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**17/sci03/007**

**Bch312 assignment**

Questions:

1 . Itemize what heterotrophic cells do with the free energy obtained from the

 Degradation of molecules

2 . Energy is present in variety of forms which are inter converted . Whenever

 Energy is used for executing a task or when one form of energy is converted

 into another , there is a loss of energy. This led to two fundamental laws of

 Thermodynamics, state them.

Answer:

1

* To synthesize bio\_molecules for smaller precursor ( chemical work )
* To carry out mechanical work . Such as muscle contraction
* To transport bio-molecules and ions across the membrane in the direction

 Of increasing osmotic work

2 A. FIRST LAW OF THERMODYNAMICS: state that in a physical or chemical change

 the total energy of system including its surroundings remains constants. Con-

 Sequently , whenever energy is used for executing a task or is transformed from

 One kind into another the total amount of energy is unchanged

 B . SECOND LAW OF THERMODYNAMICS: states that the total energy of a system

 Must increase if a process is to occur spontaneously.