Clinical Biochemistry – 5GM

1. The correct concentration of Na\(^+\) in extracellular fluid is:
   a. 130 mmol/L  
   b. 120 mmol/L  
   c. 140 mmol/L  
   d. 150 mmol/L.

2. Blood osmolality under physiological conditions is: ........mmol/kg

3. Laboratory findings in metabolic acidosis are:
   a. pH 7.125, HCO\(_3\) 12 mmol/L  
   b. pH 7.325, HCO\(_3\) 22 mmol/L  
   c. pH 7.125, HCO\(_3\) 24 mmol/L.

4. Select the causes of MAL:
   a. diarrhoe  
   b. vomiting  
   c. infusion of normal saline  
   d. hyperaldosteronism

5. GFR estimation needs to determine ........concentration in serum and in urine (name the lab test)

6. Prerenal glycosuria may occur at a blood glucose value above:
   a. 15 mmol/L  
   b. 10 mmol/L  
   c. 20 mmol/L  
   d. 5 mmol/L

7. What kind of bilirubin passes into urine during obstructional (posthepatic) jaundice:
   a. unconjugated (indirect) bilirubin  
   b. conjugated (direct) bilirubin  
   c. none, only urobilinogen

8. Name at least two enzymes used for hepatocyte integrity testing:

9. Conjugated bilirubin:
   a. is not present in urine in healthy person  
   b. does not pass through glomerular barrier  
   c. is present in urine during cholestasis  
   d. could be filtrated into urine

10. Diagnosis of diabetes mellitus is based on following laboratory tests:
    a. fasting plasma glucose + glycosuria  
    b. fasting plasma glucose + HbA1c (glycated hemoglobin)  
    c. random plasma glucose + insulin

11. The major cause of hyperproteinemia is:
    a. dehydratation and haemoconcentration  
    b. increased intake of protein by food  
    c. monoclonal gammopathies  
    d. chronic inflammation

12. For rule-out of acute myocardial infarction in patient with an acute chest pain you would request laboratory test:
    a. creatinkinase  
    b. cardiac troponins  
    c. myoglobin  
    d. BNP

13. Which lipoprotein particles change way of internalisation into cells after oxidation:
    a. HDL  
    b. VLD  
    c. Chylomicron  
    d. LDL

14. If GFR in diabetic patient suddenly decreases, his glycosuria will:
    a. be improved  
    b. be worsend  
    c. not change  
    d. GFR has no influence on glycosuria

15. Select the true statements concerning urea:
    a. It comes from liver  
    b. It comes from muscles  
    c. It may be elevated in dehydration  
    d. It is elevated in case of GFR decrease