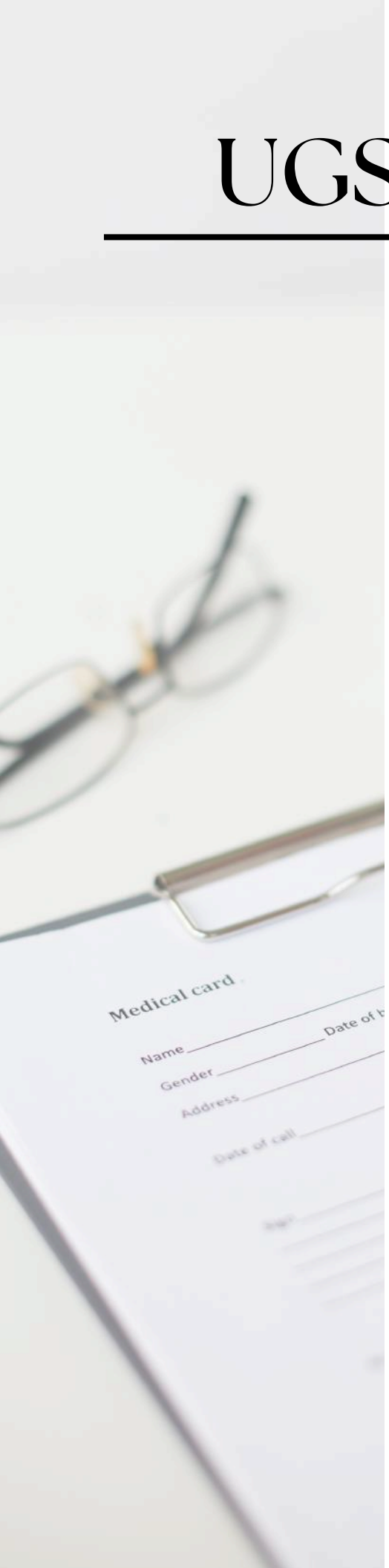
UGS-Biochemistry



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Lecture 1

ACID BASE BALANCE

Corrected by:

Qasim El Shajrawi

UGS-Biochemistry Lecture 1

1)A man came to hospital with releasing his stomach contents with PH= 7.55, PCO2= 52, HCO3-= 40 what does he most likely has? Select one:
A- Metabolic alkalosis
B- Metabolic acidosis
C- Respiratory alkalosis
D- Respiratory acidosis
E- None of the following

Answer: A.

2)If a case of emphysema was hospitalized showing drop in blood PH and increase in C02. This is a condition of? Select one:
a. Metabolic alkalosis
b. Respiratory alkalosis
c. Metabolic acidosis
d. Respiratory acidosis
e. Compensated respiratory alkalosis

Answer: d.

3)If a patient undergoing a prolonged surgery and have repeated blood transfusion during and after surgery, which condition will he have if you know that the transfused blood contain citrate? Select one:
a. Compensated respiratory alkalosis
b. Metabolic alkalosis
c. Respiratory alkalosis
d. Respiratory acidosis
e. Metabolic acidosis

Answer: b.

4) In sever acidosis, the kidneys? Select one:
a. Excrete bicarbonate.
b. Forms ammonia.
c. Prevent excretion of keto-acids.
d. Reabsorb H+.
e. Inhibits excretion of titratable acids

Answer: b.

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5)Metabolic acidosis is caused by all of the following, Except? Select one:
a. Breath holding.
b. Diabetic keto-acidosis.
C. Heavy exercise.
d. Cardiac arrest.
e. Renal failure

Answer: a.

6)The kidneys keep acid base balance via doing all of the following except? Select one:
a.Excretion of non-volatile acids.
b. Formation of ammonia.
c. Bicarbonate re-absorption.
d. Release of erythropoietin.
e. Formation of acid phosphate in renal tubules

Answer: d.

7) Patient transfused with blood during and after surgery, what is his state ?
A.metabolic alkalosis
B.metabolic acidosis
C.respiratory alkalosis
D.respiratory acidosis

Answer: A.

Explanation:
When a patient receives large amounts of blood transfusions, especially during prolonged surgery, the stored blood contains citrate (used as an anticoagulant).

8) Patient with loss of bicarbonate .. (metabolic acidosis) how to compensate ?
A. Hypoventilation
B.Hyperventilation
C. Decreased renal H^+ excretion
D. Increased bicarbonate excretion

Answer: B.

