

Exam. marks

■ **Day one : paper 1 : 150 marks : 3 hours**

15 short questions :.....

■ **Day two: paper 2: 100 marks: 2 hours**

Classic MCQ : 60 marks (60 statement) : each 1 mark

Problem solving : 40 marks (20 case) : each 2 marks

- On the average 1 minute for each classic MCQ : 2-3 minutes for each problem solving

■ **150 : clinical and oral final exam**

110: department exam:

History: (10 marks) – examination (50 marks) – investigations (10 marks)-treatment (10 marks) – differential diagnosis(10 marks) – 20 (oral general).

40: diagnostic tools :

X-rays ,CT, blood gas, CBC, emergency urine (or stool report), photos

Chapters grading ???

Part 2: 9 chapters

Part 1: 7 chapters

Questions titles- How to answer

- **Enumerate** causes of = list causes of = mention causes of
- **Diagnosis = diagnostic approach= Diagnostic criteria**
- **Diagnostic investigations** = Investigations: (laboratory + imaging)
- **Management** : Diagnosis in short - Treatment
- **Treatment** whenever possible, write shortly prevention
- **Types of** : discuss shortly features of each type

General advises : 1: read? , 2: start with?, 3: write?

Questions grading

A :

B :

C :

Infections

- Rashes caused by childhood infections - - Causes of skin rashes
- Causes of maculopapular rash =Differential diagnosis of maculopapular rash (A):table;126
- Measles
 - . Clinical manifestations of measles (A) table
 - . Complications of measles.(A)
- Rubella :
 - . Clinical manifestations of german measles.??_table
 - . Complications of german measles (B)??.
- Roseola infantum: human herpes virus type 6 : clinical picture
- Scarlet fever
 - . Clinical picture: table
 - . Complications of scarlet fever and its prevention (B)
- Infectious mononucleosis : clinical manifestations : (A)
- Chicken pox: varicella
 - . Clinical manifestations of varicella (A)
 - . Differential diagnosis (or causes) of papulovesicular rash (A)
 - . Complications of chicken pox(A)
- Herpes simplex infections : (A)
Human herpesviruse (herpes virus 1, 2 - varicella zoster virus- cytomegalovirus
 Epstein Barr virus- human herpes virus 6,7,8) : مش سوال
- Parvovirus B19 : (B)
- Enterovirus infections (B)
- Mumps:
 - . Clinical manifestations of mumps : A
 - . Complications of mumps: A
 - . Differential diagnosis of mumps : B
- Whooping cough. Diagnosis of whooping cough : Q : Cough causes : see respiratory
- Fevers
 - . Grades of fever.: MCQ
 - . Causes of fever (B)
 - . Septicemia : Etiology and clinical features: (A)
Management of septicemia (clinical features- investigations-treatment) (A)
 - . Causes of prolonged fever – investigations of prolonged fever (FUO) (A)
 . Management of febrile infant or child: (assessment الورقة)
- Vaccines: A
 - . Hepatitis vaccines-BCG- polio vaccines
 - . Program of vaccination in Egypt (obligatory vaccines)
 - . Vaccination in the first year of life (compulsory and non compulsory)
 - . Viral vaccines
 - . Non compulsory vaccines.
- N.B : meningitis + TB : with infections in Tom Lissauer ??**
- NB** : Enumerate worldwide caused of death in children less than 5 years
 (diarrhea- pneumonia – TB- measles- HIV- Malaria - neonatal death – injuries)

Nutrition

■ Normal nutrition

Nutritional requirement

- . Energy requirement - Protein requirement: MCQ
- . Why infants and children are more vulnerable to poor nutrition? (A)
- . Assessment of nutritional status (A)

Breast feeding

- . Factors that maintain milk flow.(B)
- . Factors that increase(promote) breast milk production(A)
- . Advantages of breast feeding (A)
- . Advantages of breast feeding for infants(A)
- . Anti-infective properties of breast milk =Protective mechanism in breast milk(A)
- . Disadvantages of breast feeding (A)
- . Why exclusive breast feeding in developing countries is lifesaving

