

CHOITHRAM SCHOOL MANIKBAGH INDORE

CLASS XII- Session: 2017-18

Subject: Biotechnology
Allotment Date: 15/ 04/ 2017

Assignment No: I
Submission Date: 25/ 04/2017

S.NO	QUESTION	MARKS	LEVEL
OBJECTIVE TYPE			
1.	What will happen when normal proteins misfolds or undergo conformational change?	1	KNOWLEDGE
2.	Why do hydrophobic regins of a protein form the core of folded protein?	1	LOGIC
3.	How do Good Night or Allout act as insect repellent	1	HOT
SA TYPE1			
4.	Why has sickle cell trait been selected in population where malaria is endemic? What is the molecular basis of sickle cell anemia?	2	UNDERSTANDI NG
5.	Chymotrypsin is a proteolytic enzyme which hydrolyses protein. Explain the mechanism of protein hydrolysis. Also explain why it does not cut other pproteins of pancreas?	2	MULTICONCEP TUAL
6.	During downstream processing of any microbial product, name and why one extra step is required ? how the concentration of protein in the sample is monitored.	2	HOTS
7.	Aarohi suffered from kidney failure, doctors suggested kidney transplant, but she faced host rejection. Explain how biotechnology could help her.	2	LOGIC
SA-TYPE 2			
8.	A single cell of E coli produce about 4000 different protein under optimum conditions. One of the desired intracellular enzymes produced is in the form of 5000 molecules/cell. If the molecular weight of that enzyme is 100000 D, how many E coli cells are required to produce 1 g of this enzyme?	3	UNDERSTANDI NG
9.	The functional properties of protein are dependent on 3D structures. 1. Name the non covalent interactions involved in making a folded protein. Differentiate between Hydrogen Bonds and Van der Waals forces.	3	LOGIC
10.	After making paneer, left out should not be thrown. Why? Explain the importance.	3	HOT
LA			
11.	a. Draw a labeled diagram of Mass Spectrophotometer. Explain ionization methods that are required for examination of molecules? Write down the steps of purification of microbial protein.	5	MULTICONCEP TUAL
12.	From ages animals are slaughtered for benefits of human. How now biotechnology can prevent such activities as well as meet the purpose of human welfare. What values do they teach us?	5	VALUE BASED