3. Deep tendon reflexes.
4. Proprioception.

III. BIO-CHEMISTRY:

(3 x 5 = 15)

1. Lactose intolerance.
2. Biochemical changes in Kwashiorkor.
3. Biotin.

IV. PHARMACOLOGY:

(3 x 5 = 15)

1. Tachyphylaxis
2. Imatinib.
3. Anti diphtheritic serum.

V. MICROBIOLOGY:

(3 x 5 = 15)

1. Type IV hypersensitivity.
2. Infection prevention and control in PICU.
3. Herpes simplex virus.

VI. PATHOLOGY:

(3 x 5 = 15)

1. Good pasture's disease.
2. Peripheral smear picture in Beta Thalassemia.
3. Proto oncogenes.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MD 0723]

**JULY 2023
(MAY 2023 EXAM SESSION)**

Sub. Code: 2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Lymphatic drainage of face and its significance.
2. Defects in the development of Neural tube.
3. Portacaval anastomosis.
4. Embryology of 4th Branchial arch.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Physiology of Lactation.
2. Formation of RBC and factors affecting it.
3. Fetal to neonatal transition of breathing.
4. Intestinal motility and its disorders.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. HPLC (High Performance Liquid Chromatography) in Hemoglobinopathies.
2. New born screening.
3. Diagnosis of Debrancher enzyme deficiency.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Doxycycline.
2. Intra Thecal Methotrexate.
3. Inhaled corticosteroids.

V. PATHOLOGY: (3 x 5 = 15)

1. Role of Immunohistochemistry in diagnosis of Tumors.
2. Liquid biopsy.
3. Pathological changes in Kidney in glomerulosclerosis.

VI. MICROBIOLOGY: (3 x 5 = 15)

1. Gene Xpert.
2. Inflammatory markers in Pediatrics.
3. RT – PCR tests.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MD 1223]

**DECEMBER 2023
(OCTOBER 2023 EXAM SESSION)**

Sub. Code: 2030

**M.D. DEGREE EXAMINATION
BRANCH VII – PAEDIATRICS
PAPER I – APPLIED BASIC SCIENCES IN PAEDIATRICS**

Q.P. Code: 202030

Time: Three Hours

Maximum: 100 Marks

Write notes on:

I. ANATOMY: (4 x 5 = 20)

1. Vocal Cord Paralysis.
2. Developmental anomalies of Kidney.
3. Lumbricals muscle weakness and its interpretation.
4. Thoracic duct.

II. PHYSIOLOGY: (4 x 5 = 20)

1. Physiology of Postural hypotension.
2. Functions of the Liver and tests to interpret it.
3. Urine concentration mechanism.
4. Metabolism of B12 and its defects.

III. BIO-CHEMISTRY: (3 x 5 = 15)

1. Role of ABG analysis in poisoning.
2. Management of Hyperkalemia.
3. LDH.

IV. PHARMACOLOGY: (3 x 5 = 15)

1. Role of Dietary supplements in Pediatrics.
2. Milrinone.
3. Mechanisms of Resistance of β lactam antibiotics.

V. PATHOLOGY: (3 x 5 = 15)

1. Describe smear study of a Hemolytic anemia.
2. Urine microscopy in office practice.
3. BCG adenitis.

VI. MICROBIOLOGY: (3 x 5 = 15)

1. Antimicrobial stewardship.
2. Diagnosis of fungal infections.
3. Diagnosis and categorization of Influenza like illnesses.