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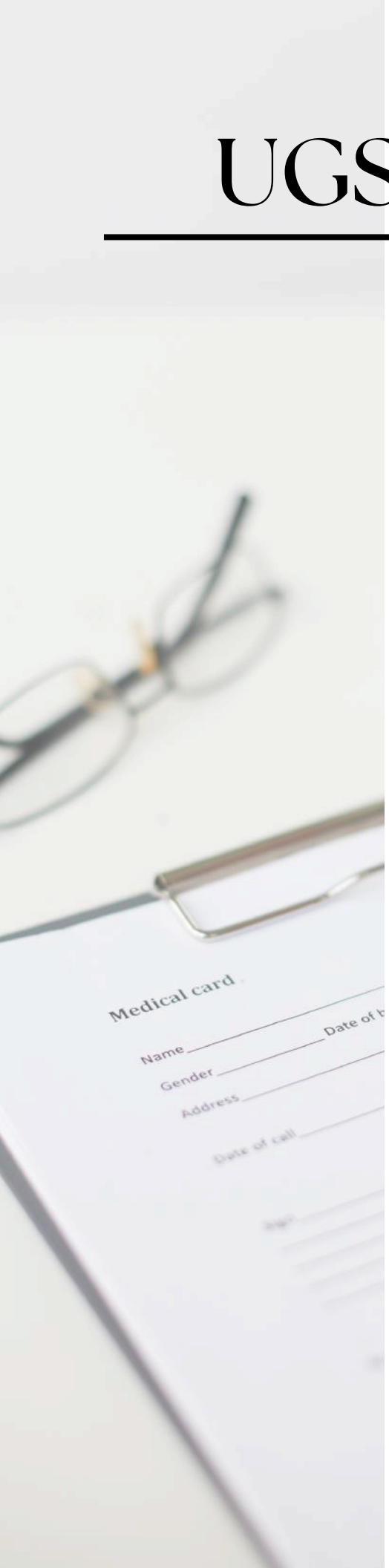

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Lecture 2

Biochemical aspects of kidney function

Corrected by:

Qasim El Shajrawi

UGS-Biochemistry Lecture 2

1)Creatine is synthesized from?
Select one:
A. Glycine, arginine, and methionine
B.Glutamate, leucine, and lysine
C. Alanine, tyrosine, and tryptophan
D. Histidine, cysteine, and valine

Answer: A.

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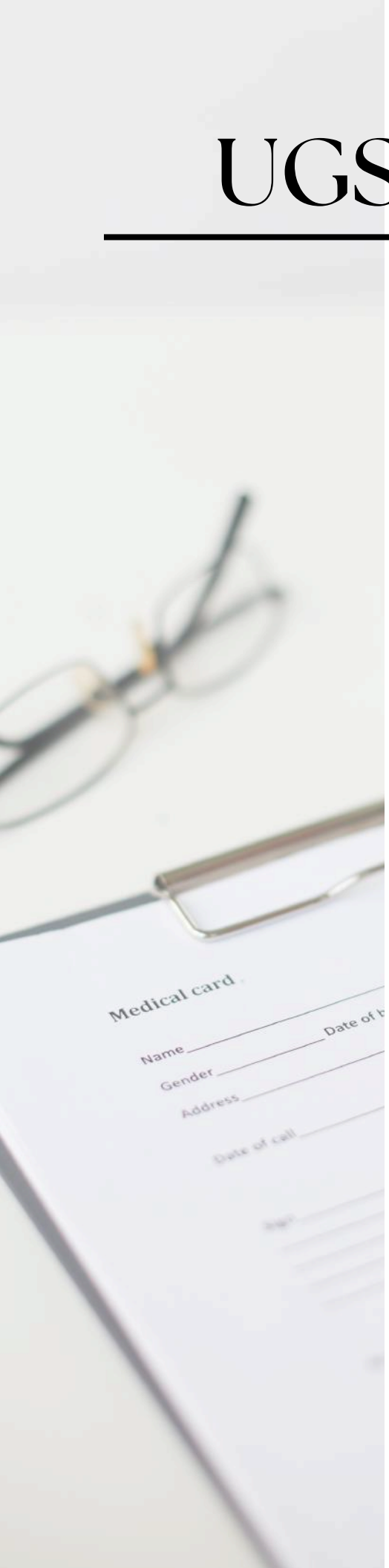

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Lecture 3

Urine Analysis

Corrected by:

Qasim El Shajrawi

UGS-Biochemistry Lecture 3

1)Diabetes mellitus is associated with? Select one:
A- Decrease urine volume, increase urine specific gravity
B- Increase urine volume, increase urine specific gravity
C- Increase urine volume, decrease urine specific gravity
D- Decrease urine volume, decrease urine specific gravity
E- Nothing

Answer: B.

