



**All questions must be answered:**

<b>Q1</b>	Discuss: a. Causes, differential diagnosis and laboratory diagnosis of pathological fracture b. Role of endocrinal variations in lipid and lipoprotein metabolism c. Immunodiffusion: types, principles and their clinical applications	10 15 15
<b>Q2</b>	Mention: a. Types of PCR, principles and applications b. Laboratory investigations of a case of septicemia	10 10
<b>Q3</b>	Write short note on the following: a. CSF proteins and their clinical significance b. Differential diagnosis of metabolic acidosis	10 15
<b>Q4</b>	Draw an algorithm for male infertility	15

Prof. Morad ahmed Morad  
Prof. Hala Nagy  
Prof. Gehan Atea

**Department Chairmen**  
**Prof. Manal Eid**

Examination for (Master Degree Clinical Pathology)

Course Title : Clinical Chemistry

Date : 7/10/ 2019

Time Allowed : 3.0 hours

Total marks : 100 marks

لائحة ٢٠٠٥ وما قبلها



Tanta University  
Faculty of Medicine  
Department of Clinical Pathology

**All questions must be answered**

marks

**I-Discuss:**

- a-Clinical value of cortisol assay and lab. diagnosis of it's disorders (15)  
b-Chromatography technique: types, principles and applications (15)  
c-Pleural fluid analysis and it's diagnostic tools (10)

**II-Mention the following:**

- a-Enzymes involved in lipid metabolism (15)  
b-Pre-analytical errors in measurement of calcium (10)  
c-Assessment of renal concentrating ability (10)

**III-Give an account on:**

- a-Hyponatremia: clinical significance and method of estimation (15)  
b-Helicobacter pylori: pathogenesis , laboratory assessment and treatment (10)

- موعد امتحان العملي يومي ٣ و ٢ من نوفمبر ٢٠١٩ (٢، ٣، ١١/١١/٢٠١٩)

- موعد امتحان الشفوي الخامس من نوفمبر ٢٠١٩ (٥، ١١/١١/٢٠١٩)

رئيس القسم

أ.د/ منال عبد الواحد عيد

Examination for MSc in Clinical Pathology

Exam Hematology

Date : 13/10/2019

Time Allowed : 3 hour

Total marks : 40 marks



Tanta University  
Faculty of Medicine  
Department of Clinical Pathology

**All questions must be answered :**

**Q1 – Give an account of:**

- A. Differential diagnosis of chronic lymphoproliferative disorders.  
(8 marks)
  
- B. Acute myeloblastic Leukemia ( classification and diagnosis)  
(8 marks)

**Q2- Determine short notes on:**

- A. Causes and laboratory diagnosis of hemolytic anemia .  
(7 marks)
  
- B. When and why anemia occurs in patients with iron deficiency .  
(5marks)
  
- C. Idiopathic Thrombocytopenic Purpura. (6 marks)

## PATIENT HISTORY:

A 2-year old boy was brought to the emergency department by his mother for oozing blood from his mouth following a fall nearly 6 hours ago. His mother related that he tended to bleed for prolonged periods from his immunization sites, but there was no history of bruising or hematomas. The patient was on antibiotics for a recent ear infection. There was no known family history of a bleeding disorder.

## PHYSICAL EXAMINATION:

*GENERAL:* Alert, in no apparent distress, development appropriate for age

*Physical examination:* Two small lacerations on the inside of lower lip, oozing blood. Remainder of exam within normal limits (notably, no petechia, bruises, joint swelling)

## INITIAL LABORATORY TESTS:

Hemoglobin	12.3 g/dl	(10.5-13.5)
Hematocrit	35.4%	(33.0-39.0)
WBC	$7.9 \times 10^9/L$	(6.0-17.5)
Platelets	$190 \times 10^9/L$	(156-369)
PT	11.3 s	(10.0-12.8)
APTT	49.6 s	(28.0-38.0)
APTT MIX	35.7 s	(28.0-38.0)
FACTOR VIII	0.16 U/ml	(0.60-1.50)
FACTOR IX	0.82 U/ml	(0.60-1.50)
THROMBIN TIME	17.3 s	(16.0-22.0)
vWF AG	0.16 s	(0.78-1.53)
RCOF	<0.10 U/ml	(0.50-1.50)

RCOF : Ristocetin cofactor (RCOF) activity

- 1- What is the most likely cause of prolonged bleeding in this case?  
(3 marks)
- 2- What is the normal function of causative factor of this abnormality in hemostasis?  
(3 marks)

**Good luck**