The West Bengal University of Health Sciences
B. Sc Nursing 2nd Semester August-September, 2023 Examination

Subject : Applied Biochemistry & Applied Nutrition & Dietetics

Time: 3 Hours. **Full Marks: 75**

Use separate answer script for each group
*Attempt **all** questions*

Group-A

1. a) Normal level of Sodium in plasma is. 4 x 1
   i) 30-40 mg/dl. ii) 50-80 mg/dl. iii) 74-105 mg/L. iv) 136 – 145 mg/L.
   b) Scurvy occurs due to deficiency of :
   i) Niacin. ii) Thiamine. iii) Ascorbic Acid. iv) Riboflavin.
   c) All of the following biochemical parameter are indices of liver function except :
   i) Bilirubin. ii) Albumin. iii) Alkaline Phosphatase. iv) Creatinine.
   d) Blood for estimation of blood glucose is collected in Fluoride-oxalate vial to :
   i) Prevent clotting. ii) Preserve Glucose. iii) Both i) & ii). iv) Prevent Hemolysis.
2. Write in brief ***any three*** of the following :
   a) Name the proteins present in plasma. State the functions of any two of these plasma proteins. Mention their normal values. 1+2+2
   b) Enlist the parameters assessed in lipid profile. Name the compounds synthesized from Cholesterol. Mention two diseases where ketone bodies are present in urine. 2+2+1
   c) Define isoenzymes. Name four enzymes of diagnostic importance mentioning the diseases which alter the normal levels of these enzymes. 1+4
   d) Write down the factors which regulate the enzyme activity. 5
3. Answer the following questions : 3 x 2
   a) Name two buffers present in the human body. State the acid base member of each buffer.
   b) State the diagnostic importance of Hb A1c.
   c) Name two Amino acids and the biologically important products derived from them.

Group-B

4. Choose the correct alternatives : 5 x 1
   a) Major source of energy.
   i) Carbohydrates. ii) Minerals. iii) Vitamins. iv) Dietary fibre.
   b) One example of trace element :
   i) Calcium. ii) Magnesium. iii) Sodium. iv) Iodine.
   c) One traditional method of food preservation is :
   i) Drying. ii) Deep frying. iii) Chemical preservation. iv) Vacuum packing.
   d) 100ml breast milk provides energy :
   i) 54 kcal. ii) 67 kcal. iii) 72 kcal. iv) 80 kcal.
   e) Overweight is called when BMI is :
   i) >20. ii) >25. iii) >30. iv) >35.
5. Fill in the blanks : 3 x 1
   a) Name one essential fatty acid_____.
   b) Two fat soluble vitamins are_____ and _____.
6. Differentiate between : 6 x 2
   a) Simple sugars and complex carbohydrates.
   b) Essential and nonessential amino acids.
   c) Macro and micronutrients.
   d) Dry Beriberi and wet Beriberi.
   e) Saturated and unsaturated fats.
   f) Water soluble and fat soluble vitamins.
7. Write short notes (***any four***) : 4 x 5
   a) Protein-energy malnutrition. b) Principles of Cooking. c) BMR.
   d) Prevention of Food Adulteration Act (PFA). e) Functions of Vit. A.
8. a) What do you understand by Therapeutic Diet? 2+6+2
   b) Write down the dietary guidelines of a patient with cardio vascular diseases.
   c) List down some special feeding techniques.