



INDIAN SCHOOL DARSAIT DEPARTMENT OF BIOLOGY



Subject : BIOLOGY	Topic : CHAPTER 8: CELL- THE UNIT OF LIFE	Date of Worksheet: 26-04-2018
Resource Person: Mrs. S. Subhaja Nandakumar		Date : _____
Name of the Student : _____	Class & Division : XI Div. __	Roll Number : __

Answer the following

Marks

- 1) Why are golgi apparatus in close association with endoplasmic reticulum? 1
- 2) Name the following: 2
 - a) the organelle without a membrane
 - b) longest animal cell
 - c) Human cell without a nucleus
 - d) Organelle involved in osmoregulation and excretion.
- 3) What is cell theory? Who modified Schleiden and Schwann's hypothesis? 3
- 4) Enumerate the similarities and differences between mitochondria and chloroplast. 3
- 5) Name the 'cartwheel' like structure and describe the structure with the help of a diagram. 3
- 6) Explain the structure and function of Nucleus. 5
- 7) Write a short note on mitochondria and Plastids 5
- 8) In a prokaryotic cell describe the following organelles: 5
 - a) Cell wall
 - b) Flagella
 - c) Mesosomes
 - d) Plasmid
- 9) Describe the different types of chromosomes based on their centromere position. 5
- 10) Explain with a labeled diagram the structure of cell membrane proposed by Singer and Nicolson. 5

CHAPTER 9 : BIOMOLECULES

Answer the following		Marks
1)	What is activation energy?	1
2)	Starch gives blue black colour with iodine solution. Give reason	1
3)	Define zwitterion.	1
4)	Comment on the statement "living state is a non-equilibrium	1
5)	Name the abundant proteins in biosphere and abundant protein in animals. Give an example for fructose homopolymer. Give an example for polysaccharide heteropolymer.	2
6)	Write against each of the following the appropriate chemical bond formed. a) Polysaccharides b) Protein c) Fat d) Water	2
7)	How are prosthetic groups different from co-factors?	3
8)	What are different classes of enzymes? Explain any two with the types of reaction they catalyse.	3
9)	Illustrate with an example a glycosidic, peptide, and a phosphodiester bond.	3
10)	Formation of enzyme-substrate complex (ES) is the first step in catalysed reactions. Describe the other steps till the formation of product.	5
11)	What is the difference between a nucleotide and nucleoside? Give examples of each.	5
12)	Explain Watson and Crick model of DNA structure.	5
13)	Write two example each A) Sugar B) Pyrimidine C) Fatty acid D) Amino acid E) Nucleic acid	5
14)	What are the factors which affect enzyme activity?	5
15)	Explain briefly four levels of protein structure?	5