- . Nutritional properties of breast milk = Composition of human milk (A)
- . Indicators of adequate breast feeding(A)
- . Drugs secreted in breast milk.(B)
- . Management of early minor problems with breast feeding.(A)

Artificial feeding

- . Indications of formula feeding
- . Types of formulas (or one of them):

Weaning or part of it : general rules of weaning (A)

■ Nutritional disorders

Marasmus

- . Etiology of marasmus (c) ?
- . Clinical manifestations and complications of marasmus (c)

Kwashiorkor

- . Constant findings variable findings in kwashiorkor (B)??
- . Biochemical changes in kwashiorkor (B)??
- . Management or part of it (Nutritional management of protein energy malnutrition) B

Failure to thrive (A) very important

- . Causes of failure to thrive
- . Investigations of failure to thrive : page 101

Rickets

- . Causes of rickets = types of rickets (vitamin D deficiency + other types) (A)
- . Clinical manifestations and complications of rickets (B).
- . Biochemical changes in rickets (B) ??
- . Treatment of vitamin D deficiency
- . Hypervitaminosis D

Prinatal medicine - Neonatal medicine

- Resuscitation

- . Steps of resuscitation of the newborn : A
- . Reasons for failure of resuscitation (failure to respond to resuscitation) : A
- . Hypoxic ischemic encephalopathy : B (ورقة)

- Normal newborn

- . **Routine examination of newborn infant** :A: characteristics of normal newborn
- . **Lesions in newborn infants which resolve spontaneously**: A
- . Neonatal biochemical screening: B
- . Neonatal reflexes - Significance of Moro reflex : A

- Abnormalities of growth and gestational period

- . **Clinical features of premature infant = maturational changes in appearance**
- . **Medical problems of preterm infant: enumerate** (very important)
- . **Stabilizing the preterm or sick infant** : A
- . Small for gestational age: B Or Large for gestational age :B:
- . **Complications of infant of diabetic mother(complications of maternal diabetes)**

- Other abnormalities

▪ Respiratory distress

- . **Causes of respiratory distress IN FULL TERM INFANT**: A (very important)
- . **Respiratory distress syndrome** : A
- . Management of respiratory distress syndrome
- . **Transient Tachypnea of the newborn: PS or Meconium aspiration syndrome** : B

▪ Seizures : causes of neonatal seizures : A

- . Neonatal apnea: B
- . Hypothermia (cold injury) : A or Hypoglycemia: B

▪ Jaundice

- . **Physiological jaundice**:A
- . Causes of neonatal jaundice
- . Physiological (unconjugated) – Pathological (unconjugated and conjugated)
- . **Causes of neonatal jaundice according to the date of onset** (very important))
- . **Assessment of neonatal jaundice**: A
- . **Kernicterus**
- . Management of unconjugated jaundice =treatment

▪ Hemorrhagic disorders

- . Hemorrhagic disease of the newborn (A)
- . Causes of neonatal bleeding. OR Differential diagnosis of neonatal bleeding(A)

▪ Causes of neonatal anemia or neonatal anemia ; A

▪ Infections

- . Clinical presentations of congenital infections – investigations in neonatal infections
- . **Neonatal septicemia**:clinical features of neonatal septicemia:A (very important)

▪ Birth injuries?

- . Caput-cephalhematoma-subgaleal hematoma - Intracranial hemorrhage)

Growth and development

- **Factors affecting physical growth (A)**
- **Growth curves (A)**
- Motor development.- part of it
 - During infancy (gross motor skills)
 - During early childhood (Refined skills)
 - During late childhood : fine motor skills
- **Mental development or part of it**
 - During infancy (social development)
 - During early childhood (speech development)
- Puberty ?? MCQ : Causes of precocious puberty?(B)- causes of delayed puberty
- Causes of Macrocephaly – causes f microcephaly
- **Causes or differential diagnosis of short stature (A)**

