Practice Question Set For A-Level
Subject : Biology
Paper-1 Topic:1 Biological Molecules

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Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Mark Schemes

Q1.

(a) 1. Condensation reaction between amino acids;
Accept descriptions of condensation reaction: eg loss of water

2. (Forming) peptide bonds;

3. Creating (specific) sequence/order of amino acids;

3

(b) (Similarity)

1. Substrate fits/binds to active site

OR

Enzyme-substrate complex (formed);

(Difference)

2. Active site changes shape, but does not change in lock and key

OR

(Initially) active site not complementary to substrate with induced-fit, but is complementary in lock and key;
Reject 'substrate changes shape'
Accept 'flexible' for changes shape and 'rigid' for does not change

2

(c) Lower/reduce activation energy (needed to start a reaction);

1

(d) Correct answer for 2 marks = 300;;

Accept for 1 mark,

2 000 000 or 2×10^6 (correct calculation of maltase rate per second)

OR

$6 \times 10^8 \div 4 \times 10^7$

OR

× 15 (correct division but not multiplied by 20)

2

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(e) Increased maltase concentration;

1

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Q2.

(a) Isomer(ism);

Accept phonetic spelling

Ignore structural

1

(b) High(er) absorbance (has more sugar)

OR

Low(er) transmission (has more sugar);

Accept a description of absorbance or transmission

1

(c) 1. Benedict's (solution) volume;

2. Benedict's (solution) concentration;

3. (Fruit) juice volume;

4. (Water bath/water/solution) temperature;

5. Duration of heating (in water bath);

Accept examples of volumes and concentrations and temperatures

2 max

(d) Correct answer for 2 marks = 12;;

Accept for 1 mark,

30 (correct mass of apple core)

OR

150 (correct mass of apple flesh)

OR

$\frac{8}{100}$ / 0.08 × incorrect mass **calculated** using the ratio

OR

14.4 (correct mass in whole apple)

2

(e) 1. Starch hydrolysed;

2. Maltose is soluble (so reduces Ψ)

OR

Starch is insoluble;

Accept glucose for maltose

Ignore sugar

2

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