**Sylhet Women’s Medical College**

**1st Term MBBS Examination**

**Subject: Biochemistry**

**SWMC-10 (SAQ)**

**Full marks -80 Time – 2hrs 40 min Date- 12.04.15**

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

**GROUP –A**

1. Mention Handerson –Hasselbalch equation with explanation. Give it’s importances. 3+2
2. Define and classify enzymes with example. What is isoenzyme? 4+1
3. Define isomerism. Mention the isomers of glucose. What is Chiral carbon? 1+3+1
4. What are the structural organizations of protein? What is denaturation of protein? 3+2
5. Define and classify lipid. Mention the functions of Phospholipid and cholesterol. 3+2
6. Define and classify buffer. How buffer maintain blood pH? 3+2
7. Name the essential fatty acids with their importance and deficiency manifestation. What is omega carbon? 4+1
8. What do you mean by reference sugar, invert sugar, rancidity, Km value, enzyme

inhibition. 5

1. Write short notes on: a) Mutarotation b) Isotopes 2.5+2.5

**GROUP –B**

1. What are the energy releasing nutrients? Mention their RDA. Name the nutrients essential for man.

1.5+2+1.5

1. Calculate the calorie requirement of a lactating mother of 60kg. Prescribe her required macro and micro nutrients. 2.5+2.5
2. What is BMR? Mention the factors affecting BMR. Write the ways of basal energy expenditure.

1+2+2

1. Define dietary fiber. Give its RDA. Source and functions. 1+4
2. Classify B complex vitamins. Mention their active forms and functions. 1.5+3.5
3. What are the sources of vitamin D? How its active form is fromed? Mention its RDA. 1+3+1
4. Name the antioxidant vitamins. Write down the source, function and deficiency manifestation of vitamin C? 1+4
5. What are the microminerals? State the functions of iron, iodine, zinc. 2+3
6. What are the common nutritional problems in Bangladesh? State the difference between kwashiorkor and marasmus. 3+2