Genetics

- **Structural chromosomal abnormalities-numerical chromosomal abnormalities**
- Clinical situation suspecting chromosomal abnormalities:
- Clinical manifestations of trisomy 21.- late medical problems of Down syndrome
- **Genetic types of Down syndrome:** cytogenetics of Down syndrome: **A**
- Prenatal diagnosis of Down syndrome
- **Sex chromosomal abnormalities:** **A**
- **Characteristic features of autosomal dominant inheritance:****A**
- **Characteristic features of autosomal recessive inheritance:****A**
- **Examples of Autosomal inheritance**
- **Characteristic features of Sex linked recessive inheritance :****A**
- **Characteristic features of Sex linked dominant**
- **Examples of sex linked inheritance**
- **Multifactorial inheritance✓✓✓ - characters and examples:** **A**
- Clinical features of fragile x syndrome??
- Genetic counseling.

Respiratory

I- Respiratory tract infections

• Upper respiratory tract infection

1. Nasopharyngitis : clinical features and complications of nasopharyngitis): C
2. Otitis media: complications of otitis media: B
3. Tonsillitis : streptococcal pharyngitis):B

• Lower respiratory tract infections

1. Acute bronchitis

- . Acute bronchitis clinical picture: B (part of cough causes)

2. Acute bronchiolitis

- . **Acute bronchiolitis : A**
- . Treatment of acute bronchiolitis

3. Pneumonias

- . Causes and pathological types of pneumonia:MCQ
- . **Diagnosis of pneumonia. A**
- . Complications of pneumonia
- . Treatment pneumonia

4. Suppurative lung disease: C

5- Tuberculosis

- . Clinical manifestations of pulmonary TB : B
- . **Diagnostic investigations of pulmonary TB (do not forget tuberculin test):A**
- . Prevention of pulmonary tuberculosis:B
- . Treatment of (chemotherapy of) tuberculosis : B

II- Bronchial asthma

- . Asthma triggers: B
- . Diagnosis of bronchial asthma : A ??
- . Clinical grading of acute asthma : clinical assessment of acute asthma: A
- . Assessment of the child with chronic asthma : A
- . Management of acute severe asthma
- . Preventive treatment of asthma : Long term control medications for asthma: B

- Wheezing : Causes of recurrent wheeze in infancy: A

- Cough : causes of recurrent or persistent cough: A

Enumerate common causes of cough in infancy and childhood

Hematology

I- Anemias

- . Causes of anemia IN INFANTS AND CHILDREN: A
- . Clinical features AND COMPLICATIONS of thalassemia major. : A
- . Laboratory diagnosis (investigations) of beta thalassaemia.
- . Treatment of thalassaemia major: A
- . Clinical features of sickle cell anemia : A
- . Crises in sickle cell anemia. A
- . Hereditary Spherocytosis: B
- . Glucose 6 phosphate dehydrogenase deficiency : A
- . Iron deficiency anemia : Any part of it : A
- . Differential diagnosis of microcytoic hypochromic anemia : B

II- Purpura

- . Causes of PURPURA : A
- . Clinical picture of ITP. B
- . Laboratory investigations of thrombocytopenic purpura: A
- . Differential diagnosis of thrombocytopenic purpura: B
- . Treatment (therapy)of immune thrombocytopenia
- . Types of aplastic anemia.: BONE MARROW FAILURE SYNDROMES : B
- . Henoch Schonlein purpura: B
- . Diagnosis of Acute leukemia : A

II- Hemophilia

- . Hemophilia : A any part – hemophilia complications: A
- . Von Willebrand disease : B

Cardiology

Murmurs or Innocent murmurs. A : very important

- Causes of Cyanosis : causes of central cyanosis :A

- Investigations of cardiac diseases

I- Rheumatic fever ; A

- . Diagnosis of rheumatic fever OR part of it (Carditis)
- . Treatment of rheumatic fever - Prevention of rheumatic fever

