



TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BMLS

AML 4201: CLINICAL CHEMISTRY I

SUPPLEMENTARY/ SPECIAL EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2HOURS

DATE: Pick Date Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **TWO** Section(s). Attempt **ALL** questions.

Circle the correct answer in section A.

Section A

1. Which of the following separates the ICF and ECF compartment

- a. vesicular membrane
- b. endometrium
- c. nephrotic membrane
- d. cellular plasma membrane
- e. cellular glomeritis membrane

2. Which of the following is not a manifestation in ECF water volume loss

- a. Thirst,
- b. anorexia,
- c. sunken eyes
- d. shock
- e. weight gain

3. Which of the following is the end product of protein metabolism

- a. bilirubin
- b. uric acid
- c. glycogen
- d. urea
- e. creatinine

4. Which of the following electrolyte is majorly absorbed in the proximal tubule

- a. Na⁺
- b. Cl⁻

c.H₂O

d.HCO₃⁻

e.all the above

5. which of the following statement is true about bicarbonates

a. are anions of extracellular fluids

b. are anion of intracellular fluid

c. are cation of extracellular fluids

d. have normal plasma range

e. have increased plasma osmolality

6. Which of the following enzymes is most specific for diagnosis of a Myocardial Infarction?

a. AST

b. LD

c. Troponin

d. CK

e. ALT

7. Which of the following compartment has highest water volume

a. Intracellular

b. Extracellular

c. dermal

d. intra dermal

e. plasma

8. Which of the following means the decrease in urine volume

a. hypovolemia

b. Anuria

c. oliguria

d. polyuria

e. pyuria

9. Which of the following lipoprotein is also referred to as "pre-beta" lipoprotein?

a. HDL

b. VLDL

c. LDL

d. Lipo B

e. none above

10. Which of the following will lead to transfer of K⁺ into ECF invariable

a. Neutral PH

b. Acidosis

c. hyperkalemia

d. hyponatremia

e. alkalosis

11. Which of the following terms means high concentration of urea in blood

a. uremia

b. uremic syndrome

c.azotemia

d.urea

e.hyperuremia

12.creatine is synthesized in

a.bile

b.GIT

c.pancrease

d.Liver

e.Liver and pancrease

13.Which of the following statement is not true about Uric acid

a.Uric acid is a final breakdown product of purine metabolism

b.Uric acid is transported to kidney and filtered (70%)

c.Present in plasma as monosodium urate

d.to confirm diagnosis and monitor treatment of gout

e.causes tubular necrosis

14.Which of the following is not a non protein nitrogenous compound

a.urea

b.ammonia

c.amino acid

d.creatinine

e.albumin

15.Which of the following is the greatest source of acidity in the body

a.CO₂

b.Lactic acid

c.hydrolysis reaction

d.dehydration reaction

e.oxidation of fatty acid

16. Which of the following is an anion

a.bicarbonate

b.magnesium

c.potassium

d.zinc

e.sodium

17.Which of the following hormones control water reabsorption in the distal tubule

a.Glucagon

b.aldosterone

c.ADH

d.Glucagon

e.estrone

18.Which of the following describe glycosuria

a.Glucose in blood

b.jaundice

c.Lack of glucose

dGycogen in urine

e glucose in urine

19.iron absorption occurs majorly in

a.liver

b.pancrese

c.Blood

d.Duodenum

e.kidney

20Which of the following inhibit iron absorption

a.citrate

b.ascorbate

c.iron overlod

d.aminoacid

e.iron defiency

21. Which of the following is not an iron absorption competitor

a.ascorbate

b.lead

c.aminoacid

d.iron overload

e.citrate

22. Which of the following enzyme deficiency does not cause haemolytic anaemia

a lactase deficiency

b.hexokinase defiency

c.pyruvate deficiency

d.G6PD deficiency

e .pyruvate dehydrogenase defiency

23. Which of the following disease is caused by deficiency in lactase enzyme

a.haemoltyic anaemia

bHereditary lactose intolerance

c.galactosemia

d.Hereditary fructose intolerance

e. pentosuria

24. Which of the following is the percentage total water volume in infants

a.greater than 70%

b.50-60%

c.22-50%

d.60%

e.less than20%

25. Which of the following describes plasma

a. removal of clots

b.centrifugation for cell separation

c .add anticoagulant

d.no fibrinogen

e .all above

26 Which of the following enzyme is involved in the principle blood glucose estimation

a. Glucose reductase

b. hexokinase

c. Glucose oxidase

d. catalase

e. None of the above

27. Which of the following process is not involved in urine formation

a. Glomerular concentration

b. tubular differentiation

c. tubular specialization

d. tubular secretion

e. none of the above

28. Which of the following will result to a positive benedict test of urine

a. urea

b. potassium

c. glucose

d. ascorbic acid

e lead

29. Which of the following test measures the concentrating ability of kidneys

a. Volume

b. creatine

c. specific gravity

d. Glucose

e sodium

30 Which of the following is the phenomena of glucose regulation

a. homeostasis

b metabolism

c. anabolism

d. glycogenolysis

e .catabolism

Section B

31. a. Describe the Sulphosalicylic acid test for albumin (10mrk)

b. Describe the Benedicts test (10marks)

32. a. Describe oral glucose tolerance test (10mrks)

b. Describe Type 1 diabetes mellitus (10mrks)