

Name \_\_\_\_\_

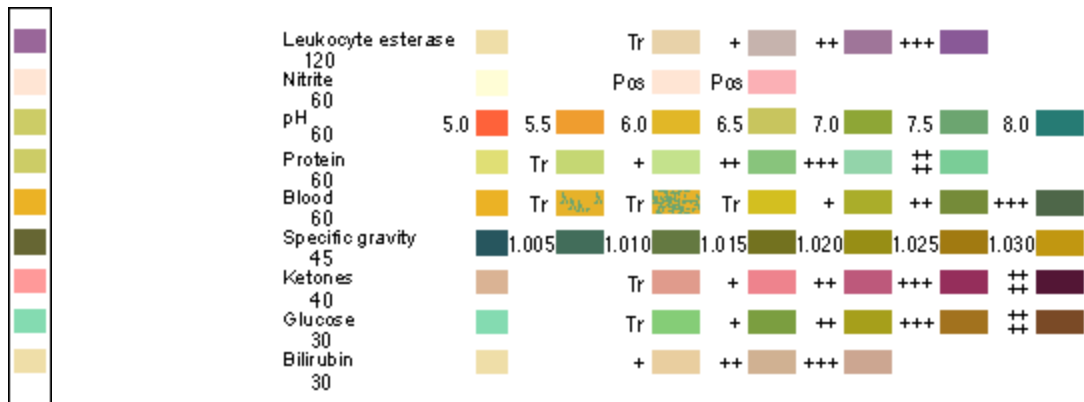
Date \_\_\_\_\_

\_\_\_\_\_/20 points

**MLAB 1211 UA/BF****Laboratory 4 Exercise****Case Study 1 - History**

A 15-year-old boy is brought to the pediatrician by his mother because he has had a fever with shaking chills for the past day. The child noticed that his urine was cloudy in the toilet.

On physical examination, he has a temperature of 39.6 C (103.2F) and has mild right low back tenderness. He has not had an appetite and feels tired.

**Macroscopic Urinalysis**

Characteristic	Result
Color	Yellow
Appearance	Turbid
Leukocyte Esterase	3+
Nitrite	Pos
pH	6.5
Protein	Neg
Blood	Neg

	Specific Gravity	1.015
	Ketones	1+
	Glucose	Neg
	Bilirubin	Neg

### Microscopic Urinalysis

Characteristic	Result
WBC/hpf	>50/hpf
RBC/hpf	5-10/hpf
Casts	Many WBC
Other	Occasional transitional cells

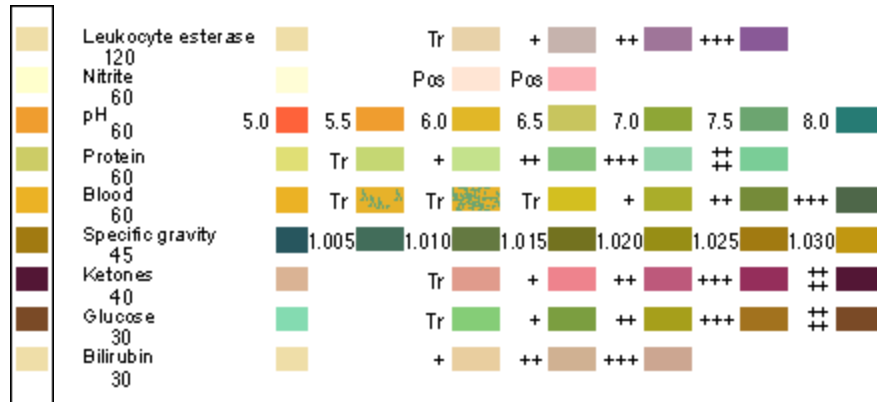
**Please answer the following questions in complete sentences.**

1. How do you explain the appearance of the urine? How do you relate this to other findings? (2 points)
2. What is the significance of the finding on physical examination? (1 point)
3. Is there a relation between the color of the urine and the diagnosis? (2 points)
4. What findings on microscopic urinalysis are of help in this case? (4 points)
5. What is the suspected diagnosis? (1 point think kidneys)

## Case Study 2 - History

A 29-year-old woman has noted an increase in her appetite and thirst over the past six months, although she has lost five pounds. The patient also has had considerable frequency of urine output, without any associated pains from urinating. On physical examination her vital signs include normal temperature, pulse of 72 beats per minutes, respirations – 16/min, and her blood pressure is normal. A midstream clean catch urine sample is obtained.

## Macroscopic Urinalysis



Characteristic	Result
Color	Yellow
Appearance	Clear
Leukocyte Esterase	Neg
Nitrite	Neg
pH	5.5
Protein	Neg
Blood	Neg
Specific Gravity	1.025
Ketones	4+
Glucose	4+
Bilirubin	Neg

## Microscopic Urinalysis

Characteristic	Result
WBC/hpf	None

RBC/hpf	1-2/hpf
Casts	None
Other	None

**Please answer the following questions in complete sentences.**

1. What disease is suggested by these findings? (1 point)
2. Will all sugars be detected by the reagent test strip for glucose? Why? (3 points) (HINT: review the chemical reactions of the strip)
3. What is the significance of the positive test for ketones? What would you suspect if the ketones were positive and everything else was normal? (2 points)
4. What other laboratory tests should be done in this patient? (2 points – think blood and correlation)
5. What are some complications of her disease that can affect the urinary tract? (2 points)