II- Congenital heart disease

- . Causes of congenital heart disease: B
- . Clinical presentations, investigations and treatment of : VSD: B
- . Clinical presentations, investigations and treatment of Coarctation of the aorta or PDA : or FALLOT (A) - TGA : B
- . Treatment of hypercyanotic spells
- . ASD - Pulmonary stenosis - aortic stenosis : c
- . Complications of congenital heart disease : A

III- Infective endocarditis: A . Management of infective endocarditis

Endocrinology

I- Hypothyroidism: A

- . Etiology of hypothyroidism: (types and causes of hypothyroidism)
- . Causes of primary hypothyroidism
- . Clinical manifestations of congenital hypothyroidism in neonates or early manifestations of congenital hypothyroidism
- . Late manifestations of congenital hypothyroidism
- . Acquired hypothyroidism: etiology- clinical manifestations- investigations
- . Diagnostic investigations of congenital hypothyroidism

II- Diabetes :A

- . Clinical presentations of diabetes mellitus
- . Differential diagnosis of diabetes mellitus
- . Complications of diabetes mellitus
- . Diabetic ketosis ✓✓✓: clinical presentations, investigations, DD, treatment
- . Treatment of diabetic ketosis
- . Treatment of ordinary cases of diabetes mellitus

Gastroenterology

I- Vomiting : A

- . Causes of vomiting in infancy .
- . Causes of vomiting in preschool children
- . Gastroesophageal reflux : complications

II- Abdominal pain

- . Causes of acute abdominal pain OR part of it : Medical causes of acute abdominal pain
- . Causes of no organic (dysfunctional pain)
- . Causes of organic recurrent abdominal pain

III- Diarrhea : A

- . Causes of diarrhea
- . **Conditions which mimic gastroenteritis**
- . Clinical diagnosis of infective diarrhea(gastroenteritis)
- . Complications of severe gastroenteritis

- . Clinical picture of dehydration
- . Hypertonic or (hypotonic) or isotonic dehydration
- . Why infants are at special risk for dehydration
- . **Clinical ASSESSEMENT (grades of) dehydration**

- . Investigations of gastroenteritis.
- . Oral rehydration solution
- . Hone management or hospital management of gastroenteritis
- . Intravenous rehydration
- . Causes of persistent diarrhea

IV- Painful oral lesions

- . Monilial stomatitis (B) . Herpetic stomatitis . Herpangina

Hepatology

Hepatitis: A

- . Diagnosis of viral hepatitis- clinical forms of acute hepatitis
- . investigations of acute HEPATITIS - HEPATITIS MARKERS
- . Prevention of hepatitis
- . **Acute liver cell failure : { - etiology - clinical picture- laboratory evidences }**
- . **Causes of chronic liver disease in children.** Causes of chronic hepatitis
- . Diagnosis of chronic hepatitis

Cholestasis

- . Causes of Colestasis:
- . **Causes of prolonged (persistent) neonatal jaundice: VERY IMPORANT**
 Unconjugated: ENUMERTAR
 Conjugated : CAUSES OF CHOLESTASIS
- . Laboratory approach of cholestasis- laboratory approach to identify the cause
- . Management of cholestasis

Portal hypertension

- . Causes of portal hypertension
- . Treatment of portal hypertension

Liver cirrhosis : chronic liver cell failure

- . **Manifestations of hepatic dysfunction ; clinical picture of chronic liver cell failure**
- . Investigations of chronic liver disease -

Neurology

II- Mental retardation

- . Causes of developmental delay (genetic – acquired)
- . Investigations in a case of developmental delay

III- Convulsions

- . Causes of convulsions
- . Criteria of typical febrile convulsions : very important
- . Epilepsy ???

IV- CNS infections

- . Etiology of bacterial meningitis
- . Diagnosis of bacterial meningitis: A
- . CSF changes in different types of meningitis: VERY IMPORTANT
- . Complications of meningitis (early and late) : VERY IMPORTANT
- . Treatment of acute bacterial meningitis: A
- . Etiology of viral encephalitis – viral agents causing encephalitis
- . Diagnostic investigations of encephalitis

V- Neuromuscular disorders

- . Common causes of Floppy infant. A
- . Acute paralysis (causes – comment on ?)
- . Guillian Bare syndrome
- . Causes of progressive motor weakness?.

