**Sylhet Women’s Medical College**

**2nd Term Examination**

**Subject: Biochemistry**

**SWMC-9 (SAQ)**

**Full marks -80 Time – 2.40 hours Date- 20.10.2014**

Answer any 8 questions from each group. All questions carry equal marks.

**GROUP –A**

1. Define bioenergetics. How free energy is related to entropy and enthalpy? 1+4
2. What are the components of ETC? Name the inhibitors of respiratory chain. 3+2
3. Enumerate the common digestive juice with their normal pH. How lipids are digested and absorbed in our body? 2+3
4. Name the intermediary metabolic pathways of carbohydrate metabolism. Mention the importance of gluconeogenesis and HMP shunt pathway. 2+3
5. What are the sources and fates of Acetyl CoA? Why TCA cycle is called common metabolic pathway? 3+2
6. Mention the steps of cholesterol biosynthesis. Write the importance of cholesterol. How blood cholesterol level can be reduced? 2.5+1.5+1
7. Draw and label a structure of lipoprotein. Write down the fate of chylomicron. 2+3
8. Define Trans – Deamination and mention its importance. How Ammonia produced and disposed of human body? 2+3
9. What are the phases of glycolysis ? Calculate ATP generated in aerobic and anorobic glycolysis.2+3

**GROUP –B**

1. What are the body fluid compartments? Mention the volume disorders in human body with example. 2.5+2.5
2. What are the factors which regulate the water & electrolytes balance? What is water intoxication & water turnover ? 3+2
3. Define anion gap. How to calculate anion gap? What are the causes of high anion gap acidosis? 1+1.5+2.5
4. How acid base balance is maintained in normal human body ? 5
5. Write short notes on : i) Osmolar gap ii) Diuresis . 2.5+2.5
6. Write down the water intake & output chart. What is insensible water loss ? 4+1
7. Define metabolic & respiratory acidosis. How they are compensated? Explain the acid-base disorder from the following data (pH- 7.25. [HCo3) – 16mEq/L,PCo2 -30mmHg) 2+1.5+1.5
8. Define hyponatremia & hypokalemia. Give their causes & consequene ? 2+3
9. What is renal clearance? Mention the processes of acidification of urine. 1+4

**Sylhet Women’s Medical College**

**2nd Term Examination (supplementary)**

**Subject: Biochemistry**

**SWMC-9 (SAQ)**

**Full marks -80 Time – 2.40 hours Date- 03.11.2014**

Answer any 8 questions from each group. All questions carry equal marks.

**GROUP –A**

1. Define bioenergetics,free energy ,entropy, enthalpy and biological oxidation ? 5

2. Mention the location and component of ETC. How ATP is produced in ETC. 3+2

3. Enumerate the common digestive juice with their normal pH. How lipids are digested and absorbed

in our body? 2+3

4. Name the intermediary metabolic pathways of carbohydrate metabolism. Mention the importance of

gluconeogenesis and HMP shunt pathway. 2+3

5. What are the sources and fates of Pyruvate? Why TCA cycle is called amphybolic pathway?

3+2

6. Mention the steps of cholesterol biosynthesis. Write the importance of cholesterol. How blood

cholesterol level can be reduced? 2.5+1.5+1

7. Draw and label a structure of lipoprotein. Write down the fate of chylomicron. 2+3

8. Define Trans – Deamination and mention its importance. How Ammonia produced and disposed of

human body? 2+3

9. Enumurate the Ketone bodies. How they are synthesized and utilized? 2+3

**GROUP –B**

1. What are the body fluid compartments? Mention the volume disorders in human body with example. 2.5+2.5
2. What are the factors which regulate the water & electrolytes balance? What is water intoxication & water turnover? 3+2
3. Define anion gap. How to calculate anion gap? What are the causes of high anion gap acidosis? 1+1.5+2.5
4. How acid base balance is maintained in normal human body ? 5
5. Write short notes on : i) Osmolar gap ii) Diuresis . 2.5+2.5
6. Write down the water intake & output chart. What is insensible water loss ? 4+1
7. Define metabolic & respiratory acidosis. How they are compensated? Explain the acid-base disorder from the following data (pH- 7.25. [HCo3) – 16mEq/L,PCo2 -30mmHg) 2+1.5+1.5
8. Define hyponatremia & hypokalemia. Give their causes & consequene ? 2+3
9. What is renal clearance? Mention the processes of acidification of urine. 1+4