NORTH SOUTH UNIVERSITY
Dept. of Biochemistry & Microbiology

Course: BIO103 (Biology)
Fall semester 2015
Midterm-II, Marks: 20, Time: 90 min

	Answer any **Five** of the following questions	Marks
1	a. What is macromolecules? How are macromolecules formed? b. How are macromolecules broken or digested? Describe with examples.	2.0 2.0
2.	a. Describe the characteristics of starch, glycogen, cellulose and chitin. b. Write at least 6 functions of carbohydrates c. What is fructose and Lactose? What are the basic element of fructose and lactose?	2.0 1.0 1.0
3.	a. What is protein? What are the basic element of amino acid? b. Write the main functions of proteins. What is the difference between essential and non-essential amino acid? c. Write the biological functions of protein	1.5 1.5 1.0
4.	a. What is lipids? What are the building blocks of lipids and how many types of lipids? b. Describe the difference between fats, oil and wax c. What is the main characteristics of saturated and unsaturated fats? Which fatty acid is good for health	1.5 1.0 1.5
5	a. Describe phospholipids & steroids with example b. Describe nutrition and health facts regarding lipid consumption c. What is the major role of cholesterol in the body?	1.5 1.5 1.0
6.	a. What is nucleic acids?. How many types of Nucleic acids? Write the chemical composition of nucleic acids b. Describe the base pairing principle. c. Difference between DNA and RNA?	2.0 1.0 1.0
7.	a. What is the chemical equation of photosynthesis? Which organ responsible for the absorption of light for the photosynthesis process in plants? b. What are the three main limiting factors of photosynthesis? c. How do chloroplasts multiply?	1.5 1.5 1.0
8.	a. What are the types of cell respiration? What is the difference between facultative anaerobic beings and obligate anaerobic beings? b. What are the three phases into which the cell respiration is divided? c. Does glycolysis occur within the mitochondria? How many ATP molecules are made after glycolysis?	1.5 1.0 1.5