**Sylhet Women’s Medical College**

**3rd Term Examination**

**Subject: Biochemistry**

**SWMC-09, (SAQ)**

**Full marks -80 Time – 2 hrs 40 min Date- 9.03.2015**

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

**GROUP –A**

1. Draw the diagram of Watson crick model of DNA. State the organization of DNA into chromosome.

2+3

1. Draw and label cell cycle. In which phase of cell cycle replication occurs? What are the criteria of replication? 2+1+2

1. Define transcription.How termination of transcription occurs . What is transcription unit ?

1+3+1

1. Mention the differences between .
2. .
3. a) Sense codon and nonsense codon. b) Genetic code and codon.
4. 2.5+2.5
5. Define translation. What are the components required for translation? Mention the initiation steps of translation. 1+2+2

1. What are the types of DNA damage? How it is repaired ? 3+2
2. What are the methods of amplification of a target DNA fragment? Mention the basic steps and uses of PCR. 1+2+2
3. Define mutation. What are the types of mutation? Mention the consequence of altering the nucleotide sequence of codons. 1+2+2
4. Write short Notes on: i) RFLP ii) Wobble phenomenon

2.5+2.5

**GROUP –B**

1. Define hormone- Classify hormone according to their chemical nature. Write down the mechanism of action of steroid hormone. 1+2+2
2. Write the chemical structure of insulin Mention the effect of insulin on protein and fat metabolism.

2+3

1. Mention the metabolic function of Cortisol. What is the permissive action of glucocorticoid. 3+2
2. What are the forms of calcium in blood? State the hormonal regulation of calcium homeostasis.

2+3

1. Write short notes on : 2.5+2.5
2. Addison’s diseases & addisonian crisis
3. Cushing’s syndrome & cushing disease
4. Define lipid profile . Mention the normal values of lipid profile in SI unit & conventional unit.What is dys lipidemia ? 1+3+1
5. Give an account of renal function test. What is plasma clearance value of a substance? Write the clearance value of glucose, Urea, Creatinine. 3+1+1
6. Define quality control. What do you mean by precession, accuracy, sensitivity and specificity?

1+4

1. What are the modern techniques in biochemistry? Mention the principle and function of any two.

1.5+3.5