2)Which of the following crystals found in acidic urine? Select one:
A- Calcium phosphate
B- Amorphous phosphate
C- Triple phosphate
D- Calcium oxalate
E- None of the following

Answer: D.

3)Substance if found in urine even in very small amount may indicate kidney disease?
A- Urea
B- Creatinine
C- Glucose
D- Potassium
E- Sodium

Answer: C.

4)When specific gravity is fixed at 1.010, this indicates:
Select one:
A- Acute glomerulonephritis
B- Chronic renal failure
C- Diabetes mellitus
D- Nephrotic syndrome
E- Normal hydration state

Answer:B

UGS-Biochemistry Lecture 3

5)Colorless dumbbell-shaped crystals in acidic urine are most likely:
A- Uric acid
B- Triple phosphate
C- Calcium oxalate
D- Calcium carbonate
E- Ammonium biurate

Answer: C.

6)why in urinalysis the specimen should not examined after two hour?
A. RBC agglutination
B. bacteria make the urine alkaline
C. leukocytes cast
D. increase bilirubin
E. form ketones

Answer: B.

7)WBC cast seen in ?
A.cystitis
B.urethritis
C.pyelonephritis
D.prostites

Answer: C.

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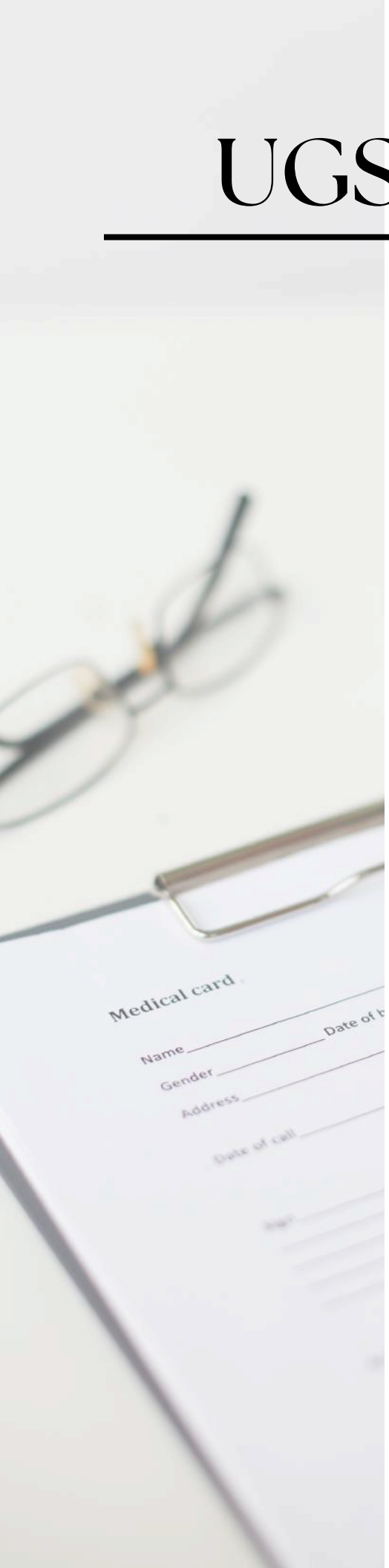

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Lecture 4

PURINE & PYRIMIDINE
METABOLISM & DISORDERS

Corrected by:

Qasim El Shajrawi

UGS-Biochemistry Lecture 4

1)The atoms of purine ring are derived from different precursors in the pathway of de novo synthesis. Which of the following is not of theses precursors? Select one:
a. CO2
b. Glutamine
c. Aspartate
d. Arginine
e. Glycine

Answer: d.

2)A patient diagnosed with a disease related to immunity. Treatment regimen is directed to inhibit ribonucleotide reductase. What is the function of this enzyme?
A. Xanthine --> uric acid
B. Guanine --> xanthine
C. Ribonucleotide --> deoxyribonucleotide
D. AMP --> IMP
E. PRPP --> phosphoribosylamine

Answer: C.

3)A young patient is suffering from megaloblastic anemia without other obious clinical manifestations. Urine test is done, which shows high level of orotate. The probable underlying cause is deficiency of orotate-phosphoribosyltransferase. Which substance should be administered to control the condition?
A. Thymidine
B. Uridine
C. PRPP
D. Glutamine
E. PRPP synthetase

Answer: B.

UGS-Biochemistry Lecture 4

4)Lesch-Nyhan Syndrome is caused by a deficiency in:

A. Adenosine deaminase

B. Xanthine oxidase

C. Carbamoyl phosphate synthetase II

D. Hypoxanthine-guanine phosphoribosyltransferase (HGPRT)

E. Thymidylate synthase

Answer: D.