

Examination for Master Degree in: Pediatrics
Course Title: Pediatrics
Date: November 7, 2020 (Paper II)
Time allowed: 3 Hours
Total Assessment Marks: 100 (4 Pages)



Tanta University
Faculty of Medicine
Department of Pediatrics

All questions should be tried:

Q 1) Hepatology (20 marks)

Discuss in short: definition, mechanisms, etiology, pathology, clinical manifestations, complications, investigations and management of infantile cholestasis.

Q 2) Behavioral Pediatrics (16 marks)

A. Give an account about (Breath Holding Spells). (5)

B. Mention the definition of Enuresis and Encopresis. (4)

C. **Problem solving:** (3)

Hany is ten-year-old boy coming to Neuro-Psychiatry outpatient Clinic (NPC) of Pediatric Department with his parents complaining of his school phobias, repeated absences and rejection by peers. History of recent bilateral bruises of face and forearms explained by parents as corporal punishment from his peers and even teachers. On examination, contusions and bruises were noticed to be very mild and healing. Consciousness was normal but Hany looks depressed and somewhat confused, inattentive and drowsy. He failed to do (draw a person test) with very bad hand writings, No abnormalities on laboratory findings and investigations except mild hypochromic microcytic anemia. Hany blurts answers even of simple questions about name, home and school addresses and his father's work. Hany clothes were wet and of bad odor due to bed wetting and loss of bladder control. Hany parents complained of his repeated school failures and absences and losses from family house. When his school files revised, bad low and deteriorating scores observed. IQ testing gave him the score of 50. His big sister suffered similar but less severe conditions of developmental delay and school failures. Dietetic history and examination showed over-weight with history of excessive use of junk and sweetened foods.

1. What is the most likely possible diagnosis?
2. What are the investigations to be requested?
3. What are medications and foods that may help?

D. MCQs:

1. Best treatment of nocturnal enuresis is: (2)
 - a. ADH (Vasopressin)
 - b. Enuresis Alarm Devices (EAD.s) with instructions
 - c. Tri-cyclic antidepressants (TCAs)
 - d. Brain Stimulants (BS)
2. Best drugs used for treatment of autism: (2)
 - a. Methylphenidate (Ritalin)
 - b. Sedatives
 - c. Hyper-baric Oxygen (HBO)
 - d. Risperidone

C. Problem Solving: (3)

A 12-yr-old Tanner stage 2 female has weight loss, polyuria, and polydipsia. Her bl. glucose level is 650 mg/dl, and her BUN value is 75 mg/dl. She is tachypneic and has a serum HCO₃ level of 5. Serum Na is 132 mmol/l and K is 3.2 mmol/l. Therapy begun with insulin and aggressive fluid management. Five hours later, she complains of a headache, has double vision, and quickly becomes unresponsive.

1. What is the diagnosis?
2. Calculate her serum osmolality?
3. What is the suitable treatment of such case?

D. MCQs:

1. A patient with hypocalcemia demonstrates short stature and brachydactyly with a short middle finger. The serum parathyroid hormone level is elevated. The most likely diagnosis is: (2)
 - a. Rickets
 - b. Hypoparathyroidism
 - c. Hypomagnesemia
 - d. Pseudohypoparathyroidism
2. Gonadotropin-dependent precocious puberty (true precocious puberty) is associated with all of the following **EXCEPT**: (2)
 - a. Female predominance
 - b. Hypothalamic hamartoma
 - c. Hypothyroidism
 - d. Menstruation as the first sign

=====Good Luck=====

Chairman of Department
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2. Which of the following is considered toxic side effect of steroid therapy? (2)
- Pseudo-tumor cerebri
 - Flaring of infection
 - Abdominal striation
 - Hypokalemia
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Q 5) Genetics (16 marks)

A. Discuss gene mutation. (5)

B. Give an account on genetics of Down syndrome. (4)

C. Problem solving: (3)

A 6 weeks old female infant had feeding problems, hypotonia, and emesis for 3 wk. During the last week she developed an erythematous exfoliative generalized rash and partial alopecia. Laboratory data reveal metabolic acidosis, ketosis, and hyperammonemia.

- What is the most likely diagnosis?
- How to confirm the diagnosis?
- What are the complications of this case?

D. MCQs:

1. Infants with galactosemia are susceptible to infections by: (2)

- E.coli
- S typhi
- S. pneumoni
- Staph aureus

2. The following are a triplet repeat expansion disorders Except: (2)

- Fragile X syndrome
 - Huntington disease
 - Kearns-Sayre syndrome
 - Myotonic dystrophy
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Q 6) Endocrinology (16 marks)

A. Give a short note on the diagnostic approach for a child with short stature. (5)

B. Mention the criteria for diagnosing constitutional delay of growth. (4)

Q 3) GIT (16 marks)

A. Give a short account on refractory sprue in celiac patients. (5)

B. Enumerate causes of selective intestinal malabsorption. (4)

C. Problem solving: (3)

A 5-month-old boy presented by recurrent attacks of intestinal obstruction with abdominal distension, bilious vomiting and constipation. Between these attacks the patient suffered from diarrhea, malabsorption and protein losing enteropathy.

- 1. What are the diagnostic steps needed?**
- 2. What are the specific radiological signs?**
- 3. What is the treatment?**

D. MCQs:

1. Zinc supplementation in children with diarrhea in developing countries leads to the following EXCEPT: (2)

- Improved diarrhea recovery rates
- Decreased use of ORS
- Reduced severity and duration of diarrhea
- Reduced hospital admissions

2. The histological features of celiac disease include all of the following EXCEPT: (2)

- Crypt hyperplasia
- Increase in thickness of the mucosa
- Increase in intraepithelial lymphocytes
- Increase in inflammatory cells in lamina propria

Q 4) Nephrology (16 marks)

A. Write short account on recurrent gross hematuria in children. (5)

B. Enumerate causes of hemolytic uremic syndrome. (4)

C. Problem solving: (3)

A 12-year-old girl presented by facial edema and fatigue over the last month with low grade fever. Blood pressure was normal. Urine analysis +++ proteins and ++ blood, CBC Hb 8.9, WBCs 3200, platelets 45000, Cr 0.6.

- 1. What is the next best step for her evaluation?**
- 2. What is the most likely diagnosis?**
- 3. Do you recommend renal biopsy for this case?**

D. MCQs:

1. Which is true regarding fractional excretion of sodium? (2)

- It can distinguish between renal and post-renal acute kidney injury
- Its normal level in neonates and children is the same
- Its level is less than 1% in pre-renal failure
- Its level is not affected by diuretics