My Question Paper

1. Answer **one** of the following.
Any diagrams included in your answer must be fully annotated.

Either, *(a)* Describe the properties of water and its functions in living organisms. [10]

Or, *(b)* (i) Describe how inhibitors affect the rate of an enzyme catalysed reaction. [7]

(ii) Describe the advantages of using immobilised enzymes in industrial processes. [3]

Marking Scheme

1.

H. non-competitive binds away from active site/ binds at allosteric site

I. changes shape/conformation of enzyme molecule;

J. shape/conformation of active site changed;

K. increasing substrate concentration has no effect on rate of reaction **[7]**

(ii) L. enzymes tolerate wider range of conditions/temp/pH/thermostable/ Qwtte (not: stable unqual)

M. enzyme easily reused;

N. several enzymes can be used together;

O. product not contaminated / easier purification of product

P. greater central of reaction achieved/ enzymes easily added or

Removed qual. **[3]**

(Total 10 Marks)

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Examiner's Comments

1. Both questions were equally popular. Answers to (a) were good but in some cases failed to use correct terminology. For example, many candidates referred to latent heat rather then the latent heat of vapourisation. Answers to (b) often scored full marks, only marking points G and K causing the most difficulty.

*This comment originally referred to question **8** on paper **1071/01 (11/01/2011)***