Clinical cases??? . hydrocephalus - Clinical types of cerebral palsy

Emergencies

I- Respiratory emergencies

- Stridor : differential diagnosis of acute upper airway obstruction: very important
Treatment of stridor
- Respiratory distress: . Causes of respiratory distress (A)
- Types and causes of respiratory failure (A)
- Oxygen therapy : complications of oxygen therapy (B)

2- Cardiac emergencies

- Acute congestive heart failure (A): causes or treatment
- Circulatory failure (shock); causes or manifestations

4- Neurological emergency: coma causes - grades

Nephrology

1- Nephrotic syndrome

- . Clinical presentations and possible complications of nephrotic syndrome: A
- . Laboratory investigations in nephrotic syndrome: A
- . Management of minimal lesion nephrotic syndrome: A
- . Causes of proteinuria: A
- . Differential diagnosis of generalized edema

2- Glomerulonephritis

- . Causes of glomerulonephritis: B
- . Clinical presentations of acute post streptococcal glomerulonephritis: A
- . Diagnostic investigations of acute post streptococcal glomerulonephritis: A
- . Treatment of acute post streptococcal nephritis: A

3- Urinary tract infection : VERY IMPORTANT

- . Clinical presentations of urinary tract infections IN INFANTS AND CHILDREN: A
- . Diagnostic investigations of urinary tract infections: A
- . Investigations in recurrent urinary tract infections. A
- . Treatment of urinary tract infections

4- Acute renal failure

- . CAUSES of acute renal failure: A - Hemolytic uremic syndrome
- . Treatment of acute renal failure: A

5- Chronic renal failure

- . Etiology and diagnosis of chronic renal failure
- . Management of chronic renal failure = treatment

6- Nocturnal enuresis: management

7- Clinical presentations of renal disease

- Causes of Hematuria : A : VERY IMPORTANT
- Causes of hypertension: A
- Causes of palpable kidney
 - Unilateral :
 - . Renal tumors : wilms
 - . Renal vein thrombosis
 - . Obstructed hydronephrosis
 - . Multicystic kidney
 - . Compensatory hypertrophy
 - Bilateral
 - . Polycystic kidney - . Bilateral renal vein thrombosis

Final examination M. B. B. Ch.

Answer the following short essay questions: (150 Marks)

1. a. Enumerate causes of neonatal convulsions. Mention its immediate management.
(10 Marks)
b. List characteristic features and complications of preterm babies.(10 Marks)
2. a. Describe causes and clinical manifestations of the floppy infant (10 Marks)
b. Describe management of acute severe asthma.(10 Marks)
3. a. List causes of acute diarrheal illness.(10 Marks)
b. Mention the laboratory approach of a case of cholestasis.(10 Marks)
4. Describe clinical features, investigations and treatment of persistent ductus arteriosus.
(10 Marks)
5. Mention the compulsory vaccination schedule in Egypt.(10 Marks)
6. Describe indicators of adequate breast milk intake. (10 Marks)
7. List features of autosomal dominant inheritance. Give 3 examples. (10 Marks)
8. Mention factors affecting physical growth in infants and children. (10 marks)
9. Describe the treatment of acute congestive heart failure.(10 Marks)
10. List causes and differential diagnosis of iron deficiency anemia.(10 Marks)
11. Give the treatment plan of diabetic ketoacidosis. (10 Marks)
12. Mention clinical presentations and diagnostic investigations of urinary tract infections.
(10 Marks)

Part 1 : 70 marks	Part 2 : 80 marks
Growth: 10 marks Genetics: 10 marks Neonatology: 20 marks Nutrition: 10 marks Infections and vaccines: 10 marks Endocrinology: 10 marks	Respiratory ; 10 marks Cardiology: 10 marks Hematology : 10 marks Hepatology: 10 marks Gastroenterology: 10 marks Nephrology: 10 marks Neurology : 10 marks Emergency: 10 marks