

“Do your best, not to be better than anyone but to be the best version of yourself”



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BIOLOGY 1st TERM (2023-2024) HOLIDAY PACKAGE FOR S2

- Q1.** There is an old saying which goes like “no man is an island”, what do you understand by that saying? And how could you relate it with biology and life in general?
- Q2.** State and explain the condition that must be in place for diffusion to take place.
- Q3.** With clear drawings illustrate the effects of the following types of solution to plant and animal cell.
- Isotonic solution
 - Hypotonic solution
 - Hypertonic solution
- Q3. a.** suggest the importance of hollow bones for birds.
- a) how are fishes adapted to gaseous exchange in water?
- b) give the group of chordates is both aquatic and terrestrial? And explain how it is adapted
- i. Mammals ii. Birds iii. Amphibians iv. Reptiles
- Q4. (a)** Discuss the function of ;
- i. Carrier protein in active transport
 - ii. Channel protein in diffusion
- (b)** The root of a certain plant was treated with a respiratory poison.
- (i)** State the effect of this to the uptake of mineral ions.
- (ii)** Explain the effect you have stated in (a) above.
- Q5. a)** With examples, distinguish between reducing sugars and non-reducing sugars.
- b) What is the purpose of sodium hydrogen carbonate in the test for non-reducing sugars?
- c) Starch is stored in seeds, stems and roots among many other places in plants. Where is starch stored in animals?
- Q6.** Give the products of digestion after the following food substances are broken down completely.
- (i) Carbohydrates (ii) Proteins (iii) Lipids
- b) what are the enzymes that are involved in breakdown of the above food components?
- Q7.** Athletes are normally given glucose and not sucrose. Give a reason for this.
- Q8. a)** Distinguish between enzymes and other catalysts.
- b) Explain the meaning of the following terms with reference to enzymes: (a) Denaturation (b) Inactivation
- c) Explain why enzymes are said to be substrate specific.
- d) Broadly discuss the significance of enzymes
- Q9.** Digestion of starch by enzyme amylase begins in the mouth but stops when the food arrives in the stomach. Explain.
- Q10.** What does the key and lock hypothesis refer to with regard to enzyme action?

Examiner: Teacher M. Gentil Theophile

“Don’t wish it was easy, wish you were better”